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Effective Patient-Provider Communication in Pediatric Obesity

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Summary

Effective patient-provider communication, although acknowledged as a key clinical skill and linked to better outcomes for patients, providers, and society as a whole, is not a primary focus of many medical schools' curricula. Motivational Interviewing, or MI, is a patient-centered, directive communication framework appropriate for the health care setting with an ever growing empirical evidence base. Research on MI's causal mechanisms has previously established patient change talk (motivational statements about behavior change) to be a mediator of behavior change. Current MI research is focused on identifying which provider communication skills are responsible for evoking change talk. MI recommends three core communication skills – informing, asking, and listening. A consistent evidence base is emerging for providers' use of reflections (an active *listening* strategy). Our research provides evidence that *asking for and reflecting* patient change talk are effective communication strategies, but cautions providers to *inform* judiciously. In addition, our research indicates that supporting a patient's decision making autonomy is an important strategy to promote health behaviors.

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Keywords

patient-provider communication; Motivational Interviewing; adolescents; obesity

Introduction

The primary treatment strategy health care providers use when treating patients is communication. Providers engage their patients in conversations to understand their medical history, illness experiences, and to formulate treatment recommendations. These conversations fulfill task-oriented (e.g., exchanging information, facilitating patient comprehension of medical information, engaging in informed and collaborative decision-making, enabling patient self-management) and socio-emotional functions (e.g., fostering an interpersonal, healing relationship, responding to and regulating patients' emotions, managing uncertainty).[1–3]

Benefits of Patient-Provider Communication

The benefits of effective patient-provider communication and its relationship to medical care outcomes have long been highlighted in the chronic illness literature.[2, 4–10] Better patient-provider communication is linked to patient satisfaction with medical care and medical care providers.[3, 11] Patient satisfaction is critical because it is an indicator of how well the provider is meeting patients' health care needs, expectations, and preferences.[3] Multiple research studies have positively linked patient-provider communication to patient adherence to treatment recommendations and better medical outcomes.[5, 12–19] Actively involving patients in their medical care affects adherence to treatment recommendations directly and through improved comprehension, understanding, and negotiation of treatment recommendations.[20]

Effective patient-provider communication not only leads to a better medical care experience and improved outcomes for patients, but benefits also extend to providers and society. Improvement in provider communication skills is associated with greater satisfaction with patient interactions,[21] increased self-confidence for treating "difficult" patients,[22] and decreased malpractice claims.[23] Improved patient-provider communication may also pose benefits society as a whole through decrease health care costs[24]

Patient-Provider Communication in Pediatrics

Patient-provider communication in the pediatric health care setting differs dramatically from adult patient-provider communication in that the patient is a child and the responsible party is the child's caregiver. This presents a dilemma for the provider - with whom should the provider communicate, the caregiver or patient? Research suggests that providers spend more time communicating with caregivers than with their pediatric patients. Specifically, pediatric patients, regardless of age, are typically engaged in a less than 20% of the communication in a typical medical care visit.[25, 26] When pediatric patients are engaged in the conversation, they are generally included in social aspects and the provision of medical history with the treatment decision-making typically completed by the provider and caregiver.[27, 28] When providers attempt to increase pediatric patients' participation,

caregivers often disrupt this effort by interrupting and responding to questions and statements directed to the patient rather than supporting and encouraging the patient's active involvement.[27, 29] This dynamic may have unintended consequences. Pediatric patients, particularly adolescents, report feeling marginalized when they are excluded from conversations about their own health[30] which may lead to disengagement and disinterest in their own health care.

