

The Contingencies of Organizational Learning in Long-Term Care: Factors That Affect Innovation Adoption

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Abstract: We apply the theoretical frameworks of knowledge transfer and organizational learning, and findings from studies of clinical practice guideline (CPG) implementation in health care, to develop a contingency model of innovation adoption in long-term care (LTC) facilities. Our focus is on a particular type of innovation, CPGs designed to improve the quality of LTC. Our interest in this area is founded on the premise that the ability of LTC organizations to adopt and sustain the use of innovations like CPGs is contingent on the initial capacity these institutions have to learn about them, and on the presence of factors that contribute to capacity building at each stage of innovation adoption. Based on our review of relevant theory, we develop a set of fifteen testable propositions that relate factors operating at the guideline, individual, organizational, and

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environmental levels in LTC institutions to stages of guideline adoption/transfer. Our model offers insights into the complexities of adopting and sustaining innovations in LTC facilities particularly, in health care organizations specifically, and in service organizations generally.

At the present time, when clinical practice guidelines (CPGs) are being heralded as one of the key solutions to some of the existing issues around quality of care in long-term care (LTC)—offering standards upon which to base care, and its costs—it is important for us to understand more precisely what the conditions are that lead to successful transfer and implementation of CPGs in LTC settings, and what has led to the transfer failures observed to date. In this article, we apply theories of organizational learning, innovation diffusion, and knowledge transfer and findings from studies of CPG implementation in health care to discuss the factors that can affect the adoption, transfer, adaptation, and retention of a particular type of innovation in health care—evidence-based CPGs. Based on our literature review, we develop a contingency model of guideline adoption in LTC facilities and put forward fifteen testable propositions that identify relationships between the stages of guideline-specific knowledge transfer and factors operating at the knowledge, individual, organizational, and environmental levels of LTC facilities.

INNOVATION HEALTH CARE

Evidence-based CPGs are “systematically developed statements and recommendations to assist practitioner and patient decisions about appropriate health care for specific clinical conditions.”¹ CPGs are predicated on research evidence generated by the scientific community and generally contain a series of recommendations and statements that are intended to serve as decision-making aides to practitioners. Their development is related to the evidence-based practice (EBP) movement that has captivated health policy makers and practitioners for the past fifteen years.¹ In essence, CPGs are mechanisms designed to facilitate the transfer of research evidence into practice.² Some practice guidelines are developed with specific health professionals in mind, for example, evidence-based medicine (EBM) is the groundwork for guidelines targeting physicians, while evidence-based nursing informs guidelines targeting nurses. Other practice guidelines, often more contemporary, engage multiple disciplines in care decisions around a particular clinical issue.³

While CPGs are of interest to health care practitioners as aides to clinical decision making, they also

offer the potential, additional benefits of mitigating variations in care practice and quality through effectively standardizing clinical decisions and care processes.⁴ Standardization of care practices is particularly important to health care; unlike other high-hazard industries like the nuclear power industry, health care is delivered in a highly decentralized way,⁵ which makes it difficult to track, study, and understand variations in care quality, including performance failures like medical errors and adverse events.⁶ There is a great deal, therefore, that compels the development of practice guidelines.

An immense body of research has accrued over the past few decades in the areas of EBM and evidence-based nursing that has led to the development of literally thousands of evidence-based CPGs.^{1,7,8} Despite considerable investment in their development, evidence-based CPGs have not fulfilled their promise. Experiences of EBP implementation have been disappointing to the extent that advisory groups like the Institute of Medicine⁹ and other researchers^{10,11} have remarked on the wealth of knowledge embedded in best practice guidelines and the concurrent dearth of knowledge relating to their implementation in situ. As is now clearly not the case “there was hope that simply producing these statements would unify, modify and improve clinician behavior, with clinicians referring to guidelines to aid in decision making. However, it is becoming increasingly clear that guidelines alone are not the solution for inappropriate care and that they are certainly not self-implementing.”¹² There is now widespread acknowledgment of a gap between research that has contributed to guideline development, and the uptake and implementation of guidelines, underscored by a few key observations:

- “...that knowledge generation and dissemination are distinct activities...”¹³ *not* necessarily ideally carried out by the same individuals;
- that knowledge must be actionable to be useful; and
- that challenges inherent in knowledge transfer and innovation adoption are as much organizational as they are individual.

