CHAPTER THREE

Change Theory and Models: Framework for Translation

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A butterfly is a transformation, not a better caterpillar.
—CHRIS MCGOFF FROM "THE PRIMES"

TRANSLATION MODELS, DISCUSSED IN CHAPTER 2, ARE MODELS of change but have been designed to guide thinking about and planning specifically the translation of new knowledge into practice. It is also useful in the discussion of translation of research into practice to consider change theory and models. The challenges to translation of research into practice are similar to the commonly described challenges to any change implementation, such as gaining internal support for the change, ensuring effective leadership, integrating with existing programs, developing a supportive organizational culture, maintaining momentum while changing, and documenting and positively publicizing the outcomes of the change (Bradley, Schlesinger, Webster, Baker, & Inouye, 2004).

Change—the transformation of tasks, processes, methods, structures, and/or relationships—is necessary for organizational survival. Changes, such as the diffusion of evidence-based practice (EBP) into an organization or, more specifically, the translation of new knowledge into practice, must be planned for and managed based on how the change affects the people of the organization. When planning for change, the situation will vary widely according to the impetus for the change, the type of change needed, the personnel and clients involved, and many characteristics of the organization, agency, or practice where the change is necessary. The planning and management of change determines whether the change will be a success or a failure (Crow, 2006).

Change has traditionally been viewed as a continual and sequential process, affected by a complex set of interacting factors. The rational change approach, with its origins in economic theory, assumes that those involved in the change will have full information, act reasonably and sensibly, use sound judgment and good sense, and that the change process is predictable, linear, and static. This classical view of change does not account for today's complex and chaotic change environment (Reineck, 2007). The behavioral change approach considers that organizations and their people are goal oriented, focused on purpose, and problem driven and that they have activities, patterns, and routines that

they follow as long as they work. When those patterns and activities prove insufficient, they seek to change. Theories of behavior change plan for and manage attitudes, norms, intentions, self-efficacy, benefits, fears, resistance, and perceived barriers to change, all concepts of human behavior (World Bank, 2010).

McConnell (2010) identified two major categories of resistance to change that must be planned for and managed as the change process is implemented. The principal cause of most resistances to change is the disturbance to the status quo or, as he describes, "equilibrium," especially if the disturbance or direction for change leads into unfamiliar territory. Secondary causes of resistance are intellectual shortcomings, or the inability to conceive of certain possibilities or to think beyond the boundaries of what is presently known or believed. Both of these causes of resistance to change are rooted in the EBP movement. Assessment of these causes of resistance and the development of strategies that anticipate and manage the resistance will enhance the adoption of or translation of new knowledge into practice.

This chapter discusses change theories and how they can be used to translate new knowledge into practice.

■ ORGANIZATIONAL THEORIES OF CHANGE

Lewin's Force Field Analysis

Kurt Lewin's (1951) classic theory of change is a three-phase change model that views change as a dynamic balance of forces (driving and restraining) working in opposite directions within an organization or *field* (Figure 3.1). The driving forces promote or move individuals toward the change direction, and the restraining forces inhibit or move individuals away from the change. Lewin's theory of change was developed after World War II when he carried out research exploring how individuals change their dietary habits. He

