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An Update on the Representational Approach to Patient Education

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Abstract

Purpose—To provide an update on the Representational Approach to patient education.

Organizing Construct—The development and testing of theoretically sound interventions are essential for advancing the science of patient education. The Representational Approach to patient education was introduced in 2001 as an intervention theory that could guide the content and process of a wide-range of educational interventions. Since that time several specific interventions based on the approach have been developed and tested, resulting in modifications to the Representational Approach.

Methods—Four intervention trials based on the Representational Approach are discussed: the Representational Intervention to Decrease cancer Pain (RIDcancerPain), Patient-Centered Advance Care Planning (PC-ACP), an Individualized Representational Intervention to Improve Symptom management (IRIS), and the Written Representational Intervention to Ease Symptoms (WRITE symptoms).

Results—Findings from these trials support that interventions based on the Representational Approach are efficacious. In addition, these trials provided critical information to strengthen the approach and to extend it to novel clinical problems and delivery modes.

Conclusion—The Representational Approach to patient education appears to be adequately flexible to guide interventions in different patient care situations, while also sufficiently structured to be replicable and testable.

Keywords

Patient education; Intervention research; Symptom mgmt.; Pain management; Oncology; End of life care

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In 2001, the Representational Approach to patient education was proposed and initial evidence of its acceptability to patients was described (Donovan & Ward, 2001). The Representational Approach is based on theory regarding illness cognition (Kleinman, Eisenberg, & Good, 1978; Leventhal, Meyer, & Nerenz, 1980; Leventhal, Nerenz, & Steele, 1984) and theory regarding how conceptual change occurs (Hewson & Thorley, 1989; Posner, Strike, Hewson, & Gertzog, 1982). The core tenet of this approach is that effective patient education is most likely to occur when patients' knowledge and beliefs are elicited *prior* to the provision of any new information.

In the years since the publication of the Representational Approach, it has been operationalized into specific representational interventions and tests have been conducted which provide initial evidence that the Representational Approach is not only valued by patients but is also efficacious (Donovan & Ward, 2001; Song, Kirchhoff, Douglas, Ward, & Hammes, 2005; Ward, et al, in press). These studies have also resulted in clarifications, revisions, and additions to the Representational Approach. The purpose of this paper is to provide an update on the approach, describe the development and testing of interventions based on the approach, describe modifications and extensions to the approach, and discuss avenues for future research.

Introduction

Theoretical Foundations of the Representational Approach

The Representational Approach to patient education is based on two complementary theories regarding the structure of knowledge and the processes through which knowledge changes in the face of new information. The first theory, Leventhal's Common Sense Model (CSM), is a theory that has guided a great deal of research on coping with health threats (Leventhal & Diefenbach, 1991; Leventhal, et al., 1984). The CSM focuses on understanding a person's cognitive representations of health problems and the influence of those representations on coping and outcomes. An illness representation can be thought of as a network of related information (including memories, ideas, attitudes, beliefs, etc.) that an individual has about a health problem. Much research has been done describing the content and structure of illness representations (e.g. Keller, 1993; Lau, Bernard, & Hartman, 1989). This research indicates that cognitive representations generally include an individual's ideas about the identity, cause, timeline, consequences, and cure/controllability of an illness. In fact, early work in medical anthropology by Kleinman and colleagues (1978) supports that these dimensions of illness representations are seen cross-culturally.

A critical assumption of the CSM is that representations are based on a wide range of influences - from traditional information-based learning to everyday experiences to stories from influential others - and therefore may not be scientifically or medically accurate. In recognition of the importance of understanding a person's everyday or "common-sense" representations of illness, Leventhal named his theory the Common Sense Model. Individuals' representations are critical to patient education because existing representations serve as the framework through which all new information is evaluated and understood.

