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**FACULTY OF GRADUATE AND
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Interprofessional collaboration within Canadian
integrative healthcare clinics: Mixing oil and water

Isabelle Gaboury

Thesis submitted to the Faculty of Graduate and Postdoctoral
studies in partial fulfillment of the requirements for the PhD
degree in Population Health

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Canada

"There cannot be two kinds of medicine – conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work."

Angell and Kassirer, 1998

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List of Abbreviations

BM: Biomedical practitioners

CAM: Complementary and alternative medicine

CHEO: Children's Hospital of Eastern Ontario

CI: Confidence interval

IHC: Integrative healthcare

IN-CAM: Canadian Interdisciplinary Network for Complementary & Alternative Medicine
Research

IPO: Input Process Output

IQR: *Interquartiles range*

MTHP: Models of Team Healthcare Practice

OR: Odds ratio

RCC: Relationship-centered care

US: United States

Thesis abstract

Integrative healthcare (IHC), the combination of biomedical disciplines and expertise in various forms of complementary and alternative medicine (CAM), is an example of interdisciplinary collaboration that has emerged over the last two decades. Little has been written so far to gain an understanding of how the healthcare practitioners in such setting collaborate. The main goal of this doctoral dissertation was to better understand what is inside the "black box" of interdisciplinary collaboration within IHC clinics so that appropriate links related to clinic effectiveness and cost-effectiveness as well as patient outcomes could be tested in future research.

This thesis explored the concept of interprofessional collaboration in IHC using three theoretical and conceptual models: Input Process Output, Relationship-Centered Care, and Models of Team Healthcare Practice. Inductive and deductive inquiries were conducted through sequential mixed methods and methodological triangulation techniques. Four objectives were proposed to better understand how collaboration was experienced and conceptualized within these clinics and how the related factors interacted with each others. Finally, assumptions of a conceptual model of classification of IHC clinics were tested.

Constructs contributing to collaboration included practitioners' attitudes and educational background, as well as external factors such as the healthcare system and financial pressures. Major processes affecting collaboration consisted in communication, patient referral and power relationships. These determinants of collaboration resulted in learning opportunities for practitioners, modified burden of work and ultimately, higher affective commitment toward the clinic. The quantitative inquiry revealed that interpersonal

relationships were shown to be central to the collaborative practice of IHC delivery. Additionally, beliefs in the benefits of collaboration were found to play an important role in an IHC collaborative enterprise. Finally, clinic model comparisons confirmed that interprofessional collaboration is modulated by the practice model. Suggestions to improve the conceptual model of classification were made.

This multi-method study was the first to summarize systematically the factors that impact and ensue from interprofessional collaboration in the context of Canadian IHC. The framework lay down by this dissertation represents an important step to investigate further the impact of IHC on patients and the Canadian healthcare system and to guide the development of more effective IHC clinics.

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Chapter 1

Rationale, objectives, and literature review

CHAPTER 1

RATIONALE, OBJECTIVES, AND LITERATURE REVIEW

Study Context

The last three decades have seen important shifts in the way healthcare services are delivered to Canadians, and in their expectations from the healthcare system. These changing expectations are reflected in a steadily increasing interest in complementary and alternative medicines (CAM) (Gavin & Boon, 2005), resulting in a significant demand for healthcare focused on healing and wellness, rather than symptomatic treatment aimed at “curing” (Foley, 1999; Peters, 2000; Weil, 2000; Makowski, 2004; van Haselen et al., 2004; McCaffrey et al., 2007; Remen, 2008; Ben-Arye et al., 2008). At the same time, increasing complexity of patient care, disease burden, and rising healthcare costs for medical specialization and technologic advancements call for a need to shift the way the Canadian healthcare system is organized (Johnson, 1992; Shortell et al., 1996; Welton et al., 1997; Gage, 1998; Foley, 1999; Bezold, 2001; Smith et al., 2002). Thus, the Romanow and Kirby reports on the future of Medicare recommended re-examining how physicians can best serve the population, and one proposal was to look at the creation of multidisciplinary teams to deliver efficient and appropriate care (Romanov R.J., 2002; Kirby M.J.L., 2002). Indeed, their recommendations complement research showing that interprofessional collaboration is a strategic factor in the implementation of effective healthcare programs (San Martin-Rodriguez et al., 2005; D'Amour et al., 2005).