As the complexity of innovation adoption and implementation in health care has become apparent through studies conducted over the last decade,^{14,15} theorists

have urged the development and testing of more complex models of innovation adoption that involve the simultaneous consideration of multiple factors at multiple levels. In this article, we apply theories of organizational learning and knowledge transfer to create a comprehensive organizing framework for our discussion of factors that may affect nursing guideline-specific knowledge transfer in the institutional LTC sector. We contend that an organization's *capacity to learn* is key to realizing enhanced performance (e.g., improved quality of care) through the application of new knowledge and innovations—including CPGs. In the organizational learning and knowledge transfer literature *learning capacity* is a key term used to describe an organization's ability to recognize the value of new knowledge and information, assimilate it and then apply it to make high-quality decisions.¹⁶ Understanding what contributes to learning capacity, and what factors differentiate good organizational learners from poor organizational learners, is important because:

- There is general agreement among learning theorists that organizational learning promises to contribute to understanding performance variations across organizations.
- Performance variations, studies suggest, can generally be explained as differences in the rates at which organizations learn, the ease with which they innovate, and differences in the effectiveness of the processes and mechanisms by which new knowledge is applied to decision making in organizations.¹⁷

We develop a contingency model of organizational learning around innovation adoption in LTC facilities that considers the impact of factors operating at various levels—and both endogenous and exogenous to LTC institutions—on discrete stages in the process of knowledge transfer. The propositions we outline below highlight factors that are likely to differentiate high capacity “good” organizational learners from low capacity “poor” learners operating in the LTC industry. We focus on the uptake of CPGs in LTC because it offers an excellent opportunity to study context-specific factors affecting innovation adoption and knowledge transfer processes. Further, CPGs are easily identified by users and researchers as discrete—often branded—“packages” or “bundles” of codified knowledge with explicit, formalized components along with tacit components that are more difficult to discern. Our article responds to calls for thinking and research in the field of learning and innovation that elucidates “stages in the innovation process ... and attributes of the innovations” in LTC.¹⁸

THE “PROMISE” OF CLINICAL PRACTICE GUIDELINES IN LONG-TERM CARE

Our focus on learning and knowledge transfer that occurs in LTC facilities is relevant and timely. The population being cared for in LTC facilities has shifted in recent years with increasingly older residents with more complex care needs than was the case even ten years ago. From a health care system perspective, LTC facilities have an important role to play in providing care to residents that adequately manages the complications (e.g., pressure ulcers) and minimizes the adverse events associated with their illnesses (e.g., injuries due to falls), such that quality of life in its final stages is supported and the need for costly hospitalizations is minimized. The increasing complexity of the care needs of LTC residents places new demands on the LTC workforce in terms of physical workload and, importantly, the breadth and depth of knowledge required for effective practice. At the same time, increasing costs in this sector have intensified regulatory and public interest in, and scrutiny of, the quality of care provided in LTC facilities and intensified an interest in understanding the cost–quality relationship in this sector.¹⁹ This is reflected in the recent development of public accountability tools such as (Ontario) Canada's *Hospital Report for Complex Continuing Care*²⁰ the “Nursing Home Compare” Web site in the United States²¹ and similar systems newly available in Canada. All of these factors exacerbate the tension between maintaining acceptable levels of quality of care and services and operating efficiently in environments that are increasingly cost constrained, complex, competitive, and uncertain.

Ostensibly, CPGs can address this tension because they use the best available evidence to guide standardized care practices and so stand to contribute to operational efficiency as well as sustain high-quality care. CPGs are increasingly being used to inform policy decisions regarding government funding of health services, to minimize gaps in practice, to assist patients with decision making, and to improve provider knowledge and competency in dealing with complex health conditions. Some researchers have shown that CPGs that are evidence based, clinically relevant, and implemented appropriately can lead to improved patient outcomes and reduced costs to the health system.²² At the very least, CPGs offer a knowledge source for the development of standardized care routines that have the potential to improve quality and reduce “unnecessary variation” in the provision of care in LTC settings.²³ However, as with guidelines developed for other health care sectors, nursing CPGs have not fulfilled their promise in LTC settings; a limited available literature shows there are as many examples of