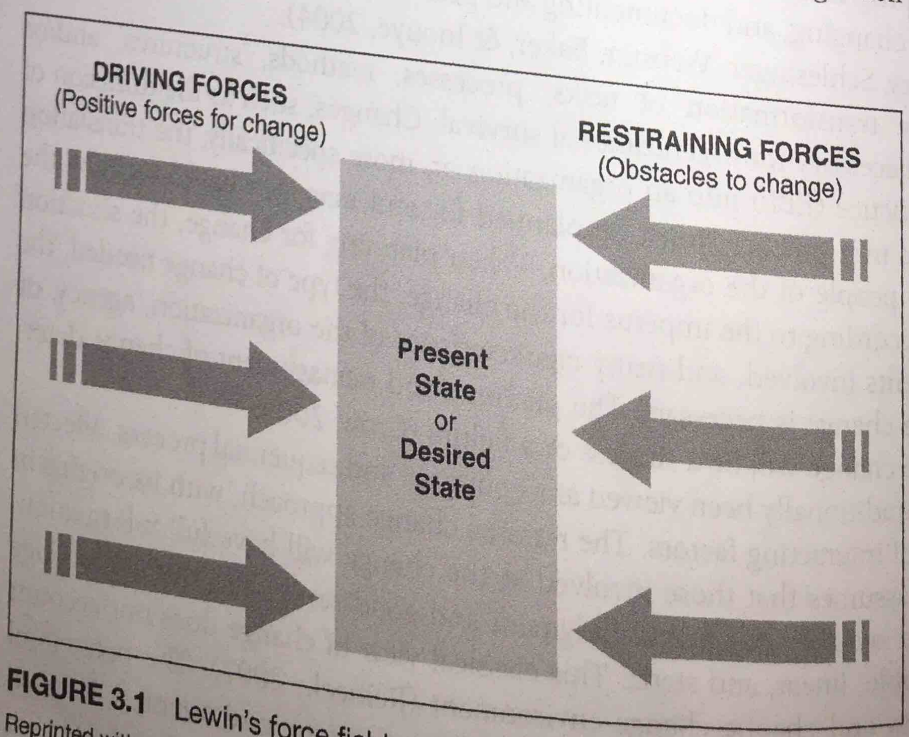

FIGURE 3.1 Lewin's force field analysis.

discovered that, if individuals are involved in the discussion about the change and issues surrounding the change, they are able to make their own decisions to change their behavior (Lewin, 1947). The first phase of the change process is to *unfreeze* the current situation by increasing the driving forces or decreasing the restraining forces toward change. *Moving* or *changing* is the second phase where the organization is moved toward a new equilibrium of driving and restraining forces. The final phase is *refreezing* that must occur after the change is implemented to sustain the change within the organization. Assessment of the forces, both driving and restraining, throughout the change process is necessary to recognize the power of the forces and to involve the individuals in the organization, build trust, encourage a new view, and to integrate new ideas into the organization.

Lewin's theory, although often criticized as viewing change as linear and predictable, is still used to plan change in organizations including EBP translations (Manchester et al., 2014; Shirey, 2013). Manchester et al. (2014) cite several studies and report their own application of the theory to two case studies from the Health Resources and Services Administration's Geriatric Education Center network to assert the need for planning change when dealing with contextual factors at play in the organization when implementing new evidence into practice. Instead of criticizing the linear nature of Lewin's three-step change model, they describe the "sequential anchors" of unfreezing, movement, and refreezing in the model as a way of understanding how the behaviors of health professionals become accepted and sustained in the clinical setting (Manchester et al., 2014).

Lippitt's Model of Change

Lippitt, Watson, and Westley (1958) built on the work of Lewin and developed a seven-step model of change that concentrated on the role of the leader in the change process and added the change agent role. The seven steps are:

1. Develop need for change by diagnosing the change
2. Establish change relationship and assess the motivation and capacity to change
3. Clarify assessment for change and determine resources
4. Establish goals and intentions for an action plan
5. Examine alternatives
6. Transform intentions into actual change and maintain the change
7. Generalize and stabilize change and end the helping relationship of the change agent

Havelock's Theory of Planned Change

Havelock (1976) further modified Lewin's theory of change and created a process for change agents to organize their work and to implement innovation in the work environment. They postulated that change is made up of cycles of action that are repeated as change advances and that the change agent must pay attention to the steps. They described six steps, but the visual of the model includes a stage 0 called *Care*, where a concern for needed change first occurs.

Care—attention to the need for change
Relate—build a relationship

Examine—diagnose the problem
Acquire—acquire the relevant sources
Try—choose the solution
Extend—disseminate, diffuse, and gain acceptance
Renew—stabilize and sustain capacity

Havelock and Zlotolow (1995) created a visual of the model for change agents to use and to guide the change process (Figure 3.2).

Framework for Guiding the Process of Implementation

Howes and Quinn (1978) summarized the organizational change literature on factors related to the successful implementation of change with a "how to" list for managers to implement change. They described two phases and 12 levers or guidelines for change, six levers in each phase.

The first phase is to *set up an adequate orientation environment* to prepare and positively influence the change by the following:

- Set aside enough time for adequate introduction to the change.
- Make the relative advantage of the change easily visible.
- Show organization members (users) that their efforts will be supported.