Direct communication with pediatric patients, on the other hand, builds trust and rapport,[31, 32] helps socialize children into the patient role,[29, 33] and, in the adult literature, has been identified as a primary mechanism for patient adherence to behavioral recommendations.[12, 17] With the top four causes of early mortality - cardiovascular disease, cancer, respiratory disease, and stroke - tied to modifiable behaviors such as poor diet and lack of physical activity,[34] there is a critical need for providers to communicate with their patients to change their behavior in these areas. Pediatricians, in particular, play a critical role in identifying children who are at risk for obesity and these life-threatening diseases and to encourage these children and their families to change their unhealthy dietary and activity patterns early, before the detrimental effects of unhealthy behavior patterns begin to unfold.[35]

The Skill of Communicating Well

The National Academy of Medicine (formerly, the Institute of Medicine) recognizes patient-provider communication as a key clinical skill[36] as does the international medical community,[37, 38] medical schools,[39–41] and professional medical organizations.[42, 43] While these organizations offer recommendations regarding the qualities of effective PPC, few offer concrete guidelines for how to effectively communicate. This poses a dilemma for the provider because patient-provider communication skills are not innate. Like any other skill, effective patient-provider communication must be systematically learned and repeatedly practiced.[44–46]

Motivational Interviewing, a Framework for Patient-Provider Communication

Motivational Interviewing (or MI) is an empirically-supported approach to patient-provider communication that is characterized as “a therapeutic conversation that employs a guiding style of communication geared toward enhancing behavior change and improving health status” (Douaihy, Kelly, Gold, p. 2)[47]. The goal of MI is to increase patients’ intrinsic motivation and self-efficacy for engaging in health promoting behaviors.[48] Intrinsic motivation, engaging in an activity for reasons of personal interest or satisfaction rather than external consequences, has been linked to positive outcomes across multiple domains.[49] MI was originally developed to treat adults in substance abuse treatment;[50, 51] thus, there is a strong evidence base for its efficacy in that domain.[52] Since its inception, MI has been adapted for multiple behavior change targets, including health care behaviors such as cancer-related fatigue,[53] medication adherence in HIV,[54–56] diabetes management,[57–59] and weight loss.[60–62] Of particular relevance, physician use of MI has been linked to weight loss among adults[63] and children[64, 65] who are overweight/obese and is a recommended approach for pediatric obesity.[66]

MI has a highly specified framework that is both patient-centered and directive, making it an ideal approach for health care providers.[47, 67] The principles of MI, including providing empathy, collaborating with clients, and supporting client autonomy, are elements of patient-centered care.[1] MI emphasizes patients' decision-making autonomy, which is the tenet of Self-Determination Theory[68, 69] and empirically linked to increased adherence to medical recommendations,[70] particularly when treating adolescents.[71] In health care, autonomy-supportive environments are those where providers elicit patient perspectives, provide information and opportunities for choice, and encourage patient responsibility.[72] These characteristics are implicit in MI's core communication skills – informing, asking, and listening.[47] Furthermore, MI is consistent with consensus recommendations for working with clients from different cultures in obesity treatment.[73] Two meta-analyses have indicated that MI was more effective with blacks compared with whites,[50, 74] suggesting it may be a relevant framework for patient-provider communication in populations affected by health disparities.

Motivational Interviewing's Causal Mechanisms

MI can be broken down into technical and relational components.[75] The *relational component* of MI refers to the ability of the provider to understand the patient's perspective and to convey that understanding in a positive, empathetic manner. These elements are referred to as the "Spirit of MI". While these components are important for relationship building, they do not fully account for MI's efficacy at evoking behavior change.[52] The *technical component* of MI is the specific communication techniques that providers use during MI sessions to elicit and reinforce patients' motivational statements about changing their behavior, i.e., "change talk". Patient change talk statements during clinical encounters consistently predict actual patient behavior change (see Box 1).[52] In fact, one study with substance abusers found that patients' change talk predicted marijuana use 34 months later.[76]

Given the importance of change talk to patient outcomes, a primary focus of current MI research is identifying the specific provider communication behaviors that predict change talk and patient outcomes. Studies of MI provider communication behavior have confirmed that communication techniques consistent with the MI framework (i.e., MICO, illustrated in Table 1) are associated with increased patient change talk[54, 77, 78] and improved patient outcomes.[79] However, a methodological limitation of many studies is the reliance on frequency counts of communication behaviors and correlational analytic techniques which limit causal inference. In other words, just because higher rates of providers use MICO communication techniques is correlated with better patient outcomes does not provide sufficient evidence to prove that MICO leads to outcomes.

