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Research

Using shared mental models to conceptualize patients as professionals, decision-makers, collaborators, and members of interprofessional healthcare teams

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Abstract
Patient engagement has become the buzz-phrase of 21st Century health care. Around the world, healthcare systems involve patients in a wide range of activities including drug development, research, and policy design. There are strong institutional pressures for patient engagement in healthcare activities that have been bolstered by ethical imperatives and social and organizational benefits from patient engagement. There is a trend to center efforts to cultivate engagement initiatives that are meaningful to patients and family. However, these efforts are characterized by multiple challenges, for example, tokenism and the lack of organizational support. These barriers may persist in healthcare professionals' conceptualizations of patients as independent from the health system; healthcare professionals are active shapers of health services and patients are passive recipients. There is a growing need to address the scholarly confusion with the roles and expectations of patients in healthcare activities, and what strategies can support more meaningful and collaborative relationships between different groups. This paper uses the literature on shared mental models - knowledge structures that define the boundaries of collaboration between groups with distinct values and beliefs - to describe how the roles of patients in healthcare activities may be expanded. This paper deconstructs how technical and informal knowledge serves as a focal point for healthcare professional identity, and how this relationship between knowledge and professionalism creates an anchor for conceptualizing patients as professionals, collaborators, and decision-makers.

Keywords
Patient engagement, patient professionalization, patient leadership, shared mental models, partnership

Background

Patient Engagement (PE) has become the buzz-phrase of 21st Century health care. Around the world, healthcare systems are now expected to involve patients in a wide range of activities, including drug development,[1] policy design,[2] health system restructuring,[3] and the co-design of interventions and technologies.[4] The work in this area is laudable; patients serve in a variety of roles,[5] planning committees provide bursaries for patients to attend academic conferences,[6] and a number of frameworks have been developed to solicit and evaluate PE.[7]

In the last two decades, institutional pressures have promoted PE in healthcare planning, service delivery, and quality improvement activities. Institutional pressures may have emerged, in part, because of research on the benefits associated with PE including increased trust between patients and care providers,[8] enhanced adherence to treatments,[9] improved clinical outcomes,[10] and more cost-effective and sustainable health services.[11] These benefits engender a strong rationale for engaging patients in activities that improve their clinical care, as well as the care for all patients in patient safety and quality improvement initiatives. However, researchers have found that these benefits may associated with partnership and *meaningful* engagement of patients, which is complicated by multiple political, organizational, and relational barriers. Furthermore, an increasing number of healthcare stakeholders consider patients (and their family and care representatives) to be users, consumers, and taxpayers of the healthcare system; as such, have the democratic right to determine how health services are managed and the resources allocated.[12-14] This belief advocates for the higher autonomy of patients by including them as partners in interprofessional teams that plan, deliver, and improve health services. However, patients can be involved to different *degrees* and an understanding of these degrees may clarify the diverse roles that patients can have in health care. According to Health Quality Ontario, patients can engage at four *degrees*: share (provide easy-to-understand health information), consult (get feedback on a health issue), deliberate (discuss an issue and explore solutions), and collaborate (partner to address an issue and apply solutions).[15] Related to these degrees is *meaningful PE*, a concept that is nebulous but widely cited in the PE literature as the goal for how patients should be involved in healthcare activities.[16]
Related to the degrees of PE, researchers and practitioners have identified that the ways in which healthcare

professionals engage patients may constitute *tokenism*[17-18]; a concept that describes a situation whereby patients' share their experiences and perspectives to enhance the organization and delivery of interventions but have limited decision-making capacity to influence real change.[19] Tokenism is related to placation in which patients are invited to contribute to organizational decision-making, but they are not included in the decisions that matter the most.[20]

Engaging patients in healthcare activities requires a considerable amount of time and resources, which healthcare professionals (clinicians, managers, administrators, and researchers) identify as a significant barrier to meaningful PE.[21] Similarly, many hospitals dedicate a substantial number of human resource hours to administering patient partnerships through full- and part-time managers with a portfolio of PE.[22] Some researchers have found that the benefits associated with engaging patients are linked to meaningful PE and there are adverse consequences of not engaging patients meaningfully such as the widening of existing health disparities.[23-24] As such, in cases where tokenism exemplifies the relationship between healthcare professionals and patients, resources are spent towards engaging patients without the benefits to patients and the system that support PE in the first place.[19] Moreover, priorities determined by healthcare professionals may not have relevance or credibility to patients if they are not meaningfully involved in the priority-setting activities.[25]

