



IxInsights August 2006: Information Therapy **Supporting Behavior Change**

Webinar Background:

The August 2006 IxInsights webinar focused on the work Pro-Change Behavior Systems has done with the Transtheoretical Model (TTM) and information therapy to support consumer's behavior change. Pro-Change Behavior Systems is a research and development company that advances and applies the Transtheoretical Model of behavior change, which was developed over the last 25 years by one of the company's founders, Dr. Prochaska. Kerry Evers, PhD, is the Director of health behavior change projects at Pro-Change Behavior Systems and shared her insights with the IxAction Alliance.

IxInsights on Supporting Behavior Change

Insight #1: The Transtheoretical Model (TTM) proposes that behavior change progresses in five stages and that the most effective strategies for encouraging change are those that are appropriately targeted to the stage and moment in care an individual is at.

- Although the TTM involves five progressive stages, it is not a linear model. Stages do not need to be completed in order and relapses (recycling) may occur.
- The five stages of behavior change include:
 - **Pre-contemplation:** When a person has no intention to start taking action in the next 6 months. Typical characteristics of people in this group include:
 - Avoid reading, talking and thinking about the behavior or its risk
 - Has developed defenses against pressures from others to change
 - Minimizes, denies or is unaware of the dangers of their behavior
 - Lacks confidence in their ability to take action
 - Resistant to public policy changes that encourage the healthy behavior
 - **Contemplation:** The person is thinking about taking action within the next 6 months. Typical characteristics of people in this group include:
 - Beginning to seek information about changing their behavior
 - Increased awareness of the benefits of changing their behavior but they are ambivalent to change due to the costs of quitting
 - Feels unprepared and lacks the confidence in their ability to quit
 - Often waiting for an event to provide the crucial reason for them to change their behavior (such as the death of a friend with a similar problem)
 - **Preparation:** The person is getting ready to take action and intends to start in the next 30 days. Characteristics that are typical of people in this group include:
 - Less tempted to continue the behavior and more confidence in their ability to change
 - Assesses the benefits of change as higher than the costs
 - The most active information seekers
 - More likely to participate in and benefit from behavior change programs
 - May leap into action prematurely (24 hour quit attempt)

- **Action:** In this stage, the person has recently started to change their behavior (for less than 6 months), though there is still a temptation to recycle.
- **Maintenance:** A person at this stage has changed their behavior consistently for more than 6 months. Although this is considered a successful behavior change, there is still the potential for recycling due to overconfidence or atypical temptations.

IxInsight #2: When deciding whether to change a behavior, consumers go through the process of decisional balance where they evaluate the pros and cons of changing. There are predictable degrees of decisional balance that align with each of the five stages of change.

- In the process of decisional balance, people weigh the perceived positives of behavior change against the perceived negative consequences of change.
- As a consumer progresses along the TTM stages of behavior change, they perceive the benefits of behavior change as outweighing the costs.
 - In pre-contemplation, the cons of behavior change outweigh the pros.
 - At the contemplation and preparation stages, the pros and cons are fairly balanced and people typically experience ambiguity at these stages.
 - At the action and maintenance stages, the pros of behavior change outweigh the cons.

IxInsight #3: The ten processes of change within the TTM theory serve as the foundation of intervention design and mediate the transitions between stages. These behavior change strategies include cognitive, affective, evaluative, interpersonal and behavioral techniques.

- The ten strategies of behavior change are categorized as being either experiential processes (thinking, feeling or experiencing) or behavioral processes (things people actually do).
- The experiential processes include:
 1. **Consciousness Raising:** Increasing awareness through the provision of information. This is especially important in the early stages of behavior change in order to convince consumers of the benefits of change.
 2. **Dramatic Relief:** Arousing emotions to elicit negative feelings about the risky behavior
 3. **Self Reevaluation:** Self reappraisal to decide if the behavior change will help you become someone you want to be
 4. **Environmental Reevaluation:** Social reappraisal to decide if the behavior change will help you become a better role model within your social network
 5. **Social Liberation:** Adopting one's social network and environment to encourage and support behavior change
- The behavioral processes include:
 1. **Helping Relationships:** Receiving support from others
 2. **Reinforcement Management:** Rewarding positive behaviors through intrinsic and extrinsic rewards is more effective for behavior change than punishing bad behaviors
 3. **Counter-conditioning:** Substituting risky behaviors for positive behaviors
 4. **Self Liberation:** Making a personal commitment for behavior change
 5. **Stimulus Control:** Adapting one's environment to support behavior change

IxInsight #4: One's level of self-efficacy is inversely negatively correlated with one's temptation to relapse from their changed behavior.