guideline noncompliance^{24,25} as there are implementation success stories^{26–29} in LTC. Achieving an understanding of the factors that influence knowledge transfer of CPGs in LTC facilities is important, therefore, because of the potential for CPGs to resolve some of the existing issues around quality of care. Further, gaining insights into what sets LTC organizations apart from others in their abilities to learn from and use innovations like CPGs, and other “packaged interventions,” will help us to capitalize more fully on the potential of evidence-based practice guidelines. Experts have called for the establishment of “Centres for the Advancement of Quality in LTC” to lead research, demonstration, and training in best practices in LTC.³⁰ The impact of such initiatives on care practices in LTC in general will depend on research that facilitates our understanding innovation adoption and knowledge transfer—and specifically identifies factors that assist in the adoption including transfer, contextualization, application, interunit dissemination, and sustained use of CPGs.

A CONTINGENCY MODEL OF INNOVATION ADOPTION IN LTC FACILITIES

KEY FACTORS

Although knowledge transfer in organizations involves face-to-face transfer between individuals, “the problem of knowledge transfer . . . transcends the individual level to include transfer at higher levels of analysis.”³¹ Research in the field of organizational learning demonstrates that factors that influence learning capacity in health care organizations exist, at a minimum, on three levels:³²

- the individual level, where the experiences, biases, and decision-making frameworks/schema of individual decision makers in organizations can influence the ways in which knowledge is valued, sought out, and decisions made relating to its use;
- the organizational level, where characteristics of the organization, such as structure and ownership, can influence an organization’s ability to effectively acquire knowledge (e.g., dedicated resources to environmental scanning, work routines dictated by chain headquarters); and
- the environmental level, where external factors can exert profound influence on the way knowledge is valued by an organization and on decisions around knowledge transfer opportunities (e.g., enforced standards of care, the actions of industry leaders).

In addition, a considerable amount of recent theory has advanced the importance of the characteristics of the knowledge itself as figurative in its transfer^{33,34} primarily focusing on the extent to which knowledge is comprised of tacit and explicit components. We therefore include characteristics of the knowledge that is the “transfer target”—that is, the guidelines themselves—as a fourth level of factors relevant to knowledge transfer in the LTC facilities.

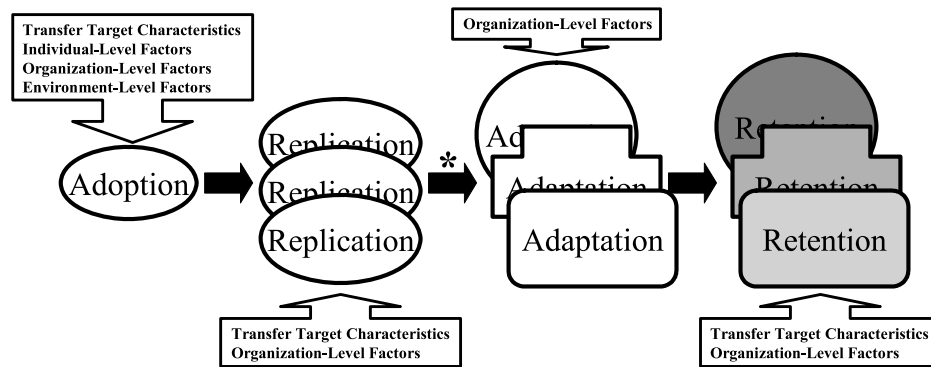
Recent literature in knowledge transfer has built on earlier conceptualizations of the innovation adoption process^{35,36} to delineate the process of transfer in organizations, making useful distinctions between stages of knowledge transfer.³⁷ In our discussion we build on the transfer process model to develop a contingency model of innovation adoption. Our model suggests that factors at the guideline (transfer target), individual, organizational, and environmental levels are more conceptually salient at some stages in the transfer process than at others. That is, specific factors may be more or less influential in facilitating, or impeding, knowledge transfer at “discrete” stages in the transfer process including adoption (inter-organizational transfer), replication (intra-organizational transfer), adaptation (contextualization), and retention (or abandonment) (see Figure 1 below).