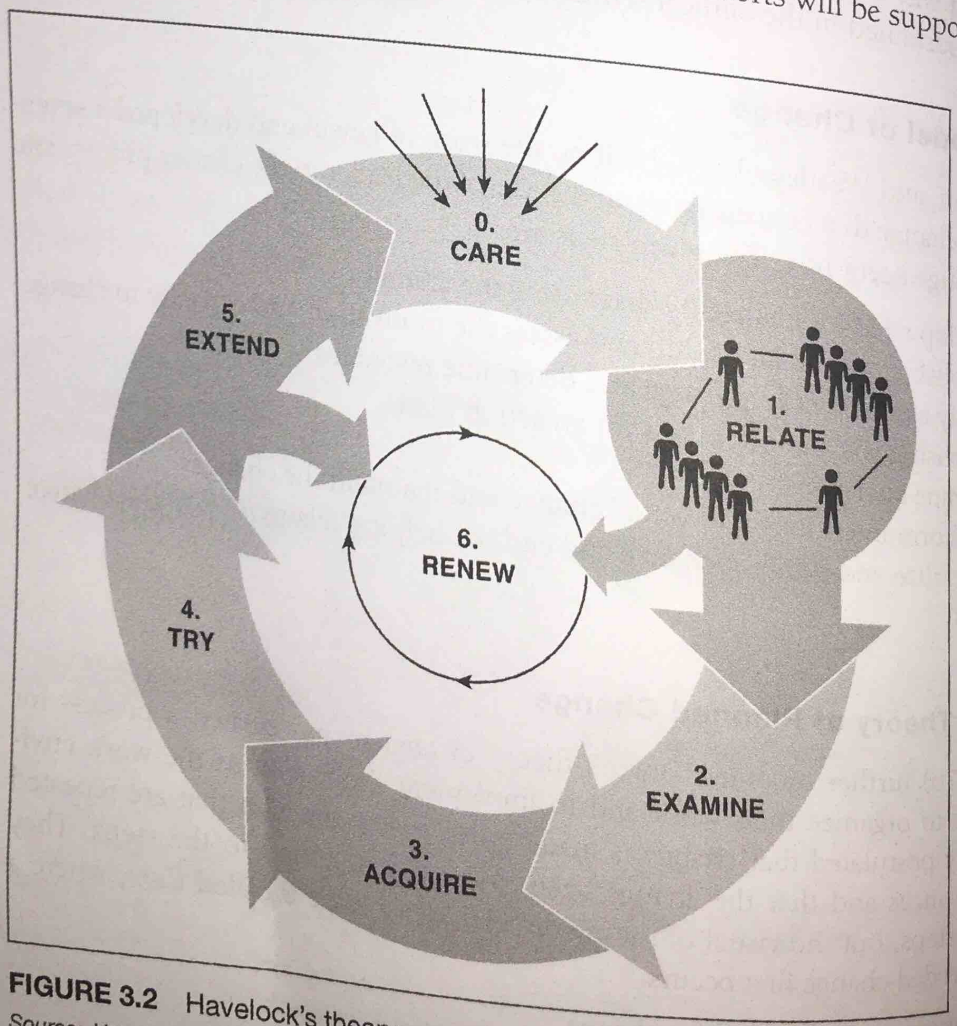

FIGURE 3.2 Havelock's theory.
Source: Havelock and Zlotolow (1995).

- Show users that it will be easy to institutionalize the change and that it will be relatively nonthreatening afterward.
- Show that immediate superiors accept and support the change.
- Clearly identify the roles and responsibilities of all who will be involved in the change process.

The perceived characteristics of the change, such as the relative advantage and compatibility of the change with the present way of doing things, its simplicity, ease of understanding, and trial ability are critically important to the user in this first phase of a change.

The second phase, to *set up adequate support networks for the implementation effort*, includes the six levers that assist the change to happen and focuses on the climate within the organization to facilitate the change:

- Produce and make supportive services available.
- Set up formal training programs to develop members' roles.
- Encourage and reward the use of horizontal and vertical communication channels.
- Relax standard operating procedures in affected (changing) units.
- Integrate change agents, managers, and users.
- Make sure users feel adequately involved.