Sequential analysis

Sequential analysis[80, 81] is a statistical technique to analyze the temporal sequence of patient-provider communication and, thereby, generate evidence for the temporal precedence of provider→patient exchanges, which is a step toward establishing causality (see Box 2 for an illustration). Moyers & Martin were the first to use sequential analysis to demonstrate that providers' use of communication techniques consistent with the MI framework (MICO)

was more likely to elicit patient change talk (CT) than MI-inconsistent communication techniques.[82]

Subsequent studies have confirmed the MICO→CT link[83–85] and spurred researchers to dig deeper to investigate which of the MICO communication techniques, specifically, are responsible for eliciting CT. To date, three studies have identified providers' use of reflections as the critical MICO communication technique, i.e., empirically linked reflections to patient change talk.[79, 86, 87] In one of these studies, other MICO techniques, including asking open-ended questions and an index composed of affirmations, emphasizing the patient's control, reframing, and support actually decreased the likelihood of eliciting patient change talk.[86] An important consideration of these studies are that two of the three were conducted with predominantly White, adult patients who abuse substances. The third included minority adolescents, but was still within the substance abuse context. Our research group has begun to investigate the relationship between provider communication techniques and patient change talk in pediatric obesity.

Effective Provider Communication with Minority Families in Pediatric Obesity

Our research group recently developed the Minority Youth Sequential Code of Process Exchanges, or MY-SCOPE,[88] to study communication in MI sessions with minority adolescents and their caregivers in weight loss sessions. The MY-SCOPE is an adaptation of the SCOPE[89] and MISC[90], the code schemes used in the previous studies of MI's causal mechanism, specifically for minority adolescents and their caregivers. Adaptations included culturally relevant examples of adolescent and caregiver language, examples of adolescent and caregiver language specific to weight loss target behaviors (i.e., healthy nutritional changes, increased physical activity), and codes for provider communication behaviors not described in the MISC or SCOPE, such as eliciting feedback.

We used the MY-SCOPE to code 37 MI weight loss sessions with minority families to identify the provider communication techniques most effective at eliciting change talk.[88, 91] Because commitment language is more closely linked to actual behavior change than other types of change talk,[92] we examined change talk and commitment language as two separate categories. Our research identified three provider communication strategies more likely than other communication techniques to elicit change talk and commitment language amongst both minority adolescents and their caregivers engaged in weight loss treatment:

1. Statements <u>emphasizing autonomy</u> were more likely to elicit both adolescents' and caregivers' change talk and commitment language.

   If you are not ready to cut out sweets, we can find another area to focus on.

   <u>You</u> made that choice.

   You're the one who knows yourself best. What do you want to focus on?

2. <u>Open-ended questions</u> were more likely to elicit adolescent and caregiver change talk and commitment language when specifically phrased to elicit change talk or commitment language.

   In what ways has your weight been a problem for you?

What concerns do you have about your health?

What kinds of activity have you done this week?

3. Counselors' reflections of adolescent commitment language were more likely to elicit commitment language in response. In conversations with caregivers, change talk and commitment language were more likely to occur after the provider reflected a caregiver's previous change talk or commitment language statement.

   You are worried that your weight is going to affect your health.

   You want to be healthier.

   Okay, so one thing you will try is eating a small meal at regular times, versus waiting until you are starving and overeat.

Recommendation: Reflect Patients' Change Talk

Our finding suggesting that providers' use of reflections was a critical communication technique in eliciting patient change talk and commitment language is in sync with the three previous studies of communication exchanges among adults who abuse substances.[79, 86, 87] Reflections are a critical component of MI because they not only convey that the provider is listening to what the patient has to say, but that the provider is making a genuine effort to understand the patient's experiences, feelings, and meaning.[47] MI recommendations suggest that providers spend twice as much time using reflections than asking questions and, when reflecting, to go beyond simply repeating back what patients are saying to increase the complexity of their reflections to summarize their understanding of the patient's experience, which conveys deeper understanding and greater empathy.[47]