- Self-efficacy is one's degree of confidence to engage in a healthy behavior (or, accordingly, the level of temptation to engage in an unhealthy behavior) in a variety of situations.

- As one progresses along different stages of change, temptation decreases and confidence increases. Thus, intervention efforts are designed to increase one's confidence.

Insight #5: The TTM model can help deliver the right information to the right person at the right time by providing a theoretical framework to determine what interventions are appropriate for each individual and to encourage behavior change at each moment in care.

- Evidence and statistical decision-making models are used to tailor interventions so that they are appropriate for each individual at whichever stage of change they may be at.
- The TTM can deliver information through a variety of different communication channels that best conform to how a patient prefers to receive information.
- Programs that utilize the TTM theory are most effective when the information they deliver is of prescription strength, meaning that it's:
 - Decision-focused: Guides people to make healthy choices and changes
 - Evidence-based: Statistical analysis is used to refine individualized programs and outcomes analysis and peer review is used to guide program development.
 - Reviewed by experts: Including consultants and an internal clinical review
 - All Materials are Referenced
 - Up to date
 - Free from commercial bias
 - User friendly: Focus groups, cognitive interviews and usability testing in program development can help ensure programs are user-friendly
- The TTM has been used in programs that support prevention, self-care, self-triage, visit preparation, self-management of chronic illness and decision support.

IxInsight #6: Interventions can be more effective when they are tailored specifically to the individual by incorporating the processes of change that is most likely to motivate that particular individual.

- Interventions can be tailored to an individual by refining the intervention based on patients' responses to specific, relevant questions. This technique identifies which of the ten processes of change will be most effective for motivating a particular individual's behavior change.
- The use of an expert system program can aid computer generated progress reports based on periodic assessments of the patient which helps refine an intervention so that it is specific and meaningful to the individual.

IxInsight #7: Due to its high level of inclusion and targeted/tailored interventions, stage-matched interventions can yield high participation rates and result in more positive impact than just action-oriented programs.

- **Recruitment**: Stage-matched interventions can be sent to any patient and address their particular needs, not just those ready to change their behavior.
- **Retention**: Stage-matched interventions can yield high retention rates since participants can progress at a pace that they are comfortable with and aren't pressured to make changes they are not ready for. When patients perceive interventions as offering services that are appropriate for them they will feel more confident in the program, which will boost their morale and increase their likelihood of remaining in the program.
- **Progress**: Intervention efforts are intended to encourage consumers to set realistic goals and progress one stage at a time, thus increasing self-efficacy and the possibility of behavior

change. If recycling occurs, interventions address the reasons why there was a relapse, what can be learned and how relapses can be prevented in the future.

- **Process**: Delivering targeted stage-matched interventions that are specifically tailored and incorporate appropriate behavioral and experiential processes has shown to be an effective way to support behavior change.
- **Outcomes**: Statistical analysis, outcomes analysis and peer review can be used to guide program development.

Additional Resources

Pro-Change Behavior Systems:

Pro-Change develops interactive technologies that offer cost-effective modalities for bringing the maximum amount of science to bear on major behavior problems in entire populations. After extensive clinical trials, Pro-Change applies proven results to the development of versatile products that enhance individual wellness. The resulting proprietary products may be customized to meet client needs and are delivered as print-based media and/or web-based services as well as protocols for training and coaching. Pro-Change Behavior Systems serves the needs of HMOs, pharmaceutical companies, as well as state and federal agencies. The firm actively teams with international and domestic distributors for marketing, sales and customer support.

Pro-Change develops tailored communications for consumers that begin with assessments to collect specific data on patient's needs at that particular moment in care. Tailored communications are then developed out of these assessments using science and statistical decision making to determine what intervention strategies will be most appropriate and effective for that individual at that particular time. A variety of delivery formats are used including manuals, handbooks, interactive media systems and individualized progress reports. The progress of each individual is constantly assessed and the interventions are continually refined. Interventions are delivered and re-delivered so that they remain personal and up-to-date with the consumer's moment in care. Pro-Change's work has included programs focused on prevention, self-care, self-triage, visit preparation, self-management of chronic illness and decision support.