Pettigrew and Whipp's Model of Strategic Management of Change

Pettigrew and Whipp (1991) developed a strategic model of change that involves the interaction of three essential dimensions of strategic change: context, content, and process. They also described the importance of historical, cultural, and political factors in the interaction of the essential elements. The *context* includes both external and internal factors and events that are driving the change, the *why* of change, including the organization's culture, leadership, type of clinical setting, and the characteristics of the organization. The *content* dimension describes the activities to be transformed or the *what* of change. In translation of research into practice efforts, these are the key organizational elements in the system focused on to enhance or to support the use of evidence. The third dimension, the *process* or *how* of change, includes the methods, strategies, and actions and interactions that will be used to make the change happen and enable the use of the new evidence (Stetler, Ritchie, Rycroft-Malone, Schultz, & Charns, 2007). The model stresses the continuous, iterative, dynamic, and uncertain nature of the change management process.

Ferlie and Shortell: Framework for Change

Ferlie and Shortell's (1996) work is similar and proposes a model for implementing change for quality improvement in health care. The model focuses on the importance of context in change and describes four levels of change: (a) the individual health care practitioner, (b) the health care team, (c) the overall organization, and (d) the cultural environment of the organization.

Contemporary Change Theory

John Kotter's (1996) view of contemporary change sets up eight steps toward leading change in organizations: (a) establish a sense of urgency, (b) create the guiding coalition, (c) develop a vision and strategy, (d) communicate the change vision, (e) introduce the change and empower a broad base of people to take action, (f) generate short-term wins, (g) consolidate gains and the production of even more change, and (h) institutionalize new approaches in the corporate culture to ground the changes in the culture and make them stick.

Kotter (1995) also describes why change efforts fail:

- Allowing too much complacency
- Failing to create a sufficiently powerful guiding coalition
- Underestimating the power of vision
- Under-communicating the vision
- Permitting obstacles to block the vision
- Failing to create short-term wins
- Declaring victory too soon
- Neglecting to anchor changes firmly in the corporate culture

Kotter (1995) acknowledges that these eight errors might be too simplistic but that in reality, most change efforts are "messy and full of surprises" and need a guiding vision to reduce the failures.

This contemporary view on leading change for translation of new knowledge to practice efforts stresses the importance of the people involved in the change; their reactions to all aspects of the change, linking to context, content, and processes/facilitation; and the bigger picture or fit of the change for the organization (Kotter, 1999). Kotter's latest work (Kotter & Cohen, 2012), *The Heart of Change: Real-Life Stories of How People Change Their Organizations*, proposes that, to be successful in change efforts, organizations must positively change the thinking of those involved in or affected by the change.

■ BEHAVIORAL THEORIES OF CHANGE

Social Cognitive Theory

Social cognitive theory posits that individuals learn by direct experiences, human dialogue and interaction, and observation. It began as "social learning theory" developed by Albert Bandura and was renamed "social cognitive theory." Bandura (1986) described that the purpose of the theory is to understand and predict individual and group behavior, to identify methods by which behavior can be modified or changed, and to test interventions aimed at personality development, behavior pathology, and health promotion. This theory of change proposes that behavioral change is affected by personal factors, attributes of the behavior itself, and environmental influences (Robbins, 2003). Individuals must believe in their capability to change and possess the self-efficacy to change. Additionally, they must perceive that there is an incentive to change, which in social learning theory is referred to as "operant conditioning," with the positive expectations outweighing the negative consequences. Social cognitive theory is particularly useful when dealing with educational programs aimed at changing behavior, such as implementing new knowledge into practice.

Stages of Change Theory

Prochaska and DiClementi's model of change behavior was originally developed for use with individual patients to change health behaviors, specifically to study smokers in therapy to self-changers (DiClemente & Prochaska, 1998). The model had four stages and was considered linear in its original development. However, the model now has five stages (Figure 3.3) with an added stage for preparation for action and is now viewed as a cyclical process. The model's use has also extended beyond the individual patient to other audiences over time. The model describes five stages that people pass through when change occurs.