Recommendation: Emphasize Patients' Decision-Making Autonomy

Emphasizing the patient and caregiver's autonomy was not only more likely to elicit both change talk and commitment language in our sample, this communication technique was also less likely to elicit sustain talk (statements about why the patient or caregiver should maintain their current behavior, i.e., the "status quo"[47]). This finding is supported by Self-Determination Theory (SDT)[68] which posits that all individuals have an innate need to experience one's behavior as self-regulated and self-endorsed.[69] SDT has explained exercise participation among teens[93] and African American adolescents specifically[94] and, recently, it has been suggested that MI is the primary intervention method of SDT.[47] The need for autonomy is particularly relevant among adolescents who are actively engaged in the developmental task of becoming independent.[95] When providers use language that honors the adolescent patient's autonomy, rather than feeling marginalized and excluded from their own health care,[30] their motivation for participation appears to be activated.

Use Caution: Providing Information May Not Always Be Necessary

Although providing information is one of the three core communication skills– informing, asking, and listening – MI recommends for the health care setting,[47] our research suggested providers use caution when providing patients with health related information. Even when providers used patient-centered communication techniques, such as asking permission, using

the third person, and offering a menu of options, information provision resulted in decreased adolescent and caregiver change talk, decreased adolescent commitment language, and increased in "other" types adolescent and caregiver speech. It may be that in our weight loss intervention for adolescents with obesity, families already had sufficient knowledge of weight loss and previous experience with attempting to lose weight that providing weight loss information was counter-productive. In fact, in our adolescent analyses, provider information statements were followed by "other" patient statement of which 30% were patient recollections of past behavior.[88] These recollections included rehashing past, failed attempts to lose weight rather than focusing on their present motivation for weight loss. To avoid such counterproductive discussions, we suggest providers carefully elicit and consider the patient's current knowledge and experience before providing information related to changing health behaviors.

Future Directions

Patient-Provider Communication in Triadic Encounters

Our research group is currently adapting the MY-SCOPE for triadic communication, that is, encounters in which there are three participants: the adolescent patient, his/her caregiver, and the provider. Triadic interactions are characteristic of pediatric health care visits and, therefore, of paramount interest. Our goal is to understand if the provider behaviors that evoke adolescent patient and caregiver change talk and commitment language in triadic MI sessions are similar to those in traditional, dyadic MI sessions. To this end, we have successfully adapted the MY-SCOPE for the triadic encounter (i.e., MY-SCOPE3) and coding is underway. To date, our coders have coded 40 triadic MI weight loss sessions with African American adolescents and their primary caregivers. Nine have been co-coded for inter-rater reliability, which is acceptable ($\kappa = .613$).[96] Results from this work are forthcoming.

Accelerating Communication Science with Computer Science

Computational technology has developed rapidly in the past decade with topic and classification models offering an efficient alternative to traditional, resource-intensive, qualitative text analysis. Topic modeling is a data mining technique in which a computer algorithm uses a probabilistic model to identify topics (i.e., themes) based on word probability distributions.[97–99] Our research group has been experimenting with these models as an alternative approach to behavior coding, such as the MY-SCOPE. As a preliminary test of these models, we analyzed the patient language in the 37 transcribed audio-recordings from the MY-SCOPE study. In supervised classification modeling, a small, existing coded data set is used to train a computer algorithm to recognize different behaviors based on the speech patterns patients use. Once trained to an acceptable level of reliability, the trained classifiers are used to label (i.e., code) new data.[100] Thus, a subset of the transcripts previously coded with the MY-SCOPE were analyzed with several classification model algorithms (Naïve Bayes,[101] Support Vector Machines,[102] and Conditional Random Fields[103]). All classifiers demonstrated promising results but the Support Vector Machine model performed best, correctly classifying 55.4% of adolescent speaking turns.[104] We are optimistic that with refinement these approaches will offer efficient alternatives to labor

intensive traditional qualitative coding and, thereby, accelerate the pace of outcomes-oriented communication research.

