

PERSPECTIVES

Are You Ready? How Health Professionals Can Comprehensively Conceptualize Readiness for Change

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One important factor influencing the successful implementation of system-wide change is initial readiness. Readiness is defined as the degree to which those involved are individually and collectively primed, motivated, and technically capable of executing the change. We present a conceptual framework that highlights three broad areas to be considered if health-care professionals are to comprehensively evaluate readiness that includes psychological factors (i.e., characteristics of those being asked to change), structural factors (i.e., circumstances under which the change is occurring) as well as the level of analysis (i.e., individual and organizational levels). We also describe more specific dimensions within each of these broad categories that have both empirical and theoretical support, presenting several valid and reliable survey instruments that measure key dimensions of readiness quantitatively.

KEY WORDS: organizational change; change readiness; measuring readiness for change; implementation.

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Leaders in health-care delivery systems remain plagued by the challenges of implementing changes in care practices and service delivery. Even one of the most cost-effective interventions, tobacco cessation services, has been incompletely implemented since its release.^{1,2} That is, the evidence-based clinical practice guidelines for tobacco control initially published in 1996 by the US Public Health Service called for providers to ask patients about tobacco use and advise users to quit.^{3,4} Research has determined that a provider merely asking patients about tobacco use and advising those who are users to quit effectively reduces tobacco use and concomitant morbidity and mortality.^{1,5-7} Nonetheless, research suggests that clinicians do not consistently assess and advise patients on tobacco use. Furthermore, evidence suggests that system-wide changes to support tobacco interventions, such as provider tobacco control training, designated support staffs,

and alignments of evaluation systems have not been widely implemented.^{1,2,8} This incomplete or partial implementation does not appear to be exceptional; instead, it appears endemic across the spectrum of changes that are introduced in health care.⁹⁻¹¹

Implementing individual and system changes like those associated with tobacco cessation services is a widely studied challenge, and one of the consistent findings from change researchers and scholars is the importance of initial readiness for change.¹²⁻¹⁴ By initial readiness, we mean the degree to which those involved are individually and collectively primed, motivated, and technically capable of executing the change. This includes psychological factors that reflect the extent to which individuals hold key beliefs regarding the change, recognize that a problem needs to be addressed, and agree with the changes that individuals and the organization must make. It also includes the structural factors that reflect the circumstances under which change is occurring and the extent to which these circumstances enhance or inhibit the implementation of a change. With a better understanding of the factors that contribute to readiness for change, leaders and their teams can establish a course of action that is more likely to succeed.¹²⁻¹⁴

A multitude of instruments and methods exist to measure readiness for change, and have been summarized in systematic literature reviews.^{15,16} In some cases, instruments are clearly inferior or have serious drawbacks regarding their validity and reliability.^{15,16} Yet in many cases, selecting among instruments is not simply a matter of choosing the best validated instrument. Methods and instruments often examine readiness narrowly, omitting one or more conceptual issues that are important parts of a comprehensive evaluation of readiness. In the present paper, we describe a conceptual framework to guide researchers and practitioners in considering three broad dimensions of organizational readiness to be considered when planning an implementation project and in selecting a method for assessing it. These include: (1) psychological factors (i.e., characteristics of those being asked to change), (2) structural factors (i.e., circumstances under which the change is occurring), and (3) the level of analysis (i.e., individual and organizational). We discuss both the rationale for each broad area and specific dimensions within each that might be considered as readiness is gauged. This conceptualization of change readiness is *not* a theory of change. It is proposed as a helpful heuristic for those who must formulate

This material is based upon a workshop led during the 2008 National Meeting of the Quality Enhancement Research Initiative (QUERI) of the Health Services R&D Service, Department of Veterans Affairs.

and implement changes, so that they can make focused assessments and make better use of limited resources. We go on to present several instruments to illustrate the differences among the broad dimensions formed by psychological and structural factors, and level of analysis.