The second core theory of the Representational Approach is the Conceptual Change Model, a model that addresses the process through which learning (conceptual or representational change) occurs (Hewson & Thorley, 1989; Posner, et al, 1982). The purposeful effort that is required to restructure existing representations is what distinguishes conceptual change from other theories of education. As described by Hewson (1993), "learning is a process in which prior knowledge is the basis for interpreting or giving meaning to new information or situations" (p. 394). Most representations are lacking in depth and breadth and include *gaps* (missing information), *errors* (misconceptions), and *confusions* (unclear or conflated ideas) (Baumann & Leventhal, 1985; Cameron, Leventhal, & Leventhal, 1993; Hewson, 1992; Horowitz, Rein, & Leventhal, 2004). It is these gaps, errors, and confusions, as understood within the context of a patient's very individual or unique representation, which can focus a clinician's patient education efforts. As patients become aware that their representations are incomplete, unclear, or erroneous, they may become dissatisfied with their existing knowledge. Dissatisfaction with current representations is considered a precursor to conceptual change. In these situations, if new information is presented which is intelligible (makes sense), plausible (believable), and fruitful (is of clear benefit or solves a current problem), the new information is likely to be accommodated, resulting in conceptual or representational change. This change can occur through *integration* of new information into existing representations in order to fill in the gaps in understanding; through *differentiation or clarification of* existing representations (in order to reduce any confusions); or through the *exchange* of misconceptions with new information (Hewson, 1992; Hewson & Hewson, 1984).

The Representational Approach

Based on these theoretical underpinnings, the Representational Approach to patient education was developed. The approach requires eliciting and understanding patients' pre-existing representations of illness before giving new information. In this way, the clinician and patient have the opportunity to recognize gaps, confusions, and misconceptions in the patient's representation. Equally important, by understanding the individual's representations of the health problem, the clinician can provide new information in a specific, highly relevant, individualized manner that is more likely to be accepted by the patient as intelligible, plausible, and fruitful.

The original Representational Approach to patient education was described as a 5-step process (Donovan & Ward, 2001). In the first step, representational assessment, the clinician encourages the patient to describe his/her health problem along five dimensions of representation: what their health problem feels like (identity), what they believe is causing it (cause); the temporal nature of the health problem (timeline); perceived short- and long-term consequences of the problem (consequences); and the extent to which the problem is curable or controllable (cure/control). During the assessment phase, the clinician attempts to identify any issues (gaps, confusions, and misconceptions) in the patient's representation that need to be addressed. In the second step, exploring misconceptions, the clinician encourages the patient to think about the experiences that led to any beliefs that are misconceptions and to evaluate the strength or importance of those beliefs. In the third step, creating conditions for conceptual change, the patient and clinician discuss any problems associated with the patient's current representations and the consequences of those representations for their coping behavior. The clinician makes direct links between previously elicited gaps, confusions, or misconceptions and undesirable consequences. In the fourth step, introducing replacement information, the clinician presents new information to fill in gaps in knowledge, clarify confusions, and replace misconceptions. In the fifth and final step, summary, the clinician summarizes the new information and discusses benefits to be expected from acting on the new information.

It should be emphasized that although the Representational Approach was described in a linear, step-wise fashion, in reality it is a fluid interview that moves back and forth between steps. To emphasize this fluidity, we no longer refer to "steps"; instead we refer to "key elements" of the approach. The goal is to maximize opportunities for the patient to reflect and comment on his/her own ideas and to provide new information during times when the patient is most ready to hear it. The opportunity for self-reflection is critical to conceptual change. Therefore, although creating conditions for conceptual change is described as a specific element in the approach, it can be viewed as a "meta-goal" of the entire process. In fact, clinicians who have used the Representational Approach often talk about "seeing the light go on" - the moment of conceptual change when the patient, while talking about his or her health problem, suddenly becomes eager for new information and begins to see plausible strategies for achieving better outcomes.

Specific Interventions Based on the Representational Approach

To date, the Representational Approach has been operationalized and tested in four sets of intervention studies. Each of these studies led to important insights about and modifications and extensions to the Representational Approach. In the following paragraphs we describe these studies, their findings, and their influences on the Representational Approach.

Representational Intervention to Decrease Cancer Pain (RIDcancerPain)

Overview of Study—The first test of the Representational Approach was a randomized trial of a representational intervention to decrease cancer pain (RIDcancerPain) (Ward et al., in press). A patient education intervention for cancer pain management was needed because a number of attitudinal barriers to pain management had been identified among cancer patients and their family members, and these barriers were consistently associated with sub-optimal pain relief for patients (Gunnarsdottir, Donovan, Serlin, Voge, & Ward, 2002; Ward, Carlson-Dakes, Hughes, Kwekkeboom, & Donovan, 1998; Ward et al., 1993; Wells, Hepworth, Murphy, Wujcik, & Johnson, 2003). These attitudinal barriers include fatalism about achieving pain relief and exaggerated fears of addiction, among others. Operationalized directly from the original Representational Approach, RIDcancerPain has five key elements. The first element is the representational assessment in which the patient is encouraged to discuss his/her beliefs and experiences with cancer pain along the five dimensions of representation. This assessment is an excellent way to elicit descriptions of common attitudinal barriers that are often misconceptions (e.g. people who take opioids get addicted to them; if my doctor prescribes a strong medicine for me now, when my pain gets worse later, the pain medicine won't work anymore); gaps in knowledge (there's nothing that can relieve cancer pain); and confusions (I experienced withdrawal symptoms when I ran out of medicine, so that means I'm addicted). As these barriers are being elicited, the second element of the intervention is initiated -- an exploration of any identified misconceptions or confusions with an emphasis on understanding where they originated and how committed the individual is to them.