Integrative healthcare (IHC), the combination of biomedical disciplines with various complementary and alternative therapies, is an example of interdisciplinary collaboration. This emerging working arrangement has potential to change the nature of our healthcare system and to have an impact upon overall population health (Willms & St Pierre-Hansen, 2008). It is particularly intriguing, given the historical divergence of paradigms between the interested actors.

To date, the literature on the complex process of collaboration is generally limited to issues arising when various medical practitioners work together, especially medical doctors and nurses. Research has focused on how interprofessional collaboration factors influence one another, and affect collaboration within interprofessional teams (e.g., McCallin, 2001; Cole et al., 2003; San Martin-Rodriguez et al., 2005; D'Amour et al., 2005). With significant public funds and efforts invested in IHC and collaborative settings over the last 10 years (e.g. the Canadian Health Transition Fund (Health Canada, 2008)), it is important not only to examine *how* healthcare professionals working in IHC settings are collaborating, but also to evaluate the extent to which they actually *are* collaborating and the extent to which particular factors foster or hinder the process.

Rationale for the thesis

There is growing evidence that collaboration positively affects healthcare team functioning and delivery by improving both access to healthcare and cost-effectiveness (Cole et al., 2003; Wheelan et al., 2003; Haward et al., 2003; Sarnat & Winterstein, 2004; San Martin-Rodriguez et al., 2005; Lemieux-Charles & McGuire, 2006; Barrett et al., 2007). However, most of these studies were limited to teams of physicians and nurses. When teams include

other healthcare professionals working collaboratively, little evidence or even conflicting evidence of collaborative effectiveness exists (Stahelski, 1990; Schofield & Amodeo, 1999; McCallin, 2001).

In addition, the literature remains unclear on the factors associated with effective teamwork (Lemieux-Charles & McGuire, 2006; Oandasan et al., 2006; Barrett et al., 2007). According to Hojat (2001), intensity of collaboration is generally related to the traditional pattern of relationships amongst types of practitioners and the roles of the practitioners within the team, although various practitioners may perceive the behaviours that define and enable collaboration differently, depending upon their roles (Baggs & Schmitt, 1997). It is also reported that interprofessional collaboration is a function of the complexity of patients' healthcare needs and the type of professionals involved in the team (Oandasan et al., 2006). However, most studies report on teams working in a hospital or institutional environment (Lemieux-Charles & McGuire, 2006) where a collaborative setting may have been imposed on the practitioners and where an organizational structure is in place to support teamwork. In sum, there are compelling reasons to believe that results obtained from the physicians/nurses models might not be transferable to other models, in particular IHC involving CAM practitioners that are often situated in out-patient settings.

IHC is an example of interdisciplinary collaboration that differs from the type of teams that have been typically described in the literature. In parallel to the well-known historic animosity between biomedical and CAM practitioners, healthcare professionals working in IHC often come together with, in certain respects, diametrically opposed paradigms of healthcare and visions of health and illness, which may impede the process of collaboration

(Zollman & Vickers, 1999; Coulter et al., 2007). Some researchers have hypothesized that collaboration is more likely to occur when professionals share similar interests and philosophies (Mills, 1990; Lappe, 1993; Wagner, 2004). With a diverse array of healthcare professionals, IHC clinics are a unique setting for studying interprofessional collaboration.

This thesis focused on the components included in a conceptual framework of collaboration rather than the impact that collaboration has on IHC clinic effectiveness. Thus, the outputs of collaboration¹ perceived and/or experienced by practitioners rather than mid- and long-term outcomes that reflect the impact of collaboration on patients' health were evaluated. This decision was taken because the process of collaboration and its meaning to practitioners, especially in an IHC setting, is still not well studied or understood (Boon et al., 2004b; Verhoef et al., 2005; D'Amour et al., 2005; Mulkins et al., 2005). Moreover, recognizing that practitioners are the main providers of healthcare delivery, it is important to study their perceptions and experiences of collaboration, for healthcare providers must see benefits in order that IHC clinics be successful. In other words, a better understanding of the interdisciplinary process experienced by practitioners is required before we attempt to explore possible links between collaboration and improved health.