It appears that tokenism may stem from two factors: strong institutional pressures to engage patients on the one hand, and the lack of organizational resources and support to practice meaningful PE on the other hand.[26] Many healthcare institutions obligate clinicians, managers, and researchers to engage patients in healthcare activities. For example, all hospitals in Ontario have some form of a Patient and Family Advisory Committee that guides the design and delivery of health services.[27] Managers and clinicians in many instances are required by their organization to involve patients, family, and care representatives in planning and quality improvement work. Some organizations, however, may not have the necessary infrastructure, resources, training, and support that promote authentic collaboration and partnership between healthcare professionals and patients.[26] Lack of practical support and guidance is a commonly cited barrier to meaningful PE.[28-31] Without adequate support, scholars have found widespread confusion among PE practitioners on which patients to engage, where, how, and the goals of PE.[18] Adequate resources, support, and preparation contribute to clearer goals, expectations, and mechanisms of PE, which may yield initiatives that better represent meaningful PE; accordingly, health service organizations may observe the benefits associated with PE.

Objectives

Patients are often perceived as distinct from healthcare activities; healthcare providers manage and deliver care, and patients serve as passive recipients of that care. However, due to increasing pressures to involve patients in a wide range of activities, there is a need to better conceptualize patients' roles in healthcare activities. Using the theory of shared mental models – knowledge structures that define the boundaries of collaboration between groups with distinct values and beliefs – this paper builds an understanding of patients as professionals, collaborators, and decision-makers in healthcare activities. This paper will clarify how patients may be perceived as professionals by juxtaposing their experiential knowledge to the technical and informal knowledge that characterizes the identity of healthcare professionals. Table 1 includes a summary of points discussed in this paper.

The Need to Redefine Engaged Patients as Professionals

Viewing patients as members of and partners in interprofessional healthcare teams may offer new insight into the innerworkings of how teams can function in complex, changing environments. This view employs the concepts of collaboration, authenticity, and team integration as anchors to conceptualize partnerships with patients that are indicated by *shared* power, responsibility, and accountability. Adopting such a view, however, requires a remarkable paradigm shift in how healthcare professionals understand health care that tests the values and beliefs that ground the normative health system culture. Acknowledging a new group of individuals (i.e., patients) as members of a compendium of values and beliefs is not a straightforward task. Including patients as members of interprofessional teams is particularly problematic because of the pronounced power differences between professionals,[32] traditional habits of mind that sustain conventional roles of patients and healthcare professionals,[33] and tacit paternalism that still exists in the fabric of medicine today.[34]

The literature shows that engaging patients in planning and improvement activities yield many benefits to patients and health service organizations. As noted by some scholars, however, these benefits come from authentic collaboration and partnerships, whereby patients are viewed as equal members of interprofessional teams.[8] One component of this view requires health system stakeholders to perceive patients' *experiential knowledge* (i.e., their preferences, experiences, and perspectives) related to health services as