TRANSFER TARGET CHARACTERISTICS

The “characteristics of knowledge being transferred . . . affect the ease and success of knowledge transfer.”¹⁷ An innovation with the attributes of relative advantage, compatibility, observability, and complexity would be adopted more quickly than one that does not possess these characteristics.³⁵ Relative advantage refers to the extent to which an innovation is thought to be superior to that which it is replacing. Compatibility measures the congruence of an innovation or knowledge with individuals’ experience, values, and beliefs. Observability refers to the extent to which an implemented idea can be seen in action by others.³⁵ Complexity addresses the level of difficulty in understanding a new idea or innovation and is, in part, related to the extent to which knowledge targeted for transfer is tacit. Tacit knowledge is knowledge based on capabilities and routines that have not been or are difficult to codify; it is more challenging to convey and is more susceptible to incomplete or inaccurate transfer both at the initial adoption and replication stages.¹⁷ Attributes of innovation were used to characterize a series of practice guidelines for physicians: they found that guidelines deemed to be highly complex had lower compliance rates, while observability was not found to be significantly related to compliance.³⁸

FIGURE 1

Stages of Knowledge Transfer and Points of Potential Impact of Factors Operating at Transfer Target, Individual, Organizational, and Environmental Levels



* We acknowledge that adaptation can precede replication.

^{NB} Our development of this model was assisted by the excellent discussions on knowledge creation by Nonaka (1994) and on knowledge transfer by Szulanski (1996; 2000).

The complexity of guideline information likely plays a role in the decision in an LTC facility to adopt a CPG and in the ease with which CPG use is subsequently transferred within an institution. For example, guideline recommendations on wound care are largely specific (e.g., “use wet packing”), easier to communicate, and less reliant on the tacit knowledge that individual care providers bring to the situation. By contrast, implementing recommendations regarding management of behaviors associated with dementia is made more difficult due to greater reliance on tacit knowledge (e.g., considerations of psychological state, physiological condition, social status, and environmental triggers in the behavioral management of dementia).

Proposition 1: The likelihood of CPG adoption decreases with the extent to which the CPG relies on tacit knowledge over explicit knowledge.

Causal ambiguity is also a significant predictor of the ease of knowledge transfer. If there is uncertainty around the utility of the new knowledge, any related new routines or practices may be abandoned for more familiar, prior practices. A study³⁹ of factors that contribute to the assimilation of innovations showed that medical innovations in hospitals that have readily demonstrable outcomes are more readily adopted than those that do not.³⁹ Causal ambiguity is a key characteristic of transferred knowledge that can impact

the success of transfer, the willingness on the part of intended recipients to undertake transfer, and the extensiveness of later investment in mechanisms that will lead to the retention of best practices.⁴⁰ The following proposition relates to the extent to which the application of a CPG produces a causally ambiguous outcome:

Proposition 2: The likelihood of CPG replication and retention increases with decreasing causal ambiguity around the linkage between the CPG’s implementation and positive resident health outcomes.

INDIVIDUAL-LEVEL FACTORS

In the management and organizational sciences literature, the role of individuals is described as vital to organizational learning and knowledge transfer. Significant bodies of research grounded in organizational and individual behavior theory, learning and innovation diffusion theory, and models of health education have identified individual-level factors that might predispose and enable people to take an active role in the adoption stage of knowledge transfer.^{35,41–44} All of these studies focus on clinical leaders; because most of the studies are undertaken in primary care and acute care settings, the clinical leaders tend to be physicians.

In LTC, registered nurses are more likely to serve as clinical leaders. The little research that does exist which focuses on nurses' roles in CPG implementation in LTC and chronic care settings suggests that several of the individual-level factors found to be significant to the use of EBP in acute and primary care also pertain to guideline use in LTC.^{45,46} Individual-level barriers identified as relating to CPG adoption include the following:

- lack of familiarity with and awareness of CPGs;
- lack of agreement with specific guidelines or guidelines in general;
- lack of outcome expectancy with respect to CPGs;
- lack of self-efficacy in implementing guidelines effectively;
- lack of motivation to use guidelines or inertia that favors previous practices; and
- lack of prior experience implementing guidelines.

The following propositions regarding the individual-level characteristics of clinical leaders in LTC facilities may affect knowledge transfer:

Proposition 3: The likelihood of CPG adoption increases with the levels of familiarity and agreement with CPGs in general among the clinical leadership.