From another perspective, patient health outcomes are seldom directly relevant when studying quality of healthcare delivery because 1) medical care cannot be isolated from other confounding factors when attempting to assess the influence of care on patients'

¹ Outputs are defined by the desired or anticipated direct products of the program activities. Outputs are not really ends in themselves; rather, they lead to a desired outcome. Outputs provide the metric for determining how well the objectives of the program are met. Outcomes are the societal impacts that the organization hopes to achieve as a result of its activities, the indicators for which the program is accountable for (Rossi et al., 1999).

health; 2) agreement upon which outcomes are significantly related to healthcare delivery is elusive; and 3) the association of a given outcome with a particular aspect of healthcare is difficult to make (Donabedian, 2005). Mention has to also be made of the fact that the nature of the effects of collaboration on patients' well-being is still ill-defined; especially in the context of IHC, where health is measured multi-dimensionally (Evans & Dion, 1991; Verhoef et al., 2005).

Purpose and objectives

This thesis is an exploration of collaboration amongst practitioners within IHC clinics. Sequential mixed methods were used to conduct inductive and deductive research. The approach was selected first to enrich the understanding of the studied phenomenon, and then to conduct a more objective and generalizable evaluation of its inherent dynamics (Tashakkori & Teddlie, 1998). The main purpose was to construct and validate a framework to assist decision makers, health services researchers, and practitioners in the evaluation of collaboration within IHC clinics to illuminate factors that contribute to success of this healthcare model.

First qualitative and then quantitative inquiries provided a better understanding of how collaboration within IHC is defined, experienced and operationalized on a daily basis by Canadian practitioners. More specifically, components which foster or limit collaboration were identified, and their influence on collaboration was examined empirically. Finally, the dissertation verified a conceptual model that classifies IHC clinics according to their level of integration of the biomedical and CAM paradigms.

In order to construct and validate a framework for evaluation of collaboration amongst diverse healthcare providers, four objectives were proposed:

- 1) To explore Canadian IHC clinic practitioners' experience of collaboration.
- 2) To describe how collaboration is conceptualized within these clinics at the practitioner level.
- 3) To test empirically the relationship between the determinants of collaboration and collaboration itself, and to formulate a model of collaboration within IHC that is applicable in a Canadian setting.
- 4) To test the assumptions of a conceptual model of classification of IHC clinics.

Present state of knowledge

The following section reviews the literature on interprofessional collaboration both in the general setting of healthcare and IHC. A specific focus on organizational management of a healthcare clinic from a practitioner's perspective was used, as this is a perspective that has recently emerged in the IHC literature.

There remains much confusion in the literature about the terms used to define a collaborative initiative where a group of healthcare professionals are involved (Schofield & Amodeo, 1996). In this thesis, I chose to use the term "interprofessional" when I refer specifically to individuals and "interdisciplinary" when I refer to disciplines (e.g. interdisciplinary education).

Interprofessional collaboration in healthcare

Interprofessional collaboration emerged largely as a result of personnel shortages experienced in healthcare in the 1970s (Baldwin, 1996; Heinemann, 2002). Collaboration in healthcare has been described as “a cooperative venture based on shared power and authority. It is non-hierarchical in nature. It assumes power based on knowledge or expertise as opposed to power based on role or function.” (Kraus, 1980). Although it is an ideal widely promoted in the literature, the collaborative process between different healthcare professionals is a reality that is complex, difficult to accomplish and hard to sustain (Long, 2001; Holloway & David, 2005).