Table 1. Summary of Key Points

Type of Professional	Summary Points
Healthcare Professionals	• Healthcare professionals carry out their responsibilities using the technical knowledge they acquired through formal learning, and informal knowledge developed from first-hand experiences in the field. Both types of knowledge are privy to healthcare professionals. • Technical knowledge depends on informal knowledge and experiences – and vice versa – for planning, delivering, and improving health services. Informal knowledge allows healthcare professionals to understand and leverage diverse patient needs and preferences. • Tailoring health services to match patient needs and preferences may be conceptualized as the integration of technical and informal knowledge to form a shared mental model between professional groups. • Overtime, informal knowledge becomes explicit and formal through socialization and externalization.
Patients as Professionals	• Patients have experiential knowledge that is not technical in nature, but it is a type of informal knowledge that is privy to patients that they derive from prolonged engagement with health services. • Patients' experiential knowledge has the potential to engender health system improvement towards increased effectiveness and sustainability. • On the basis of knowledge and experiences, patients can be considered a type of a professional because they hold experiential knowledge that is privy to them. • The notion of patient compensation for engaging in healthcare activities characterizes a shift towards an environment where patients enact more professional-like qualities. • Patient compensation is stymied by healthcare professionals' attributions of informal knowledge as lower priority to technical knowledge. But since financial compensation is partly determined by informal knowledge, patients who contribute their experiential knowledge to improve the design and delivery of health services should also be compensated for their time and expertise. • The professionalization of patients in health care changes the perceptions of patients from being passive consumers to professionals, collaborators, decision-makers, and members of interprofessional healthcare teams. • The professionalization of patients may transform the most commonly cited barriers of PE (e.g., lack of time and resources) as a concomitant characteristic of everyday medical practice. • Since patients are a source of knowledge and information, they are a component of the *people* knowledge reservoir that form the informal knowledge of other professional groups. • The professionalization and integration of patients as knowledge reservoirs in a healthcare organization may alleviate the negative attitudes that conventional healthcare professionals may hold of patients that prevent them from providing authentic and collaborative opportunities to engage patients. • By viewing patients as integrated members of healthcare teams, the collective knowledge that informs health service design and delivery is expanded, enabling organizations to be more innovative, effective, and efficient in the healthcare industry.

complementary to clinical judgement and evidence.[33] Patients' experiential knowledge develops from living with their disease and interacting with health services. Patients maintain self-care habits, continuously enhance knowledge about their disease condition, and consider how their values and beliefs influence treatment plans.[8] If embedded into the health care milieu, this knowledge can increase the healthcare system's capacity to generate and implement health services tailored to patients,[35] improving adherence, understanding of medical condition, and clinical outcomes.[36] Moreover, integrating patients' experiential knowledge in healthcare activities may promote the inclusion of patients as members of interprofessional teams: "through this PhD in Lived Experience, patients offer invaluable expertise, skills and unique points as partners and collaborators" (p. 8).[37] This view advances patients' experiential knowledge as complementary and substantive to empirical evidence and clinical judgement.[38]

Professional Subcultures: Shared Mental Models

Healthcare systems are organizations; and organizations are *cultures* - shared sets of values, beliefs, and preferences that guide the attitudes and behaviours of its members.[39] Even though the healthcare system has an overarching culture, it also consists of many *subcultures*, some of which may be identified as *professional subcultures* (i.e., physicians, nurses, administrators, etc.). These subcultures have a unique set of values, beliefs, and priorities that determine how members practice and collaborate with other professionals.[40-41]

The healthcare system is highly professionalized.[42] Professional subcultures may have similar goals (e.g., to plan, provide, and improve health services),[43] but their responsibilities, approaches, and the values and beliefs that ground their goals may be distinct. *Shared mental models*

(SMMs) is one way to conceptualize how distinct professional subcultures interact with each other toward common goals. Evans and Baker (2012) defined *mental models* as "representations of the environment that humans use to describe, explain, and predict their surroundings" (p. 716).[44] The authors stated that mental models are "psychological representations" that help individuals to: (1) describe the purpose of system, (2) explain the functioning of system, and (3) predict the system's future states.[44] Similarly, Mathieu and colleagues (2000) highlighted that mental models "allow people to draw inferences, make predictions, understand phenomena, decide which actions to take, and experience events vicariously" (p. 274).[45] When individuals with different mental models interact, their mental models become similar overtime and are referred to as SMMs.[46]

SMMs are "individually held knowledge structures that help team members function collaboratively in their environments" and capture how distinct professional subcultures may behave collaboratively.[47] *Knowledge structures* are beliefs about nature and reality.[48] SMMs may develop in two or more people who are collaborating on a task that requires close coordination.[47] Overtime, due to the intensity of interaction, communication, and knowledge exchange, individuals with varying values and beliefs may form a SMM,[44] which establishes similar communication strategies, expectations, knowledge, and approaches towards common goals. Time is not the only factor important to the development of SMMs; collaboration requires experiential learning, continuous feedback, and knowledge exchange.[45] Moreover, SMMs are not only characterized by the overlap between individuals' knowledge structures, but also a "synergy" and goal alignment between professional subcultures.[45]