1. *Precontemplation* is when an individual is unaware of or does not acknowledge that a problem exists and that there is a need for change.
2. *Contemplation* is the stage when the individual becomes aware of the issue/problem and begins to think about changing behavior.
3. *Preparation for action* is when the individual is ready to change and prepares to make a change. This preparation for action is defined within a 2-week period of a decision to change.
4. *Action* is when the individual engages in change activities and increases coping behaviors to deal with the change.
5. *Maintenance* is the final stage and may take up to 6 months. The change behaviors must be reinforced to sustain the change.

Prochaska, DiClementi, and Norcross (1992) described 10 processes that predict and motivate movement through the stages: (a) consciousness raising, (b) dramatic relief, (c) environmental reevaluation, (d) self-reevaluation, (e) self-liberation, (f) social liberation, (g) reinforcement management, (h) helping relationships, (i) counterconditioning, and (j) stimulus control. This model has been used successfully with counseling for HIV/AIDS and sexually transmitted diseases (STDs; Centers for Disease Control and Prevention, 1993). However, the influence of structure and environment are two key elements that are not specifically addressed in the model and are necessary components of planning for change or translation of new knowledge into the practice setting.

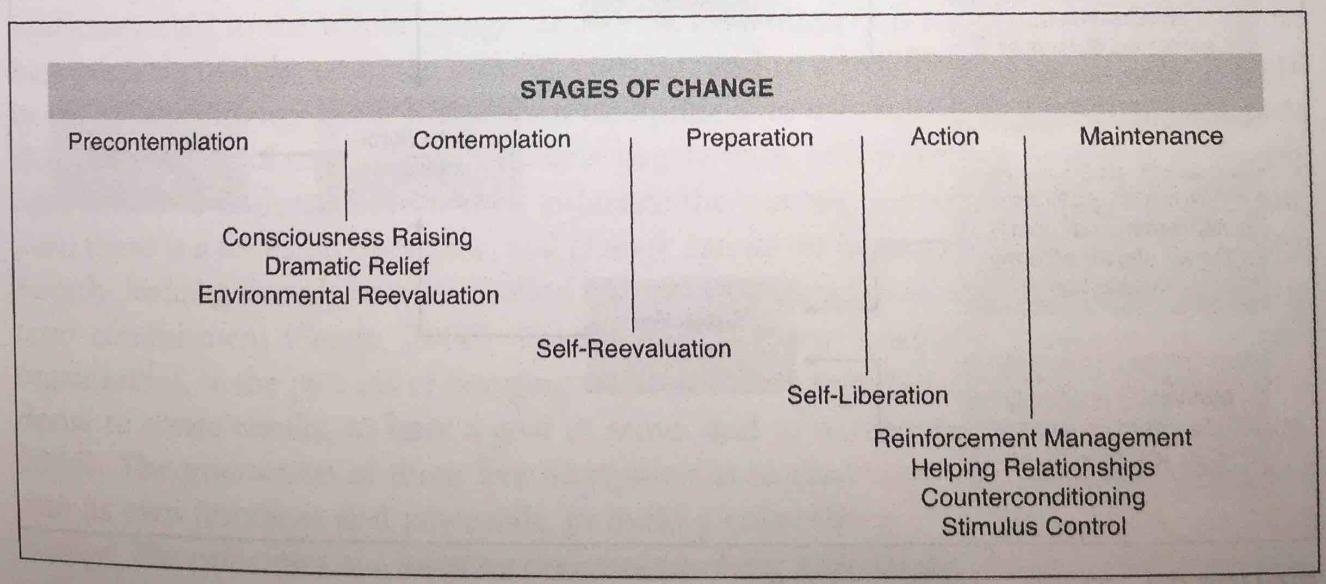

FIGURE 3.3 Stages of change theory.