Proposition 4: The likelihood of CPG adoption increases with the levels of self-efficacy among clinical leadership relating to their ability to implement a CPG.

Proposition 5: The likelihood of CPG adoption increases with the extent of prior experience among clinical leadership in CPG implementation.

ORGANIZATION-LEVEL FACTORS

Learning research reveals that the barriers to knowledge transfer from unit to unit within organizations (i.e., replication) are often formidable. One study observes "even though intra-firm transfers of knowledge are often laborious, time consuming and difficult, current conceptions continue to treat them as costless and instantaneous" and "negate the possibility of difficulty."³⁷ This study of the transfer of best practices within firms operating in diverse industries demonstrates that the dominant barriers to intra-firm transfer are related to the knowledge being transferred (discussed above) and the characteristics of the recipient organization.⁴⁰ Situations of "internal stickiness" are ascribed to a lack of "capacity" for learning within an organization. Learn-

ing capacity is related to an organization's structural capabilities that promote knowledge transfer across units¹⁷ and to how well an organization's structure supports replication processes. Structural capabilities that support replication within organizations include the following:

- standardization and documentation of activities;
- setting superordinate goals that demand cross-unit cooperation and depend upon knowledge transfer;
- providing opportunities to interact and exchange knowledge through meetings and conferences; and
- rotating personnel to effect the transfer and exchange of tacit and explicit knowledge.

Chain-owned LTC organizations, which are particularly adept at standardization around the purchase and provision of services, are more apt to support these structural capabilities than are non-chain-owned facilities.^{47,48} Chains are also more likely to have in place dedicated resources that facilitate or complement dissemination efforts, for example, through broadcast communications issuing from head office to chain units, or through in-services that involve staff from across units and provide opportunities for interunit learning and knowledge exchange. Research on organization-level factors supports the following three propositions regarding replication:

Proposition 6: CPGs are replicated more extensively throughout LTC facilities that have structural capabilities in place that support replication processes.

Proposition 7: CPGs are replicated more extensively throughout chain-owned LTC facilities.

Care protocols are often targeted at LTC providers without any attention to the resources that the interventions require, or to the need for coordination among organizational members and units.⁴⁹ The extent to which CPGs are replicated across units in LTC organizations and the extent to which they are adapted to optimize their application in context is contingent on the availability of resources (e.g., human resources, financial resources, general operating knowledge, and shared resources available through corporate ownership) that can be dedicated to knowledge transfer. This is an accepted phenomenon in the organizational learning literature where larger organizations, particularly chain-owned organizations with opportunities to share resources across sites, generally have a greater pool of resources that afford them more opportunities to innovate and experiment with new ideas.^{50,51} On the other hand, very large facilities present intra-organizational

transfer challenges related to the need to divide resources and distribute responsibilities into discrete, manageable work units. These findings lead directly to our next proposition:

Proposition 8: The size of an LTC facility has an inverted U-shaped relationship to the extent of replication and adaptation of CPGs in that facility.

The common assumption underlying most research and intervention efforts related to knowledge utilization and transfer is that decision makers will use knowledge appropriately, given adequate dissemination, relevance, and timeliness. This assumption has recently been challenged. Increasingly, theories of knowledge inquiry and use stress the importance of organizational interests and the communications between knowledge sources and users as important factors in knowledge utilization.^{52–54} Control and reward systems may be put in place to facilitate and reinforce knowledge utilization.⁵⁵ A review of research utilization studies relevant to nursing practice found these organizational factors accounted for the bulk of explained variance in regression analyses that simultaneously looked at the impact of organizational, environmental, and individual characteristics.⁵⁴ The results of an illustrative multiple case study showed that the speed and pattern of adoption of a health care innovation had more to do with the fit of the innovation to the interests of the parties involved than to the strength of the scientific evidence concerning its benefits.⁵² The next proposition reflects these findings:

Proposition 9: The likelihood of CPG replication and retention increases with the extent to which the CPG serves the interests of the staff who use it.

Despite the growing reliance on health care aides for the provision of direct care to residents in LTC, far fewer studies have focused on the role of unregulated, “nonprofessional” staff in LTC settings and the implications for evidence-based practice.^{56,57} At the level of the facility, the staff mix that is comprised of registered, professional nursing staff will likely impact the adoption and transfer of CPGs because these staff are those chiefly charged with clinical leadership in LTC facilities.