SMMs are important in the healthcare system for a number of reasons. The prevailing notion of complexity theory that views healthcare systems as comprising of a multi-faceted set of actors and interactions encourage SMMs between professional subcultures.[49] In "simple" problems that require "standardized" solutions (e.g., withdrawal of blood from a patient), SMMs between professional subcultures may stymie the achievement of goals.[45] On the other hand, the solutions to complex problems (e.g., improving the transition from acute to long-term care) requires dialogue, deliberation, and knowledge transfer between multiple professional subcultures.[49] A SMM may enable teams comprising of distinct professional subcultures to effectively coordinate tasks in a way that caters to the values and beliefs of each professional subculture while achieving common goals.[44] With a higher number of professional subcultures in a SMM, solutions and processes become more holistic and responsive to the healthcare environment.

In a public healthcare system such as Canada, professional subcultures are strongly encouraged. SMMs enable teams to adapt to ephemeral circumstances and evolving, complex problems.[45] On this note, previous research has shown that SMMs within teams who are closely coordinating on *complex* tasks leads to more responsive teams,[47] more effective communication processes,[50] similar preconceptions of how to appraise and manage new information,[51] enhanced decision-making by protecting the group from groupthink,[44] and highly integrated health care.[45] On the contrary, teams who coordinate but do not have a SMM may have more communication problems,[52] and ineffective team processes.[45]

This body of research shows that SMMs are beneficial for the innerworkings of interprofessional teams and hence, may confer a plethora of benefits to the healthcare system. However, there is a lack of clarity in the literature regarding the role of patients in interprofessional collaboration, SMMs, and teamwork. In particular, there is little discussion about the role and processes to incorporate patients as professionals in healthcare subcultures and how the nature of patient knowledge and experience may enable the conceptualization of patients as professionals. There is an emerging area of the PE literature that views patients as partners and professionals because of their experiential knowledge that an increasing number of healthcare stakeholders believe to be complementary to medical knowledge and clinical judgement.[38]

Conceptualizing Healthcare "Professionals"

In the context of the healthcare system, healthcare professionals include care providers, administrators, managers, and researchers. These professionals participate in a way of life governed by a circumscribed set of responsibilities and activities –the *scope of practice* for healthcare providers – for which they acquire financial return.[53] Generally, most healthcare providers are regulated by government authorities and as such, their scope of practice is determined by legal and policy documents. These formal documents represent an agreement between healthcare provider groups and the government in nations where providers are public employees. The scope of practice circumscribes the activities and responsibilities of healthcare providers depending on their knowledge, skills, and professional experiences. Technical knowledge is acquired through formal learning mechanisms (i.e., medical school, nursing school, residency, and fellowships, etc.) and overtime through continuing medical education.[54]

Healthcare Professional Knowledge and Experiences

Healthcare professionals may be characterized as having the *technical knowledge* to perform certain responsibilities and activities that enable them to plan, provide, and

improve health services.[43] Technical knowledge is privy to healthcare professionals because acquired it through years of formal undergraduate, graduate, and post-graduate training. Different professional groups have distinct roles: healthcare providers deliver medical care to patients, administrators ensure the organization and management of health services, and health service researchers may investigate different aspects of service planning, delivery, and improvement. However, technical knowledge is not the only type of knowledge that healthcare professionals use to carry out their roles. Each healthcare professional uses their technical knowledge and *informal knowledge or experience* - the "insights, intuitions, and beliefs" (p. 1481)[55] - to fulfill their professional responsibilities and guide them through the complexities of medical practice. Informal knowledge and experience are more difficult to articulate,[56] but they represent the nuances of medical practice and the tacit assumptions that guide the planning, delivery, and improvement of health services.

Technical knowledge is an essential aspect of professional subculture identity. Any individual who successfully undergoes formal training to acquire technical knowledge would become professionalized under that profession, and accordingly, a member of that subculture. Specialists within professional subcultures may form coalitions grounded in their scope of technical knowledge. Both of these situations indicate a relationship between technical knowledge and professional identity.