The third element involves creating conditions for conceptual change by helping the patient to recognize the limitations of their current conceptions -- ways in which their current conceptions may be interfering with good pain management and what consequences have resulted from those previous conceptions. Such recognitions often occur spontaneously as the patient has the opportunity to reflect on his/her experiences. When this does not happen, the clinician can facilitate it by making direct links between current representations, coping strategies, and any consequences that the patient has identified. The fourth element involves introducing replacement information -- providing credible information to fill in gaps in knowledge, clarify confusions, and replace current misconceptions. The fifth element is a summary and discussion of the benefits to be expected of acting on the new information that has been provided. Again, this is an iterative process in which the clinician moves back and forth among the elements of the approach, guided by the patients' responses and needs.

Methods—RIDcancerPain was compared to standard educational information (SEI) in a randomized trial of 176 persons with cancer-related pain. Outcome variables (pain severity and well-being) and mediating variables (barriers, coping) were assessed at baseline (T1), and one (T2) and two (T3) months post intervention.

Results—Results revealed that RIDcancerPain was superior to SEI. Specifically, at both T2 and T3 subjects in RIDcancerPain showed greater decreases in attitudinal barriers compared to those in SEI. In addition, RIDcancerPain worked similarly well for Caucasians and minorities, while minorities in the SEI group reported increased attitudinal barriers over time compared to Caucasians. At T3, subjects in RIDcancerPain showed greater decreases in pain severity than those in SEI. Again, Caucasians and minorities did similarly well in RIDcancerPain, while minorities did worse than Caucasians in SEI. Changes in Barriers scores mediated the effect of RIDcancerPain on change in pain severity (Ward et al., in press).

Implications for Representational Approach—Although these findings were positive, the it was clear that RIDcancerPain needed to be strengthened. Specifically, patients needed more support during the difficult process of conceptual change. RIDcancerPain was conducted during only one session, and although patients were provided with new information, little support was given for translating the new information into concrete strategies for behavior change.

Based on this insight, two key elements have been added to the Representational Approach: *Goal Setting and Planning*, and *Follow-up Reinforcement*. During goal setting and planning, patients are asked to identify personally important goals related to their health problem. If they are unable to generate goals, the clinician can suggest goals to reduce negative consequences that were identified earlier in the session. Then, the patient and clinician work to identify strategies that could help them reach the goals. During the follow-up reinforcement session (generally 2 weeks after the initial intervention), patients are asked to evaluate the strategies they attempted to implement and, if necessary, make revisions to the plan. The updated Representational Approach (Table 1) includes examples of questions that are useful during the follow-up phase of the intervention.

The second insight from this study was that providing the intervention to patients and their significant other might strengthen the intervention. Significant others often have beliefs that are barriers to optimal analgesic use (Berry & Ward, 1995) and patients believe that support from family/friends contributes to effective pain relief (Riddell, 1993). The feasibility and acceptability of the new, strengthened intervention, RIDpain+, was pilot tested. It was viewed by patients and significant others as useful and meaningful. A randomized trial of RIDpain+ is now in progress (Ward, NR03126).

Patient-Centered Advance Care Planning (PC-ACP) Intervention

Overview of the study—In the second study testing a representational intervention, the Representational Approach was used to develop and test an intervention to improve communication about end-of-life care for patients preparing to undergo cardiac surgery (Song, et al., 2005). Standard advance care planning focuses on the completion of legal documents (i.e., advance directives) and has largely failed to improve shared decision making about end-of-life treatment. The Patient-Centered Advance Care Planning (PC-ACP) intervention is based on the elements of the Representational Approach in order to facilitate discussions that are responsive to individual patient preferences, needs, and values and ensure that patients' values guide treatment decisions (Song, et al.).