Proposition 10: The likelihood of CPG adoption and intra-organizational transfer increases with the proportions of registered, professional nursing staff.

Organizational culture is “the combination of the symbols, language, assumptions, and behaviors that overtly manifest an organization’s norms and values. It

is the taken-for-granted and shared meanings people assign to their social surroundings.”⁵⁸ Attention to cultural “fit” is key; in some situations culture facilitates change and innovation, while in others it can impose a barrier to change.⁵⁹ A culture that emphasizes efficiency and coordination of care may be the most amenable to the use of guidelines and protocols.⁶⁰ Certainly, in LTC facilities with limited or no prior experience with CPG-based practice, considerations of the implications of “fit” between work culture, and the need for practice change are likely to contribute to the longer-term success of CPG implementation.

Proposition 11: The likelihood of CPG replication and retention is greater in facilities in which considerations of the “fit” between the prevalent work culture and protocol-based practice precedes CPG implementation.

ENVIRONMENT-LEVEL FACTORS

An organization’s environment, or domain of operations, includes other organizations from which managers can potentially learn. Being able to observe a new idea being applied by others was an important contributor to successful adoption of innovations.³⁵ To discriminate among possible learning opportunities, managers use heuristics to decide upon organizations whose routines they will target for new knowledge. Targeted organizations are generally chosen based on their perceived performance or success, along with related factors such as their size, proximity, experience, reputation, and observability.¹⁷ The use of heuristics for targeting sources of knowledge transfer has been observed in acute care. One report showed that the centrality of a hospital’s network location in terms of graduate medical education, the reputation, and visibility of the medical school with which the hospital is affiliated and the prior transmission of information concerning matrix management contributed significantly to predicting the adoption of the matrix management system by other hospitals.⁶¹ In this study, the effects of physical proximity are also in evidence; the cumulative number of prior adopters located in the same geographic region is a significant predictor of adoption, as is the accumulation of collective local experience with matrix management in a local network. We expect to observe similar heuristics in use among LTC institutions. The next two propositions reflect these findings and our expectations with respect to the adoption of CPGs:

Proposition 12: The likelihood of a CPG’s adoption in a focal facility will increase with the number of similar, proximal LTC facilities that adopt the CPG.

Proposition 13: The CPGs most widely adopted across all LTC facilities will be those used by large, observable LTC facilities.

Activation triggers are events or factors whose sources can be internal or external to the organization, which prompts it to respond through changed behaviors to internal or external stimuli.⁶² While some triggers do arise from internal sources—for example, organizational crises such as performance failures or important events that redefine a firm’s strategy—triggering arises primarily from factors or situations that are exogenous to an organization that serve to “shock” it into action. For example, new or renewed demands of key stakeholders like regulators who wield power over the disbursement of valued inputs including resources and accreditation⁶³ may trigger CPG adoption if guidelines are viewed as a feasible means of meeting stakeholder demands. Indeed, respondents to a survey of Directors of Care of LTC facilities in Ontario indicated that the most influential source of CPGs would be the provincial government—the LTC funder and regulator of LTC facilities.¹¹

Proposition 14: The CPGs most widely adopted across all LTC facilities will be those reinforced by regulation.

In summary, within LTC organizations there might be as many factors conspiring to work against, as for, innovation adoption and knowledge transfer and the sustained application of new knowledge; as one of our investigators observed “it is a tricky, and sticky, business.” Figure 2 summarizes the fourteen propositions given here and presents the full contingency model.