READINESS FOR CHANGE: A MULTI-DIMENSIONAL AND MULTI-LEVEL CONSTRUCT

Conceptually, we argue that *readiness for change* is comprised of both psychological and structural factors, reflecting the extent to which the organization and its members are inclined to accept, embrace, and adopt a particular plan to purposefully alter the status quo.^{17–19} Psychological factors involve individual and collective attitudes, beliefs, and intentions. Within health care, psychological factors are frequently framed in terms of a general psychological dimension based upon Prochaska and DiClemente's¹⁵ transtheoretical model of change.^{20,21} The transtheoretical model proposes that change occurs in five stages: precontemplation, contemplation, preparation, action, and maintenance. Readiness for change equates to the preparation stage whereby individuals indicate an inclination to take action in the immediate future. Readiness may be manifested through specific attitudes and beliefs regarding the need for, appropriateness of, management support for, and value of the change (individually and organizationally).^{17,19,22}

These psychological states occur at both the individual and organizational levels.¹⁶ Consider our opening vignette; one crucial element of readiness to integrate tobacco cessation services into the delivery of health care is the attitude of individual physicians regarding the intervention. Beyond this, however, system-wide changes to further integrate tobacco cessation services may require more complex adjustments within the health-care system. Administrators, for example, might provide training with specific scripts, resources such as patient education materials, or policies to facilitate access to health behavior staff, and feedback systems for care providers. In addition, as a further extrinsic motivation, they may revise performance evaluations for both individuals and units to include tobacco dependence. Such added complexity means success is contingent on the collective, coordinated actions of many interdependent individuals, each of whom contributes something to the change effort. In cases like this, when interdependence is high, a *shared* psychological sense of confidence in *collective* capabilities may be a much stronger indicator of readiness for change than individuals' confidence in their own capabilities.

As suggested, structural factors relate to the conditions within the organization and its members as they embark on change. In essence, structural factors represent the *circumstances* under which change is occurring and the extent to which these circumstances enhance or inhibit the implementation of a change.^{15,23} Like the psychological factors, structural factors occur at the individual and organizational levels. At the individual level, the characteristics of organizational members themselves, such as training and numbers, are a structural factor that will affect collective readiness for change. For instance, readiness is bolstered when individuals have the skills to successfully perform the tasks and activities that are

associated with the change.²⁴ At the organizational level, existing information technology (IT) systems might be an important tangible aspect of the organization's infrastructure that must be considered as readiness is gauged. Returning to our example of introducing tobacco cessation services, some have suggested that health-care organizations could couple electronic smoking registries with a telephone support system.²⁵ Although this application of a registry might represent a new practice, health-care organizations that have existing IT networks, used for other purposes, such as billing, have important pre-existing infrastructure at the organizational level, making these organizations more ready than others.

PSYCHOLOGICAL AND STRUCTURAL DIMENSIONS OF READINESS AT THE INDIVIDUAL AND ORGANIZATIONAL LEVELS

Taken together, these factors—psychological versus structural factors and individual versus organizational level—form four broad categories of readiness to change. Table 1 summarizes examples of key dimensions that fall within each category. This is not an exhaustive list, but illustrates common factors drawn from two systematic literature reviews we have previously conducted. Moreover, there appeared to be theoretical and empirical relationships between the dimensions we discuss, linking them to implementation success. At the psychological, individual-level, the relevant dimensions relate to individuals' beliefs. These include whether or not individuals (1) feel a change is appropriate (i.e., *appropriateness*), (2) believe management support the change (i.e., *principal support*), (3) feel capable of making the change successful (i.e., *change efficacy*), and (4) believe the change is personally beneficial (i.e., *valence*).^{17,26,27} The importance of judgments regarding the individual's abilities to perform in the changed setting (i.e., *change efficacy*), for instance, is a theoretically important dimension because efficacy is related to the amount of effort and persistence individuals are willing to put forth toward goals.²⁸ When success is felt to be out of reach, little effort is put forth and efforts are abandoned as obstacles are encountered. Research findings have indicated that these perceptions are more salient during taxing situations like those that come as changes are introduced.²⁹ Similarly, empirical investigations regarding appropriateness, principal support, and valence in several change contexts have revealed the importance of these beliefs.^{27,29–31}