Source: Prochaska, DiClementi, and Norcross (1992)

Theory of Reasoned Action

This theory was developed in the late 1960s and has been used to describe an individual's intention to perform certain behaviors (Figure 3.4). The theory assumes that individuals are rational and links the individual's behavior to beliefs, attitudes, and intentions (Ajzen & Fishbein, 1980). Fishbein, Middlestadt, and Hitchcock (1994) further defined the variables:

- *Behavior*—a specific behavior that should occur so that the individual understands the needed action, for whom, when, and where
- *Intention*—the best predictor that a behavior will occur and is influenced by attitude and norms (Family Health International, 1996)
- *Attitude*—the individual's positive or negative feelings toward performing the behavior
- *Norms*—the individual's perception of others' opinions of the behavior

These variables are interrelated and describe the individual's reasoned action or intention to change. The individual must have a positive attitude toward change, must feel that he or she has control over the change, and that changing is perceived as positive by the social group. The model describes a linear change process that posits that a change in behavior is dependent on behavioral and normative beliefs. This change model has been used successfully in behavior change for individuals and groups related to smoking cessation, condom use for the prevention of STDs and HIV/AIDS nationally and internationally, dieting, exercise, seat belt and safety helmet use, and breastfeeding (Fishbein et al., 1994)

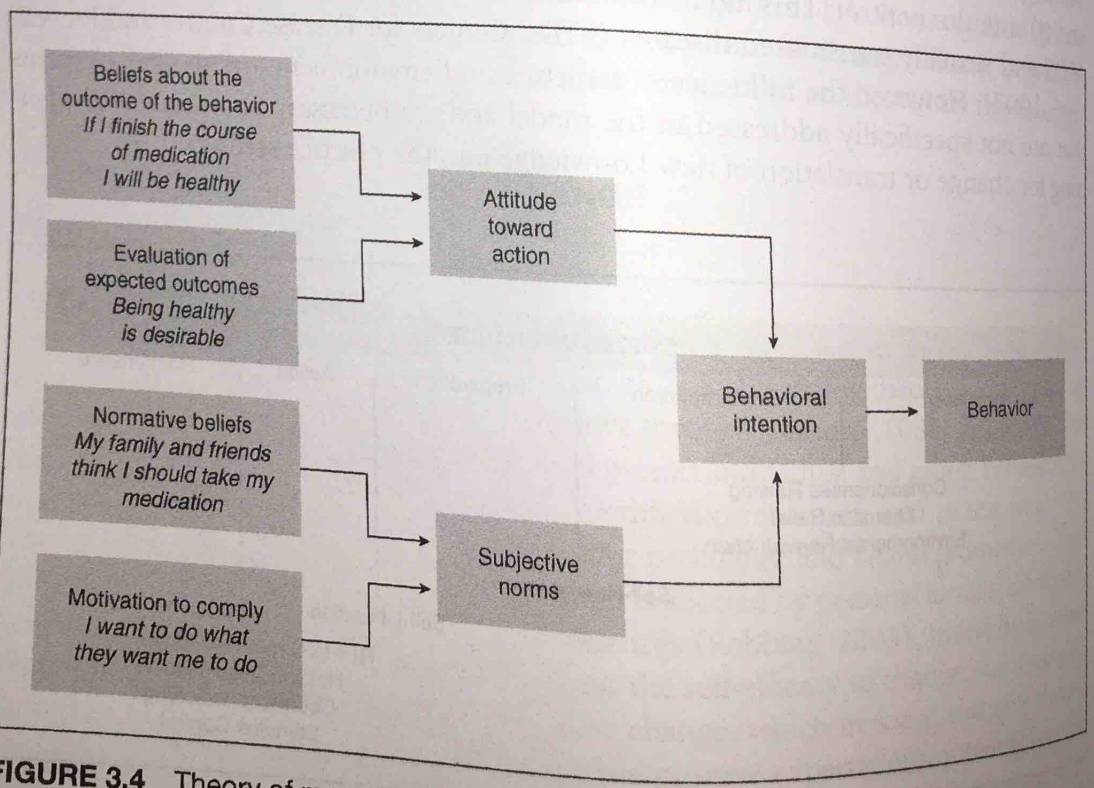

FIGURE 3.4 Theory of reasoned action.