PC-ACP begins with a representational assessment by asking the patient to describe his/her representation of the current illness. Patients discuss how their illness has affected their life and how they feel about their illness progression. Patients are encouraged to verbalize what gives meaning to life in the shadow of life-threatening illness. This is a critical discussion for both patient and surrogate to process their ideas about the severity of illness and its progression. During the second element, exploring concerns, the patient is asked to think about what experiences led to concerns related to end-of-life discussions. The dyad is asked to describe what end-of-life experiences they have had with family/friends and how these experiences have influenced their ideas about their own choices for future medical care. They are encouraged to express concerns related to end-of-life care. During the third element, Creating Conditions for Conceptual Change, the clinician reviews the concerns and discusses the influence of those concerns on the patient's and surrogate's ability to make informed choices about future medical care. The dyad begins to verbalize what might happen if serious complications occur suddenly after surgery or in the course of recovery. They begin to personalize that possibility.

When introducing replacement information (element four), the clinician presents a "statement of treatment preference" document to help the patient understand potential complications of the upcoming surgery and the kinds of treatment decisions the surrogate may be asked to make. The clinician also provides information on benefits/burdens of life-sustaining treatment related to the patient's medical condition and reviews the characteristics of an ideal decision-maker. For element five, summary, the patient, surrogate, and clinician discuss the new information and the expected benefits of the dyad acting together with the new information.

Methods—Thirty-two dyads (the patient undergoing cardiac surgery and his/her chosen surrogate decision-maker) were randomly assigned to receive PC-ACP or usual care. Outcome variables included patient-surrogate congruence regarding goals for future medical care, anxiety, patients' decisional conflict, and patients' and surrogates' knowledge of advance care planning.

Results—Compared to usual care, the dyads in PC-ACP significantly improved in patient-surrogate congruence and showed a reduction in patients' decisional conflict. Pre-post anxiety did not differ between the two groups (Song, et al., 2005). The process of articulating preferences for future medical care is typically very difficult. In this study, the PC- ACP was an effective approach to helping patients articulate wishes and make plans for future medical care based on their illness experiences and beliefs.

Implications for Representational Approach—Important insights from this study were that the Representational Approach is a versatile approach to patient education that has the potential to be used in a wide-range of patient care situations. Second, this study demonstrated the benefits of involving significant others in the intervention in order to increase the ability of the patient to identify and reflect on important health-related representations. Finally, this study provided important preliminary data that, despite some clinicians' concerns, patients and family members can discuss highly emotional situations (potential surgical complications and end-of-life decision making) without increasing anxiety and decisional conflict and without interfering with patients' plans to follow through with the scheduled surgery.

Individualized Representational Intervention to Improve Symptom management (IRIS)

Overview of the study—In the third study testing a representational intervention, the Representational Approach was used to develop an intervention to reduce symptom distress and improve quality of life in older (> 64 years) breast cancer survivors. Older breast cancer survivors typically experience multiple chronic health problems associated with aging in addition to their breast cancer and are faced with the task of making meaning of and managing the numerous symptoms associated with these conditions.

The Individualized Representational Intervention to Improve Symptom management (IRIS) expanded previous work using the Representational Approach by addressing the multiple symptoms commonly experienced by older persons (rather than single symptoms or only symptoms related to cancer treatment). Women chose up to three symptoms for intervention, they received individualized symptom management information based on their specific symptom representations, and they developed individualized symptom management goals and strategies.

IRIS begins with a representational assessment of the "target symptoms" women choose for intervention. The woman is encouraged to describe the symptoms along the five dimensions of representation. This typically elicits how women's confusions and misconceptions (most often related to the cause and control of symptoms) affect her ability to manage symptoms and enjoy life. The clinician can draw explicit links between issues that have been raised (e.g., I don't know which doctor to tell about this symptom) and consequences the women is currently experiencing (e.g., the symptom is not being adequately treated), thus creating conditions for conceptual change. The clinician provides replacement information, which generally consists of evidence-based symptom management strategies as well as guidance on communicating more effectively with health care providers. During this discussion the clinician outlines the ways in which the new information could facilitate better symptom management and improve the specific personal consequences reported by the woman. The nurse helps the woman create an individualized symptom management plan that outlines specific goals and the strategies to achieve them. Follow-up and reinforcement is done by phone. The clinician and woman review the symptom management plan, analyze progress toward goals, determine both useful strategies and barriers to progress, and revise the plan as needed.