At the psychological, organizational level, relevant beliefs relate to organizational members' *collective commitment* and *collective efficacy*.^{16,32} Collective commitment refers to organizational members' shared resolve to pursue courses of action that will lead to successful change implementation. Collective efficacy refers to organizational members' shared belief in their conjoint capabilities to organize and execute the courses of action required to implement change successfully. These are similar to the psychological, individual-level dimensions in that they acknowledge that readiness has a perceptual (versus a structural) element. They differ in that individuals reveal what they feel the group can do together rather than what each individual feels he or she is capable of doing. These dimensions are particularly salient when a change has system-wide aspects. Empirical findings have linked commitment to imple-

Table 1. Summary of the Psychological and Structural Factors of Readiness at the Individual and Organizational Level and Key Dimensions Within Each

Readiness for change factors		
Level of analysis	<i>Psychological factors</i> Factors that reflect the extent to which the members of the organization are cognitively and emotionally inclined to accept, embrace, and implement a particular change	<i>Structural factors</i> Factors that reflect the extent to which the circumstances under which the change is occurring enhance or inhibit the acceptance and implementation of change
Individual	<i>Appropriateness</i> —belief that a specific change is correct for the situation that is being addressed <i>Principal support</i> —belief that formal and informal leaders are committed to the success of the change and that it is not going to be another passing fad <i>Change efficacy</i> —belief that the individual can successfully <i>Valence</i> —belief that the change is beneficial to the individual	<i>Knowledge, skills, and ability alignment</i> —extent to which the organizational members' knowledge, skills, and abilities align with the change
Organizational	<i>Collective commitment</i> —shared belief and resolve to pursue courses of action that will lead to successful change implementation <i>Collective efficacy</i> —shared belief in their conjoint capabilities to organize and execute the courses of action required to implement change successfully	<i>Discrepancy</i> —an understood difference between the current state or practice and a more desirable state (without a particular change to address this issue in mind) <i>Support climate</i> —sufficient tangible (e.g., funding, reward and incentive systems) and an encouraging intangible environment (i.e., culture and climate) to support implementation <i>Facilitation strategies</i> —a set of clearly articulated goals and objectives that are supported by a detailed implementation plan defining roles and system to measure progress

mentation behaviors³³; in turn, others have assessed the collective efficacy in a hospital setting, linking it to implementation as well.³⁴

At the structural, individual level, relevant dimensions relate to the individual's knowledge, skills, and ability to perform when the change is implemented. Nemhard and her colleagues¹¹ argue that the characteristics of health-care professionals often contribute to failures to implement innovations designed to improve practice and care. Health-care professionals tend to be highly specialized. While this is important to their success, it means they have unique skills and deep knowledge that must often be supplemented, refreshed, and renewed as innovations are introduced. Accordingly, as change is being considered, leaders must ask, "To what extent will people's knowledge, skills, and abilities match their revised jobs?"²⁴

At the structural, organizational level, relevant dimensions relate to human and material resources, communication channels, and formal policy. Researchers from the VA's Ischemic Heart Disease and Polytrauma and Blast-Related Injuries Quality Enhancement Research Initiatives have identified several key factors through their work on implementation. These groups drew from the Promoting Action on Research in Health Services (PARiHS) framework and work done by Gustafson and his colleagues to predict successful implementation of health system change.³⁵⁻³⁹ Key dimensions include discrepancy, support climate, and facilitation mechanisms. Discrepancy refers to a significant difference between the current state or practice and a more desirable state—in essence, a performance gap. Gustafson et al.³⁷ describe this discrepancy as a *tension for change*, while the PARiHS model suggests that a discrepancy can be manifested through perceptions regarding the research evidence or patient expecta-

tations. Support climate reflects the tangible (e.g., funding, reward, and incentive systems) aspects of the organization that facilitate implementation as well as the "softer" aspects of its makeup, especially the prevailing culture and climate most notably in relation to leadership style and power balance. Facilitation strategies reflect a set of clearly articulated goals and objectives that are supported by a detailed implementation plan defining roles and a system to measure progress towards these goals and objectives. Empirically, Gustafson and his colleagues found that these key dimensions predicted successful implementation of several quality improvement initiatives in health systems.³⁶⁻³⁹