IMPLICATIONS AND FUTURE DIRECTIONS

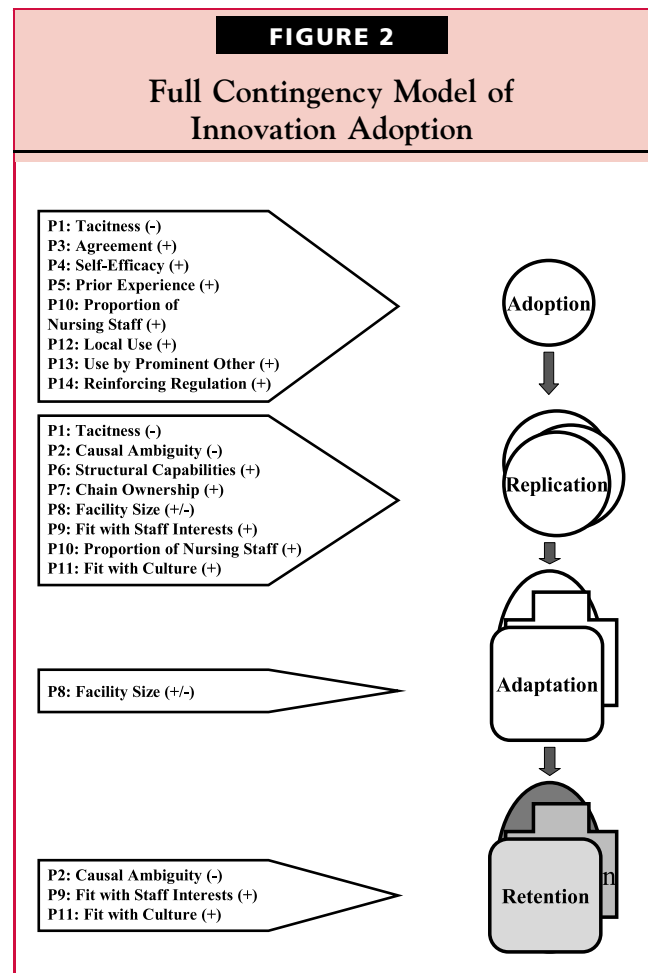
A limited available literature shows there are as many examples of guideline noncompliance^{24,25} as there are implementation success stories^{26–29} in LTC. At the present time, when CPGs are being heralded as one of the key solutions to some of the existing issues around quality of care in LTC care—offering standards upon which to base care, and its costs—it is important for us to understand more precisely what the conditions are that lead to successful transfer and implementation of CPGs in LTC settings, and what has led to the transfer failures observed to date.

This review of the innovation, organizational learning, and knowledge transfer literatures underscores the importance of acknowledging that there are constraints inherent in adopting innovations in health care organizations. Factors exist, at a number of levels, which

impose constraints on facilities’ abilities to learn and transfer new knowledge reliably and to progress from the early adoption stages of knowledge transfer to the later stages of full implementation and retention. Further, the processes of learning and knowledge transfer are complex and efforts to introduce innovations in health care organizations should not be trivialized.

PRACTICE IMPLICATIONS

This discussion suggests that managers of LTC facilities adopting CPGs, and policy makers interested in seeing CPGs “work” in health care generally, could enhance the success of CPG adoption by ensuring that the “right” factors are in place at “right” time (i.e., at critical junctures of the innovation adoption process). To facilitate adoption, it will be important for those who produce guidelines to ensure that guidelines are sufficiently explicit in their content and for LTC managers to ensure that experienced clinical leaders are “on board” with the decision to implement the guideline and to engage all registered professional nursing staff in the process. Given regulators’ significant influence



in this industry, their incorporation of CPGs into regulatory standards would have tremendous impact on adoption of guideline-based best practice knowledge. Mid-sized LTC organizations with preexisting structures and a working culture that support standardization and knowledge exchange will likely experience the most ready success in replication and adaptation of CPGs. Structural capabilities that support replication, need to be in place, including superordinate goals to guide and evaluate staff behavior and structural mechanisms that facilitate knowledge exchange among staff as they learn to apply the guideline. Guideline implementation plans need to take into account the resource limits of a facility and/or the challenges inherent in dissemination across a large, multi-unit facility. Further, the most successful guideline implementation plans are likely to emphasize the staff benefits of using the CPG over historical practices, and to take into account cultural elements reflected in patterns of work, working relationships, and common values that can be used effectively to enhance the attractiveness of using the guideline.

Our research team has embarked on a three-stage study, funded by the Canadian Institutes of Health Research, designed to test the propositions outlined above as they pertain to LTC facilities in Ontario, Canada. The findings of our study are intended to help policy makers and administrators of LTC facilities operating in Ontario decide where, and how, to invest financial and human resources to stimulate increased uptake and retention of new knowledge and innovations intended to improve performance.

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