Informal knowledge and experiences are also crucial to the development and maintenance of professional identity.[57] Technical knowledge gained from formal training is inextricable from informal knowledge and experience. Rathert and colleagues (2013), for example, noted that technical processes depend on interpersonal processes of medical care[9]; healthcare professionals are required to manage both their formal knowledge and informal knowledge and experience as they engage in the design, delivery, and improvement of health services. A physician, for example, may examine the signs and symptoms of a patient using a combination of their technical knowledge and informal experiences acquired through residency training. Their technical knowledge provides the foundation for understanding the patient's medical condition, diagnosis, prognosis, and possible treatment options.

With the advent of patient-centred care, patients' preferences are increasingly being incorporated into everyday medical practice.[58-59] Patient preferences, however, differ widely across demographic characteristics, social location, and the medical disease.[60-62] As such, healthcare providers must utilize their informal experiences to navigate through how patients' biomedical needs relate to their values, beliefs, and preferences. Healthcare providers determine the most appropriate communication methods and mechanisms depending on the situation and social location of patients. One way to communicate diagnosis, for example, may not be appropriate for different patients despite the same disease condition. The way information is delivered to patients, or treatments administered will also depend on the providers' previous experiences interacting with a wide range of patients. This *tailoring* of health services has been conceptualized as *integrating* technical and informal knowledge to form a SMM.[63] Furthermore, the same provider may not diagnose the same medical condition in the same way years later because their informal experiences evolve overtime. To reflect this evolution, Ratnapalan (2014) described the *knowledge spiral* whereby informal knowledge and experience becomes explicit overtime through the process of socialization and externalization.[64]

Patients as Professionals: Experiential Knowledge. Patients have *experiential* knowledge and informal experiences with health services. This form of knowledge is not technical in nature, but it is a type of *informal* knowledge that is privy to patients that develops through interactions and personal, prolonged engagement with health services. According to some healthcare professionals, experiential knowledge is one of the primary benefits of including patients in planning, delivering, and improvement initiatives.[65] If incorporated, the design and delivery of health services may be tailored to the values, beliefs, and preferences of patients, family, and care partners, and become responsive to changing circumstances of the healthcare system. If patients have a form of knowledge that is highly relevant to the planning, delivering, and improving of health services, and that knowledge is privy to only them, then patients may be viewed as a professional subculture by that regard. This assertion is substantiated by the observation that some patients dedicate nearly full-time hours to self-management and engagement in initiatives (e.g., chronically ill patients). From this type of involvement, patients acquire valuable and nuanced experiential knowledge about health services and medical practice.

One characteristic of a professional that is not captured in this conceptualization of patients as professionals is *compensation*. Today, the majority of patients are not compensated for their contributions to organizational activities. Since informal knowledge is ambiguous, variable, and difficult to articulate, healthcare professionals may inadvertently attribute a lower-priority to this type of knowledge compared to technical knowledge that is more certain and codified. In this way, it may be the case that patients remain uncompensated because their experiential knowledge is valued less than technical knowledge and the professional experiences of other healthcare professionals.[66] This scenario is reinforced by power differences between different professional subcultures that stymie organizational change and the professionalization

of patients.[67-68] For example, patients commonly report that they do not have the power or opportunity to discuss compensation in healthcare activities.[37] However, if experiential knowledge of patients is characteristically similar to that of other healthcare professionals, and it improves health services and contributes to a more cost-efficient healthcare system,[69] then patient compensation is warranted.

Among health services organizations, patient compensation is a contentious issue. There is uncertainty on when to compensate patients, how much to compensate, and how to maintain commitment, retention, and accountability.[70] To this end, organizations have developed guides to support PE practitioners in navigating these issues.[70-71] These guides not only provide resources and tools to address the problems with compensating patients, but also a shifting narrative whereby patients, previously viewed as non-professionals, enact more professional-like qualities by being compensated for contributing their experiential knowledge.