Summary

Patient-provider communication, although acknowledged as a key clinical skill and linked to better outcomes for patients, providers, and society as a whole, is not a primarily focus of many medical schools' curricula. Motivational Interviewing, or MI, is a patient-centered, directive communication framework appropriate for the health care setting with an ever growing empirical evidence base. Research on MI's causal mechanisms has previously established patient change talk (motivational statements about behavior change) to be a mediator of behavior change. Current MI research is focused on identifying which provider communication skills are responsible for evoking change talk. MI recommends three core communication skills – informing, asking, and listening. A consistent evidence base is emerging for providers' use of reflections (an active *listening* strategy). Our research provides evidence linking *asking* to patient change talk but cautions providers to *provide* information judiciously.

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Key Points

- Patient-provider communication is a key clinical skill linked to better patient satisfaction and improved outcomes for both patients and providers.
- Motivational Interviewing is a patient-centered, yet directive method of communication suitable for most clinical encounters.
- Emphasizing patients' behavior change autonomy is important when working on health related behavior change, particularly for adolescents who are actively engaged in the developmental task of becoming independent and seek out opportunities to make their own life choices.
- Providers integrating Motivational Interviewing communication skills into their practice are encouraged to ask open-ended questions specifically phrased to elicit patient change talk about the targeted behavior and to reflect patients' own change talk back to reinforce their existing motivation for enacting behavior change, but should carefully consider patients' current knowledge and experience before dispensing information related to the recommended behavior.

Box 1

What is "Change Talk"?

Change talk is patients' own statements about their own desire, ability, reason, and need to change their unhealthy behavior. The following statements are examples of patient change talk related to weight loss:

Desire: *I want to lose weight.*

Ability: *I know how to read a food label.*

Reason: *I do not want to get diabetes!*

Need: *I need to be a role model for my child.*

Commitment Language is a special class of change talk that describes patients' intentions and plans for enacting behavior change. Commitment Language is more closely linked to behavior change than change talk.

Next time I go to the grocery store, I will not buy junk food.

Box 2

Sequential Analysis

In sequential analysis, the data are organized into a contingency table with the antecedent behavior in rows and the corresponding response behaviors in column. The cells of the table represent the transitions between antecedents and responses for a given time interval (i.e., the lag). Each transition has a conditional probability that describes the extent to which the transition is more or less probable than expected by chance.

Responses (t2) → Antecedents (t1) ↓	**Adolescent Response Statement 1**	**Adolescent Response Statement 2**
Counselor Communication Behavior 1	Transition Probability 11	Transition Probability 12
Counselor Communication Behavior 2	Transition Probability 21	Transition Probability 22

Table 1
MI-Consistent Communication (MICO) Techniques

MICO techniques are provider communication strategies specifically designed to elicit patient change talk statements. They embody the underlying spirit of MI to support patients' exploration of behavior change.

MICO Technique	Description	Example
Advise with Permission	Offering advice, solutions, suggestions, or courses of action collaboratively (i.e., in response to a patient's request, asking permission)	*Would it be okay with you if I explained what your healthy weight loss would be?*
Affirm	Positive or complimentary statements that express appreciation, confidence, or reinforce the patient's strengths or efforts.	*It took a lot of willpower to refuse cake at a birthday party, good for you!*
Emphasize Control	Statements that directly acknowledge, honor, or emphasize the patient's freedom of choice, autonomy, personal responsibility	*This is your treatment and you get to choose how it goes.*
Open Question	Questions phrased to encourage patients to expand upon their perspective, thoughts, emotions, and concerns	*How has your weight affected your life?*
Reflections	Simple: repeating back patients' own statements Complex: repeating back patients' own statements, but adding to the underlying meaning or emotion	*You want to lose weight, but you're not sure how to get started.* *You're worried you might not lose weight even if you change your eating.*
Reframe	Suggesting a different meaning, explanation, or perspective for a situation a patient has described	*Asking about your exercise plans might be your mother's way of showing your she's interested and cares about your weight loss goals.*
Support	Statements that convey genuine support or understanding	*That must have been difficult for you.*