In a systematic review of the core concepts of collaboration, D’Amour and colleagues (2005) found that 4 traits are common to all interdisciplinary teams depicted in the literature: *sharing, partnership, interdependency, and power*. *Sharing of values, responsibilities and decision-making* exemplifies the first step of collaboration. Secondly, *partnership* evolves with open and honest collaboration, mutual trust and respect, and a set of common goals. The third level is reached as healthcare practitioners become *interdependent*, depending upon one another to address various aspects of patient care and patient’s needs. Finally, *true partnerships* are forged as power is shared among professionals according to their respective experience and knowledge. In their paper, the authors noted that there is still a high level of heterogeneity in the way interprofessional collaboration is conceptualized and that the list of factors influencing collaboration is constantly expanding. The review also criticized the paucity of literature on how the patient could be fully integrated to the healthcare team.

Recently, a systematic review by San Martin-Rodriguez and colleagues (2005) has contributed greatly to the collective understanding of the determinants of collaboration, including the processes related to collaboration. Determinants were classified under 3 categories: organizational (conditions within the organization); systemic (the organization's environment); and interactional (processes at work in interpersonal relationships within the team). The categorization of determinants, based on empirical evidence, creates a useful framework of the factors that foster or limit collaboration, which was previously lacking in the literature of interprofessional collaboration. The authors concluded that more work is required to fully understand how those determinants influence each other. Furthermore, they highlighted the need for additional research on healthcare teams outside the common nurse-physician dyad seen in the literature.

Another review worthy of mention in the literature on interprofessional collaboration in healthcare is by Lemieux-Charles and McGuire (2006). This examination complemented the triad - structure and inputs, processes and outputs - that organizational management literature relies upon to conceptualize collaboration. The authors were the first to identify the processes of collaboration most likely to affect staff satisfaction and team effectiveness. Additionally, they reviewed the context in which teams could influence patient care and organizational success. The most important contribution of this paper remains its conceptualization of the outcomes of collaboration, grouped as objective and subjective outcomes. Following the tripartite categorization previously suggested by Schofield and Amodeo (1999), the objective outcomes of collaboration are measured from the viewpoint of the patient (e.g. functional status, satisfaction); the team (e.g. clinical quality of care); and the organization (e.g. cost-effectiveness). The subjective outcomes of collaboration are

composed of factors collected at the practitioner's level to assess their perception of effectiveness (e.g. well-being, intent to leave the team). While the authors applauded the proliferation of reports and academic papers on effectiveness studies in the context of interprofessional collaboration, they called for enhanced models (similar to the one introduced in their paper) for studying team effectiveness across various healthcare settings.

Recently, Barrett and colleagues (2007) sought to provide both Canadian decision makers and researchers communities with a better understanding of how interprofessional collaboration can best serve both patients and practitioners. They synthesized the above mentioned reports as well as others, most of which arose from the evaluation of the Primary Health Care Transition Fund initiative (Health Canada, 2008), and concluded that insufficient evidence is available on how the different settings of collaboration affect both subjective and objective outcomes of collaboration. Consequently, they recommended that rigorous plans for the evaluation of teamwork be developed and implemented, using and building upon the processes and tools already available in the collaboration studies literature.

In summary, the literature on interprofessional collaboration demonstrates a reasonable conceptualization of the experience of collaboration, particularly in the context of teams of physicians and nurses. The field appears mature enough to explore the links between the multiple components of collaboration and to validate those findings in different collaborative settings.

IHC is defined by, and reliant upon, interprofessional collaboration. The following sections present an introduction to IHC, as well as the current knowledge of North American IHC clinics, from an organizational point of view.

The emergence of IHC

Although the label for IHC has gone through some modifications since the first faltering steps of the concept, IHC is currently identified as “an active, conscious effort by the health professionals and medical science to seek and sort out the evidence of application of various complementary modalities for appropriate incorporation into the continuum of healthcare within the current parameters of the healthcare system (Micozzi, 2006).” The term *integrative medicine* itself was coined in the US only recently, in 1997 (Micozzi, 2006). According to the anthropologist Hans Baer, the concept of IHC, as defined in our western context, emerged from various health movements that began in the western United States in the early 1970s. IHC quickly spread to other occidental countries such as Canada, as well as western European countries such as Germany, the Netherlands, and Denmark (Baer, 2004). This is but one social movement, sometimes classified under the New Age movement along with: 1) the Hippie Movement, 2) The Human Potential Movement, from which the Maslow’s hierarchy of needs pyramid drew upon; 3) the psychosomatic Medicine and Humanistic Medicine Movement, characterized by the introduction of the concept of bio-psychosocial medicine; 4) the Feminist Movement; and 5) the Environmental Movement.