SELECTING AN INSTRUMENT FOR DIAGNOSING READINESS FOR CHANGE

One of the reasons we propose this four category heuristic is that most instruments to assess change readiness tend to narrowly focus on either psychological or structural factors. Much of the popular press, for instance, has focused on specific psychological factors, such as the degree to which a sense of urgency (i.e., a need for change) exists or change is perceived to be beneficial. We posit that psychological and structural factors are both important, and we highlight important but less discussed factors that influence readiness (e.g., change efficacy at the individual and organizational levels). In addition, this heuristic can facilitate thoughtful and meaningful reflection among leaders of health-care organizations regarding how to assess the readiness of their members and organization either qualitatively (e.g., through reflection, observation, and interview techniques) or quantita-

Table 2. Summary of Valid and Reliable Instruments to Measure Readiness Quantitatively

Instrument (focus)	Dimensions measured (number of items)	Development of the instrument and health-care applications
Readiness for Change Questionnaire (psychological factors, individual level) ²⁷	<ul style="list-style-type: none"> • Appropriateness (10 items) • Management support (6 items) • Change efficacy (6 items) • Valence (3 items) 	<p>Developed by researchers specializing in management</p> <p>Applied to measure readiness for an ergonomic changes to processes</p> <p>Applied to measure readiness for universal health insurance</p> <p>Developed by researchers specializing in management</p>
Organizational Change Recipients' Beliefs Scale (psychological factors, individual level) ³¹	<ul style="list-style-type: none"> • Discrepancy (a structural factor, 5 items) • Appropriateness (5 items) • Principal support (6 items) • Change efficacy (5 items) • Valence (5 items) 	To date, we are unaware of applications within a health-care context
Commitment to Organizational Change Scale (psychological factors, individual level) ³³	<ul style="list-style-type: none"> • Continuance commitment (committed because of a perceived cost of not changing, 6 items) • Normative commitment (committed because of an obligation, 5 items) • Affective commitment (committed because change is wanted, 6 items) 	<p>Developed by researchers specializing in management</p> <p>To date, we are unaware of applications within a health-care context</p>
Organizational Readiness Measure (psychological factors, organizational level) ³²	<ul style="list-style-type: none"> • Collective commitment (4 items) • Collective efficacy (5 items) 	Developed by researchers specializing in health-care policy and administration
Lay of the Land Survey (structural factors, individual level) ²⁴	<ul style="list-style-type: none"> • Knowledge skills ability alignment (1 item) 	<p>Developed by researchers specializing in management</p> <p>To date, we are unaware of applications within a health-care context</p>
Organizational Readiness to Change Assessment (structural factors, organizational level) ³⁵	<p>Discrepancy (as defined as a key readiness dimension)</p> <ul style="list-style-type: none"> • Research evidence (3 items) • Clinical experience (3 items) • Patient preferences (4 items) <p>Support climate (as defined as a key readiness dimension)</p> <ul style="list-style-type: none"> • Leader culture (3 items) • Staff culture (4 items) • General resources (4 items) <p>Facilitation strategies</p> <ul style="list-style-type: none"> • Leaders practices (4 items) • Clinical champion (4 items) • Leadership implementation roles (4 items) • Implementation team roles (4 items) • Project communication (4 items) • Project progress tracking (4 items) • Project resources (6 items) • Project evaluation (5 items) 	<p>Developed by researchers specializing in health-care administration</p> <p>Applied to quality improvement projects in Veterans Health Administration</p>

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tively.¹⁵⁻¹⁷ When this is done and an assessment reveals gaps in key infrastructure, leaders can proactively earmark resources and engage in other preparatory activities to improve readiness, reducing uncertainty and pessimism that would likely emerge otherwise.

In Table 2, we summarize several scales that quantitatively measure key dimensions of readiness that align with the four categories of our heuristic. These are not proposed as preferred measures, but are merely examples for the purpose of comparison. We refer the reader to our prior literature syntheses for comprehensive reviews of these and other

organizational readiness for change surveys.^{15,16} We do note, however, that each of these has evidence of content, construct, and criterion related validity, except that the Organizational Readiness Measure³² and the Organizational Readiness to Change Assessment,³⁵ which lack evidence of criterion-related validity. All except the Lay of the Land Survey²⁴ have published evidence of reliability. This is helpful when selecting an instrument; if an instrument fails to meet basic criteria of reliability and validity in the setting where it was developed, it would generally be a poor choice to use in another setting. But reliability and validity are context dependent, and validation in