Methods—The feasibility and short-term effects of IRIS on symptom distress were evaluated in a pilot randomized trial of 42 older breast cancer survivors. Women were randomized to

IRIS or usual care. The primary outcome was target symptom distress. Secondary outcomes were symptom management behaviors and quality of life. Measures were obtained at baseline, 6- and 10-weeks post intervention.

Results—There were significant group differences in symptom management behaviors at 10 weeks. Women in the IRIS group were more likely to change their self-care of symptoms, report that self-care was helpful, talk to their health care provider about their symptoms, and start a new medical therapy for symptoms. We also found a significant decrease in target symptom distress (assessed in the IRIS group only) from baseline to follow-up

A second randomized trial in 21 older breast cancer survivors was conducted (P20 CA103697). Four biweekly telephone reinforcement sessions were added, follow-up was extended to 16 weeks to allow women more time to implement their symptom management plans, and women were randomized to IRIS or a wait-list control group. At 16 weeks, there was significantly lower target symptom distress in the IRIS group compared to controls. Women in the IRIS group were significantly more likely to have communicated with their health care provider, begun a new medical therapy, perceived improvement as a result of medical therapy, and changed their self care of symptoms.

Implications for Representational Approach—These two pilot studies provided support for using the Representational Approach in a highly individualized manner to address multiple symptoms and for its use with older individuals with complex health problems. IRIS is currently being tested in a large randomized clinical trial (Heidrich AG022914).

Extension to a Novel Delivery Mode: A Written Representational Intervention to Ease Symptoms (WRITE Symptoms)

Overview of the study—A fourth study is currently underway to evaluate the feasibility and acceptability of using secure Internet messaging to deliver representational interventions (Donovan, NR009275). The specific aims of the study are to evaluate the feasibility and acceptability of delivering *WRITE Symptoms* to women with recurrent ovarian cancer via secure Internet messaging services, and to compare changes in symptom representations, symptom interference with life activities, and QOL between women who receive *WRITE Symptoms* and those who receive usual care from their health care providers.

WRITE symptoms is similar to *IRIS* in that subjects select multiple symptoms to address during the intervention and the content and process of the intervention is tied closely to the seven elements of the Representational Approach. However, rather than being conducted in face-to-face interviews, the research nurse and subjects communicate via postings to each subject’s own private message board.

Methods—Subjects are 90 women experiencing two or more bothersome symptoms associated with recurrent ovarian cancer. Women are randomly assigned to either the *WRITE Symptoms* intervention or to a wait-list control group. The seven elements of *WRITE Symptoms* are conducted over 3-4 weeks via secure messaging services. Measures of symptom representations, symptom interference with life activities and quality of life are completed by all subjects at baseline and 5- and 9- weeks later.

Potential implications for the Representational Approach—Delivering this representational intervention via the Internet may provide several important benefits. First, giving each patient her own secure bulletin board provides her with a single “place” to go to work on symptom management. All correspondence between the patient and clinician are recorded and contained in one easily accessible place. The patient (and clinician) are be able to follow the thread of the messages and can return to the bulletin board at any time to review discussions and recommendations. Second, by using secure Internet messaging services, clinicians and patients are not constrained by the need to find a convenient time or place to meet. This issue has been a barrier to recruitment in our face-to-face interviews. Instead, patients and clinicians can each access the bulletin board at times that meet their schedule; a feature that has proved advantageous in other computer mediated health interventions. Third, representational interventions are often quite complex, requiring clinicians and patients to process a great deal of information. It is sometimes difficult for clinicians to provide instantaneous responses to patients' symptom-related problems. Asynchronous messaging provides the clinician with time to review the patient's concerns, gather information and prepare a highly individualized response in an organized, timely fashion. Similarly, patients have time to process new information and generate questions adding to the potential for conceptual change.

Discussion

A particular strength of the Representational Approach is its purposeful outgrowth from Leventhal's Common Sense Model and from theories of conceptual change. Our overarching motivation has always been to develop a theoretically sound approach to patient education that could serve as a guide for both the content and process of specific interventions. This approach serves as the link between existing theory and specific interventions, and because of its explicit theoretical framework, it should apply to a wide variety of clinical problems.

Other patient education interventions have been based on the Common-Sense Model (Petrie, Cameron, Ellis, Buick, & Weinman, 2002; Shifren, 2003). Interventions based on the Representational Approach differ from these other interventions in that they are guided by educational theories of conceptual change. The key distinguishing feature of the Representational Approach is that it is builds on the strengths of two extant theories. The components derived from the Common-Sense Model focus on *what patients know and understand about their health problems.* This guides the clinician in how best to elicit the content and structure of patients' health beliefs. Components derived from theories of conceptual change focus on *how patients learn new information and behaviors*. This guides the clinician in how best to present information in ways that will be understood, accommodated, and acted on by patients.