Those holistic health movements, in their own way, expressed the emerging scepticism of the American population of the late 1960’s about the ability of biomedicine to resolve all contemporary healthcare problems. Contrary to a common belief, the growing use of CAM

products and therapies as well as the emergence of IHC did not take root in dissatisfaction of the population towards biomedical medicine. Indeed, research shows that a large proportion of CAM users simultaneously use biomedical therapies, hence the need for the integration of various healthcare paradigms (Rakel, 2006). The emergence and maintenance of IHC in the current healthcare system thus represents the desire from the healthcare consumers for a patient-centered approach, an emphasis on lifestyle and habits, a focus on quality of life and wellness, and a trend for biomedical practitioners to provide CAM therapies to their patients.

Recently, Boon and colleagues (2004b) added to the definition of IHC with an extensive review of the literature to conceptualize IHC. They identified four key theoretical components of IHC: *philosophy and values, structure, process, and outcome* to guide the development of a framework to which practitioners aiming to practice IHC could turn. Although entirely theoretical, the working definition has helped the literature on IHC to move forward by clarifying the terminology and concepts inherent in IHC and reflected by its contemporary practice.

Since the introduction of the concept of IHC, various examples of the integration of healthcare paradigms have been described, from the creation and description of experimental models and clinics to research conducted on the practice of IHC and its outcomes. A brief summary of that literature is presented in the following section.

Contemporary portrait of IHC clinics

The literature is replete with anecdotal reports of how IHC clinics are set-up, the services they offer, and how they operate from a financial perspective (Berndtson, 1998; Mills, 2003; Le, 2003; Horrigan, 2004; Cohen et al., 2005; Coulter et al., 2005; Vohra et al., 2005; Smeeding & Osguthorpe, 2005; Hollenberg, 2007; Nedrow et al., 2007; Gamus & Pintov, 2007; Frenkel & Cohen, 2008). However, the research literature describing how interdisciplinary collaboration is experienced at the professional level within an IHC setting is modest (Maizes & Caspi, 1999; Coulter et al., 2007).

Mulkins and colleagues (2005) were one of the first team of researchers to identify some organizational components of an IHC team key to a successful environment from a practitioner's perspective. Nevertheless, the participants were selected from a single clinic that closed its door prior to the interviews, which may have biased the results toward what should have been done rather than how collaboration actually took place between the practitioners.

Hollenberg (2006) addressed, in part, the literature deficiency on interprofessional collaboration in IHC clinics by examining the functioning of two Canadian clinics. His research focussed on the process component of collaboration and more specifically on the existence of dominance tactics between biomedical and CAM practitioners. His findings suggest that although attempts are made by biomedical and CAM practitioners to blend their respective health paradigms into their practice, the level of collaboration observed in the two study settings continues to reflect important patterns of a downward exercise of

power and control in the division of labour, that handicapped the full integration of CAM practitioners with conventional physicians.

Recently, Boon and Kachan (2008) explored the development of two Canadian integrative clinics. The study focused mainly on the preliminary steps and factors involved in forging a team of IHC practitioners. The qualitative inquiry revealed 5 major themes central to the successful emergence of these clinics: 1) the importance of the inclusion of "champions" within the team staff members; 2) the credibility of these champions in their healthcare milieu; 3) the necessity to assemble the "right" practitioners and support staff; 4) the significance of trust within the team members but also for the clinic vis-à-vis its external stakeholders; and 5) the issues arising when finding physical space for the clinic.