Professionalization of Patients

Professionalization describes a process through which patients become integrated members of interprofessional healthcare teams.[72-73] Patients who are "professionalized" receive compensation for their time and expertise, contribute to the decisions that matter the most, and have a vested interest in the quality and effectiveness of health services. Professionalization is similar to involving patients as "Consumer Leaders" or "Peer Leaders" in the design and delivery of health services.[65,74] For some patients, professionalization represents an ideal and goal.[31] For example, some HIV/AIDS healthcare facilities hire individuals who were previously service users to manage Boards, coordinate events for patients, and design and implement peer education and support programs.[74] These patients take on the role of a professional and are treated as members of an interprofessional healthcare team.

The professionalization process exemplifies a paradigm shift from viewing PE as "involving patients" to "collaborating with team members." This shift has far-reaching implications because it views patients as professionals, collaborators, and decision-makers instead of passive service users. This shift is also powerful considering the evolving nature of the healthcare system whereby additional professional subcultures are introduced and accordingly integrated into interprofessional healthcare teams (e.g., most recently Physician Assistants in North America). The view of patients as professionals may prompt the necessary attention and perspective needed to overcome the barriers to PE, especially since these barriers may lead to adverse outcomes such as mistrust, poorer communication, and the squandering of constrained healthcare resources.[75] Lack of time and resources, for example, are commonly cited as barriers by healthcare professionals when engaging patients.[21] Some healthcare professionals believe that engaging patients will require additional time spent on training, preparing, and acquainting patients to healthcare activities; time that is already limited because of clinical responsibilities. This issue is further complicated by the negative attitudes and perceptions of some healthcare professionals that patients lack the knowledge, understanding, and competency to contribute to healthcare activities.[76] Lack of time and resources and negative attitudes towards patients may originate from viewing patients as *distinct* components of the healthcare system insofar that one group, the conventional healthcare professionals, design and deliver care to another group, the patients, who serve as passive consumers of health services.

By viewing patients as *team members* rather than passive consumers or distinct components of health services may transform the barriers of time into a concomitant characteristic of interprofessional collaboration. In this way, collaborating with patients as team members becomes a feature of everyday medical practice, something that professionals must perform in their prescribed activities and responsibilities. Collaboration with patients becomes a component of healthcare professionals' scope of responsibilities because the time, resources, preparation, and training needed to engage patients becomes embedded in the health care milieu and the interactions between professional subcultures.

Negative attitudes towards patients may be alleviated through professionalization if developing the patient professional subculture identity is predicated on the maintenance and exploitation of their experiential knowledge. There are multiple *knowledge reservoirs* – sources of knowledge and information within a healthcare organization.[77] One essential knowledge reservoir is *people*, which traditionally comprises of "professionals and other staff required to remember information" in order to carry out their responsibilities and activities.[77] But, patients also have information and knowledge about the healthcare system; as such, may be incorporated into the people knowledge reservoir.

By integrating patients as professionals and viewing them as knowledge reservoirs, negative attitudes, inaccurate perceptions, and previous negative experiences, may be prevented or alleviated due to an internalized need to engage in interprofessional collaboration with all members. In this way, health service organizations can better leverage the myriad of knowledge reservoirs available to them to adapt to the changing healthcare industry and community needs. On this note, Levin and Cross (2004) identified that the complete deployment of collective knowledge leads to healthcare organizations that are more innovative, effective, and efficient in the market climate.[55] This "collective knowledge" may be expanded to include

patients because they hold experiential knowledge that is privy to them, which can improve the conceptualization and operationalization of health services.

Discussion

This paper analyzed how patients can be viewed as professionals, collaborators, decision-makers and members of interprofessional healthcare teams. This paper first examined the characteristics of healthcare professionals (i.e., clinicians, managers/administrators and researchers), with a focus on the nature of their technical knowledge and experiences in healthcare design and delivery. This knowledge and experience are important components of their professional identity that distinguish professionals from other groups (i.e., patients and the public). These characteristics were juxtaposed to the experiential knowledge that patients acquire by utilizing health services. This comparison served as the springboard for advancing the notion of patients as professionals since patients' experiential knowledge improves the responsiveness of health services and is privy to patients. However, compensating patients for their contributions in planning, delivery, and quality improvement initiatives remains a concern that differentiates patients from other healthcare professionals and sustains the power imbalance between groups. This paper discussed the professionalization of patients in the healthcare system as an approach to addressing issues with compensation and transforming the notion of patients as passive consumers to professionals, collaborators, decision-makers, and members of interprofessional healthcare teams.