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Social Ecological Theory

The social ecological theory offers a model to guide translation efforts that integrates multiple perspectives into the planning of interventions for behavior change, addressing the interdependencies between socioeconomic, cultural, political, environmental, organizational, psychological, and biological determinants of health (Whittemore, Melkus, & Grey, 2004). The model proposes that any individual behavior is supported and influenced by numerous systems and groups and that any lasting behavior change requires implementation of strategies at multiple levels of influence (Emmons, 2000). Whittemore et al. (2004) described five levels of influence and the implementation strategies at each to expand diabetes prevention and management evidence:

- *Intrapersonal level*—individual beliefs, values, education level, skills, and other individual factors that affect the individual's ability to change
- *Interpersonal level*—the relationships between individuals, families, groups, and communities that are part of social support to promote behavioral change
- *Institutional level*—the influence that relevant institutions have on change activities
- *Community level*—the influence that communities have on the individual, the community attitudes, and the relationship among different institutions within communities
- *Public policy level* and the influence of policies and regulations that affect the change intervention, the participants, and the institutions in which they function

■ THE LEARNING ORGANIZATION

Peter Senge (2006), the leading expert on learning organizations, explained that the fundamental learning units of an organization are working teams or people who need one another to produce an outcome. He described five disciplines to becoming a learning organization. The first is to develop *systems thinking* or the ability to see the big picture, to distinguish patterns instead of conceptualizing change as isolated events, and to feel interconnected to the whole (Senge, 2006). *Personal mastery* is to focus on becoming the best person possible, embrace lifelong learning, and to strive for a sense of commitment in one's career (Senge, 2006). The third discipline is to use *mental models*. Senge suggests that the process of using mental models begins with self-reflection, unearthing deeply held beliefs to understand how they influence the way we operate. He also believes that, until there is a focus on openness, real change can never be implemented (Senge, 2006). Fourth, *building shared visions* is needed to bind an organization together and foster long-term commitment (Senge, 2006). Finally, *team learning*, critically important to today's organization, is the process of bringing team members together to develop in the team a desire to create results, to have a goal in mind, and to work together to attain it (Senge, 2006). The interaction of these five disciplines is to challenge the organization to look into its own resources and potentials, to build a collective will to learn, and to embrace change. The principles of a learning organization have great applicability to dissemination and translation of new knowledge to practice, with a focus on the team, what is necessary to implement a change, and the team's involvement in moving toward a desired new state.

Research on Change Interventions

Pascale, Millemann, and Gioja (1997) identified three concrete interventions that will "change the way people change": (a) incorporating employees into the process of dealing with work challenges, (b) leading from a different place to sharpen and maintain employee involvement, and (c) instilling mental discipline to make people behave differently and then to sustain that behavior. If done properly, the proposal will create an agile organization and will shift the organization's operations or culture by altering the way people experience their own power and identity and the way they deal with conflict and learning.

Thomas et al. (1999) performed a systematic review of the evidence to evaluate strategies for successful change, specifically, the introduction of guidelines into practice. Although the evidence was insufficient, the literature suggested that essential strategies for successful change in health care practices included organizational commitment, active support from key stakeholders, recognition of the importance of change, a credible change agent, face-to-face contact with practitioners to promote enthusiasm, and ensuring targeted staff have ownership of the innovation and are empowered to change.

Gustafson et al. (2003) developed and tested a Bayesian model that used subjective probability estimates to predict outcomes of organization changes, specifically health care improvement projects. The model was developed with 18 factors that were identified by an expert panel and that predict implementation success. The 18 factors included (a) exploration of problem and customer needs; (b) change agent prestige, commitment, and customer focus; (c) source of ideas; (d) funding; (e) advantages to staff and customers; (f) radicalness of design; (g) flexibility of design; (h) mandate; (i) leader goals, involvement, and support; (j) supporters and opponents; (k) middle managers' goals, involvement, and support; (l) tension for change; (m) staff needs assessment, involvement, and support; (n) evidence of effectiveness; (o) complexity of implementation plan; (p) work environment; (q) monitoring and feedback; and (r) staff changes required. The model performed well on three definitions of success; however, there was no objective measure of success; only the opinions of people were involved. Identifying factors that predict success can lead to planning that increases attention to facilitators and removes barriers to the implementation of the desired change, which is similar to Lewin's classic description of the equilibrium of the force field in an organization.