In the last five years, research in IHC has evolved to studies of outcomes; principally patient outcomes. The field is still in its infancy and thus the list of potential outcomes is still ill-defined (Verhoef et al., 2005), but IHC has been found by the users to be correlated with positive experiences (Koithan et al., 2007). Indeed, patients reported a higher sense of empowerment and stronger relationships with their practitioners. Other observational studies also reported a decrease in symptom intensity as well as improved mental and physical functioning (Mulkins et al., 2003; Scherwitz et al., 2004; Verhoef et al., 2005; Hui et al., 2006; Greeson et al., 2008). Those studies and others also found patients' compliance and satisfaction with IHC care to be high (Coulter et al., 2007; Myklebust et al., 2008).

As in any context of interprofessional collaboration, IHC cannot be expected to happen by simply assembling a team of practitioners from various healthcare paradigms. The barriers

to integration of biomedical and CAM practices, now relatively well known by the clinical and academic communities, are presented in the following section.

Barriers to integration and collaboration in IHC

Integration of the biomedical and CAM paradigms requires resolution of issues arising from multiple levels of the healthcare system, from consumers to health policy, all the way to the healthcare system level (Tataryn & Verhoef, 2001). With consumer demand and utilization driving the process of integration, barriers to integration and eventual interprofessional collaboration in IHC have been identified in both the interprofessional collaboration literature as well as the literature specific to IHC.

Many challenges associated with interprofessional practice stem from the fact that various healthcare professionals do not generally share a common culture (Hall, 2005). Conflicts may arise from internalized value systems inherent in different professions, clashing paradigms of health and disease, and different training processes and learning environments. These may exacerbate communication barriers between healthcare professionals, limit development of collaborative skills, and sustain unidisciplinary approaches to problem-solving and teamwork (Mainous et al., 2000; Hall, 2005).

Some barriers that are specific to the integration of CAM and conventional medicine, including distrust, fear of liability, lack of availability of practitioners, lack of scientific evidence, demand for evidence-based medicine, lack of legal recognition, territorialism and prejudice, have been anecdotally recognized by one or more parties as reasons to refrain from collaborative initiatives (Barrett et al., 2003; Kelner et al., 2004; Barrett et al., 2004;

Makowski, 2004; Kelly et al., 2005; Mizrachi et al., 2005; Stevens et al., 2007). Mizrachi and colleagues (2005) suggested that the CAM practitioners' simplistic knowledge of biomedical terms, as well as informal hiring processes of CAM practitioners within the hospital field, contribute further to the marginalization of these professionals. Another factor potentially contributing to the isolation of CAM practitioners is that potential economic competition for clients among conventional and CAM practitioners leads them to be protective of their referrals (Mainous et al., 2000; Barrett et al., 2004).

Finally, discussion of barriers to IHC should include health insurance, costs, and reimbursement plans (Pelletier et al., 1997; Barrett et al., 2004). This is especially true in the Canadian context where a universal public health insurance system is in place. In a Medicare program where CAM reimbursement is rare, the viability of IHC clinics is a constant challenge (Ruggie, 2005). Nevertheless, while barriers to IHC include clear psychological/interpersonal and economic dimensions, a shift in the philosophical orientation and the culture of all practitioners is necessary in order to advance integration of CAM in healthcare (Barrett, 2003; Mizrachi et al., 2005).