Table 2. (continued)

Instrument (focus)	Dimensions measured (number of items)	Development of the instrument and health-care applications
Organizational Change Manager* (structural factors, organizational level) ^{36,37}	Discrepancy <ul style="list-style-type: none"> • Tension for change • Problem exploration Support climate <ul style="list-style-type: none"> • Support from senior leaders and middle managers • Staff needs and support • Funding • Work environment Facilitation strategies <ul style="list-style-type: none"> • Project launch • Project champion • Relative advantage • Flexibility of design • Testing and refinement • Implementation plan complexity 	Developed by researchers specializing in industrial engineering and health-care administration Applied to quality improvement projects in a variety of health-care organizations to include the Veterans Health Administration

*The Organizational Change manager does not yield traditional survey-like scores; each dimension is measured with 4 items; data are analyzed using multiplicative Bayesian model that yields a log-odds, ranging from -10-10³⁶⁻³⁹

one setting (be it temporal or physical) is no guarantee that an instrument will prove reliable and valid in another setting. Accordingly, we would encourage the reader to consider any instrument—even previously well-validated tools—critically, and to incorporate reliability and validity assessments into their projects.

More to our theme, these instruments reflect different emphases with regards to psychological or structural factors, and different levels of analysis with regards to individual or organizational readiness. Leaders, therefore, would want to couple them appropriately if they hope to garner a comprehensive picture of readiness. We use our vignette regarding tobacco cessation services to illustrate how our framework can guide the coupling of instruments. Suppose leadership decides that advising those who smoke to quit is a top priority for all care providers. Clearly, the attitudes of these care providers are critical if this intervention is to be implemented successfully. Care providers, for instance, may not view this intervention favorably because providing smoking cessation counseling during a 15-min encounter may mean that they are unable to counsel patients about using bike helmets or seat belts or to screen for depression or alcoholism. Thus, a measure of appropriateness such as the Readiness for Change Questionnaire²⁷ or the Organizational Change Recipients' Beliefs Scale³¹ could inform leaders as they introduce this intervention. This measure could be coupled with a measure of discrepancy because some clinicians might have the misperception that smokers typically quit on their own without the help of treatment.^{1,3-5} The Organizational Readiness to Change Assessment (ORCA) and the Organizational Change Manager (OCM) are structured instruments that could be used to measure this structural factor.^{35,36}

CONCLUSIONS

Health-care organizations are complex, integrated systems of specialized professionals working within a structure using formal processes, reward and measurement systems, and important informal processes. To further complicate matters, changes in these settings encompass a broad set of potential interventions. Some involve adopting clinical practices (e.g., our example of providing brief smoking cessation counseling), while others involve more fundamental changes in the approach to providing care (e.g., improving the patient-centeredness, promoting patient self-management, improving the timeliness of patient dictations). By understanding readiness, health-care leaders may improve their ability to implement planned changes. While we have discussed a framework to better understand readiness through a vignette focused on tobacco cessation services, readiness is important across the spectrum of change efforts introduced by health-care leaders. As reported by Hagedorn and colleagues⁴⁰ in their work to improve the quality of opiate agonist therapies in the Veteran's Health Administration, they "did not anticipate the impact of each clinic's readiness to change on how the intervention would proceed" (p. S22).

Readiness for change is a complex multi-dimensional construct including psychological and structural factors that occur at both the individual and organizational level. In practical terms, readiness for change requires both a willingness and capability to change. An organization filled with individuals that are energized psychologically about an impending innovation but are ill equipped to accomplish it is no more ready than one that is apathetic but well equipped. Thus, we argue that the psychological and structural factors

should be considered at multiple levels. Leaders must recognize that different readiness to change surveys put more or less emphasis on these factors and levels. These surveys are not mutually exclusive of one another, and leaders may need to use more than one, simultaneously or in sequence. As an architect creates a series of drawings so that customers, builders, and others can completely understand the way a structure should look, this multi-dimensional and multi-level look at readiness for change will help give a more complete picture of the members' and the organization's readiness for change.

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