Finally, Berwick (2003) studied innovations in health care specifically and summarized the literature, which he found to be mostly descriptive in two ways. The first was a focus on three areas of influence that correlate with the rate of spread of change: (a) perception of the innovation (i.e., the benefit of the change, which is compatible with values, beliefs, past history, and current needs) and complexity of the innovation; (b) characteristics of the people who adopt the innovation or fail to do so; and (c) contextual factors, especially communication, incentives, leadership, and management. Second, he added that the research, although descriptive, offers seven guesses about what might help leaders to nurture good changes:

1. Find sound innovations
2. Find and support innovators
3. Invest in early adopters
4. Make early adopter activity observable

5. Trust and enable reinvention
6. Create slack for change
7. Lead by example

Most recently, the debate about change management has evolved into a discussion surrounding change versus transformation. The differences are subtle but worth discussing in a book covering change models useful for translation. William Bridges (2009) in his acclaimed work, *Managing Transitions: Making the Most of Change*, suggests that change is something that happens to people, whereas transitions or transformations are internal processes that happen within people. These transitions or transformations are about changing people's perceptions and thinking about the issue, problem, or innovation as something that needs to be "changed." The transformation involves viewing the innovation as an opportunity to let go of the status quo or traditional approach in favor of developing a new approach (Bridges, 2009; Kotter & Cohen, 2012).

As carefully described in this chapter, change management requires careful planning and implementation of change strategies and use of effective tools. Throughout the literature, there is agreement that the key elements of a carefully planned and managed change involve the following:

1. Strategic thinking and planning processes should develop the vision and strategy for the change, including mission and goals. This approach engages those affected by or involved in the change to buy-in and requires communicating and championing the vision and mission of the change and leading the execution of the change strategy.
2. Stakeholder analysis should identify those who will be involved in, affected by, or influential in the change process. Stakeholder analysis includes understanding the role of each of those stakeholders, the level of commitment and influence for or against the change. Understanding the stakeholders up front when planning a change is an essential action.
3. Teamwork is critical to the success of any change. Careful assessment of the team's ability to plan, implement, and sustain the change is another essential action when planning change.
4. Development of an action plan, in the form of a project management plan, will provide the detail of goals, objectives, activities, responsibilities, time frame, and measure of success throughout the change project. The use of strategic tools for project management is detailed in Chapter 9.
5. Dealing with resistance is critical to plan for at every stage of the change process. Barriers to the implementation of EBP are discussed in Chapters 14 and 15.
6. A leader who is a role model and exemplifies the vision and mission of the change is necessary. The leadership characteristics that engender trust from those involved in the change include vision, knowledge, good listening and communication skills, being action oriented, leading by example, asking the tough questions, openness, and flexibility.
7. Communication is necessary throughout the change process that answers the questions about which those involved or affected by the change are concerned: Why are we making this change? What do we have to do? When and for

how long? How will it affect me? What is in it for me? How will I know it is working? Communication plans should include the use of different forms of communication and should consistently address the issues of concern for those involved or affected.

A FINAL ISSUE TO CONSIDER IN THE TRANSLATION OF NEW KNOWLEDGE

A final issue that needs to be considered when designing the change to translate new knowledge into practice is fidelity of implementation. Fidelity refers to the degree to which program providers implement programs as intended by developers/researchers (Rohrbach, Dent, Skara, Sun, & Sussman, 2007). To make programs more acceptable for translation or for the change to be accepted, the implementers/change agents may try to adapt the new knowledge/research to achieve local buy-in. The users can also choose to modify the implementation to fit the needs or improve the fit of an intervention with local conditions. However, this makes fidelity difficult to achieve, and the research has shown that the fidelity with which an intervention is implemented affects how well it succeeds (Dusenbury, Brannigan, Falco, & Hansen, 2003; Elliott & Mihalic, 2004; Rohrbach et al., 2007).

CONCLUSION

Translation of research into practice must be guided by the models and the frameworks that include the process of change and the identification of critical elements or variables in the organization that affect and determine whether the new knowledge fits the organization and will be feasible to implement. In addition to fit and feasibility, consideration must be given to the varied personnel, structures, environments, leadership styles, and cultures of organizations as well as their economic, ethical, and legal environments. Graham and Tetroe (2007) cautioned against the "KT (knowledge translation) imperative," translating all new knowledge into practice at any cost but suggested that each opportunity for knowledge transfer should be judiciously evaluated for translation, with careful attention to customized planning and evaluation for the specific translation of evidence.

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