Collaboration and Patient Professionalization.
As discussed in this paper, SMMs are valuable knowledge structures that allow teams to function in complex environments. Complex tasks require higher quantity and diversity of information, and sensemaking.[79-80]

Organizations and teams that do not have accurate or reliable information or are unable to transfer knowledge between individuals efficiently may be important indicators of institutional failure.[81] Since patients also hold a form of knowledge that is important for health service design, delivery, and improvement, including them as members of interprofessional healthcare teams may expand interprofessional SMMs to be more responsive to complex tasks and an ephemeral healthcare system culture. Expanding SMMs to be inclusive of patients may provide a greater range of solutions and perspectives to view concomitant healthcare problems.[82]

Simonin (1999) noted that relationships may be strengthened with greater interaction between groups that hold diverse attitudes.[83] As such, the mechanisms of knowledge transfer between healthcare professionals may be improved if SMMs are expanded to include patients as professionals. This expansion is also justified by the increasing need to consolidate disparate parts of the healthcare system to provide streamlined and integrated care. As mentioned previously, Evans and Baker (2012) described three purposes of mental models (describe the purpose, explain the function, predict future states).[44] Integrating patient experiential knowledge will increase the capacity of mental models to achieve these purposes as well as the goals of health service organizations to adapt to the evolving healthcare industry. Moreover, increased support for collaborative inquiry between patients and healthcare professionals may expand SMMs to be more appropriate to the needs, preferences, and priorities of patients. As such, the perspectives that motivate healthcare activities is one that employs patient experiential knowledge as a resource, alongside clinical judgement and empirical evidence. Health service organizations who accomplish these objectives may become more patient-centric, a characteristic some literature has identified as something that differentiates between high-performing from low-performing organizations.[83]

Barriers to Patient Professionalization.
A question remains unanswered: *Why have patients not experienced professionalization despite the efforts and policy supports to involve them in a wide range of activities?* The answer to this question is both theoretical and practical. One answer identifies the difference between how healthcare professionals perceive explicit (i.e., technical) and implicit (i.e., experiential) knowledge. In particular, explicit knowledge is more codified, and commonly used to determine status, pay, and promotion. On the other hand, experiential knowledge contributes to the healthcare system through intangible mechanisms. For example, high-performing organizations report having workers perform extra-role behaviours – also known as *organizational citizen behavior* – in order to function optimally.[84-85] Due to the more codified nature of explicit knowledge, healthcare professionals may privilege this form of knowledge over experiential knowledge.[66] A higher priority given to one form of knowledge may stem from a power difference between healthcare professionals and patients and negative attitudes towards patients, two ideas that have been embedded throughout this paper. Specifically, the power imbalance may translate into issues with patient compensation. Johannesen (2018) found that a number of patients desire compensation for their time and expertise.[31] This paper argues that compensation should be considered as it promotes the value, respect, and recognition of patient contributions to healthcare activities; similar to the value attributed to healthcare professional contributions. Notwithstanding, compensation does not have to be monetary, as Richards and colleagues (2018) note.[37] Compensation may be in other forms deemed appropriate to the contribution and contributor.

The professionalization of patients is complicated by multiple barriers. As this paper argues, however, there is a strong rationale for shifting our view of patients as passive consumers of health services to decision-makers, collaborators, and professionals. Professionalization may attribute a greater legitimacy to patients, and accordingly, a higher value to their experiential knowledge.[86] Perceptions of legitimacy may be similar among healthcare professional groups and engender "tunnel vision" that maintains the peripheral engagement of patients rather than including them in SMMs as collaborators, decision-makers, and members of interprofessional healthcare teams.[87] Instead of the periphery, placing patients at the center of healthcare activities (i.e., cultivating a patient-centric culture) may support the resolution of many problems in the healthcare system.

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