Future research should begin to look more closely at key moderators and mediators of representational interventions. As with other types of interventions, it is likely that there are patient populations, clinical problems, or personal characteristics for which representational interventions are well-suited and others for which they are less appropriate.

Similarly, a primary goal of future studies should be to identify the processes through which the Representational Approach has its effects. Theoretically, conceptual change (e.g. changes in representations) should mediate the effect of representational interventions on patient outcomes. Findings from the RIDcancerPain study (Ward et al., 2005) showing that changes in subjects' misconceptions about pain and pain medication mediated the effect of RIDcancerPain on change in pain severity support this proposition, but more work is needed in this area.

Finally, before research on the Representational Approach moves into effectiveness studies (implementing and evaluating the approach in clinical practice), it will be important to identify the critical components of the approach. Currently the 7-element approach leads to time-intensive interventions. Future research should attempt to identify whether each of the seven elements is critical to the success of the approach, and if not, which of the elements are associated with the largest improvements in outcomes. Even if all seven elements are critical to the success of interventions based on the approach, we would argue that the time committed up-front to a comprehensive representational assessment (the most time-intensive aspect of the approach), may well result in both cost and time savings over the course of the long-term patient-clinician relationship. Future research should attempt to test this hypothesis.

Conclusions and Practice Implications

Although such research is clearly needed to foster refinement of the Representational Approach, there is evidence from multiple studies in diverse populations that this approach is efficacious in comparison with standard approaches to patient education. The approach is adequately flexible to guide interventions for many different patient care situations, while also sufficiently structured to be replicable and testable.

Additionally, the Representational Approach to patient education clearly meets the goals of "patient-centered care". The term *patient-centered* has been defined as the extent to which service providers perform in a manner that is purposeful, mindful, and responsive to the socio-cultural context of the patient (Radwin, 1995). *Patient-centered care* refers to the specifics aspects of intervention delivery. Lauver and colleagues (2002) describe patient-centered interventions as those in which either "the content of the intervention is selected to address salient characteristics of the patient's experience" (p. 247) or "the intervention is responsive to patients' goals or preferences" (p. 247).

Consistent with patient-centered care, in the Representational Approach, the patient's beliefs about his/her illness are viewed as critical gateways to change. The provider's assessment and feedback is informed and guided by the patient's responses and socio-cultural context. The importance of considering the patient's perspective of the health experience and his/her response to provider feedback is fundamental to the approach. Patient-clinician communication and understanding are viewed as central features in improving patient outcomes.

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Table 1

Overview of the Representational Approach to Patient Education: Key Elements and Goals

Element	**Goals of Each Element**
1. Representational assessment	Patient is encouraged to describe their representations of their health problem (e.g. symptoms or illness) along the five dimensions of representations: identity, cause, timeline, consequences, and cure/control. Goal is to get a clear picture of the patient's understanding of their problem and to identify any gaps, error, and/or confusions.
2. Identifying and Exploring Gaps, Errors, and Confusions	Patient is encouraged to think and talk about what experiences led to the development of any misconceptions or confusions. The goal is to understand how any identified misconceptions or confusions developed and how committed the patient is to those beliefs/ideas.
3. Creating conditions for conceptual change	The goal is to help the patient recognize the limitations of his/her current conceptions -- i.e., ways in which gaps or confusions may be having negative effects on his/her life. Such recognitions often occur spontaneously as the patient has the opportunity to reflect on his/her experiences. When such recognitions do not occur spontaneously, they can be facilitated by making direct links between current representations, coping strategies, and any consequences that the patient has identified.
4. Introducing replacement information	Present credible information to fill in gaps in knowledge, clarify confusions, and replace current misconceptions.
5. Summary	Discuss benefits associated with acting on new information.
6. Goal Setting and Planning	Work with patient to develop goals related to improving his/her health problem and specific strategies for reaching those goals.
7. Follow-up contact: goal & strategy review	Discuss whether patient was able to implement strategies, what problems were encountered, any concerns patient has, how well strategies worked, and whether goal was reached. Discuss continuing with same strategies or making modifications. Encourage patient to continue same pattern of implementing, evaluating, and modifying strategies to manage health problems.