Thesis conceptual framework

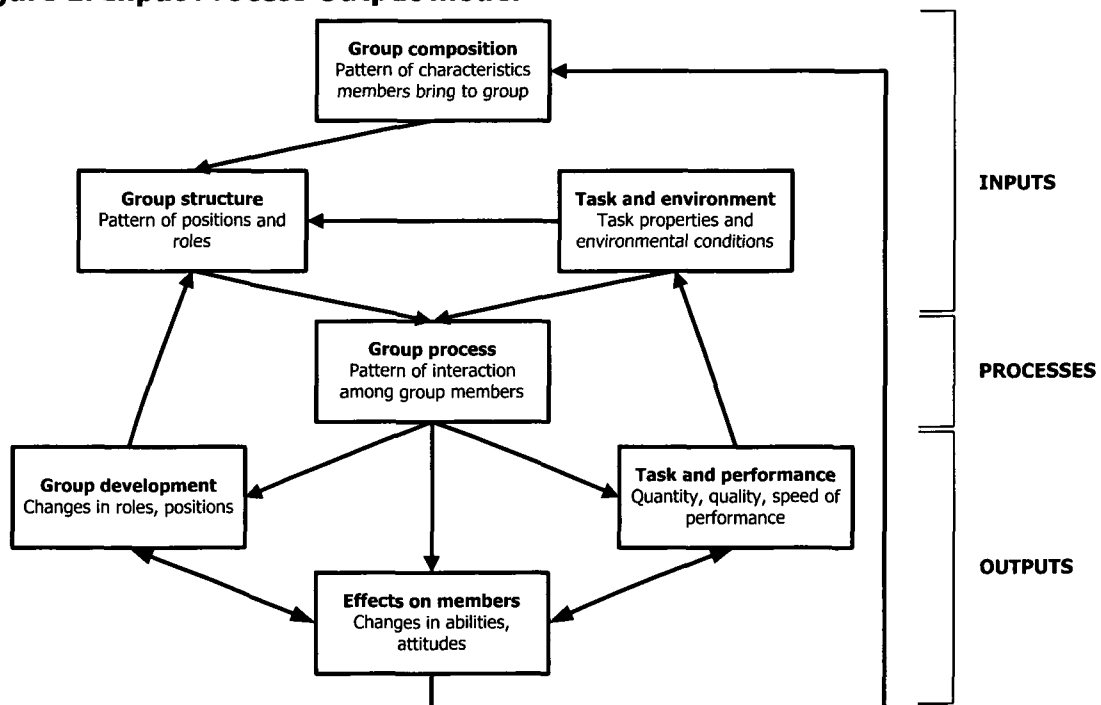
The thesis combined 3 conceptual models or frameworks: 1) the Input Process Output model (IPO); 2) the Relationship-Centered Care model (RCC) and; 3) the Continuum of Models of team healthcare practice. Two of them (IPO and RCC) have been used repeatedly to study interprofessional collaboration in healthcare. To date, the continuum of Models framework has not been empirically validated. The three models will be presented in turn in this section.

Input Process Output Model

The thesis was primarily guided by the Input Process Output model (IPO) (McGrath, 1964). This framework aims to improve understanding of the interplay between and amongst team members, as well as between individuals and the team as a single functional entity. First published by McGrath in 1964, the IPO model was pioneered in studies of collaboration within interprofessional teams, and was also one of the most influential models of organizational theory (Yeatts & Hyten, 1998).

In its original form, the model was articulated around 7 components, which are grouped in 3 key factors of collaboration: input, process, and output. These components and their theoretical relationships are displayed in Figure 1 (Chapter 1).

Figure 1. Input Process Output model



Adapted from McGrath, 1964

The 7 components are defined as follows. *Group structure*: the set of related positions in a group and the total patterns of role interrelationships amongst the occupants of those positions. This component is about division of labour, distribution of power and the team's communication net. *Group composition*: the abilities, attitudes and background characteristics of the team's members. The group composition can also be measured in terms of the members' motivation, complementarity, and interdependence. *Task and environment*: the goals of the team; their reasons for existence. *Group process*: the flow of events during the team activities; interactions within their environment. It is shaped by the first three components of the model. *Group development*: alterations in the pattern of relationship among members as well as the development of shared beliefs, attitudes, goals, and ways of perceptions. *Task performance*: alterations in the group's relation to its goals and to its environment. *Effects on members*: changes in the abilities, attitudes and personalities of the team members.

The IPO model has evolved throughout the years and 20 years after its conception Gladstein (1984) examined empirically the relationships among its various factors. In the most recent version of the IPO model (West et al., 1998), group composition, group structure, and task and environment form the inputs of collaboration, augmented by the cultural context within which the team members evolve. The processes of collaboration are measured in terms of leadership, communication, decision-making and problem-solving processes, as well as cohesiveness, and work group autonomy. The outputs are the aspect of the model that has been the least explored. However, researchers conceptually agree that this construct of effectiveness could be related to assessments of performance,

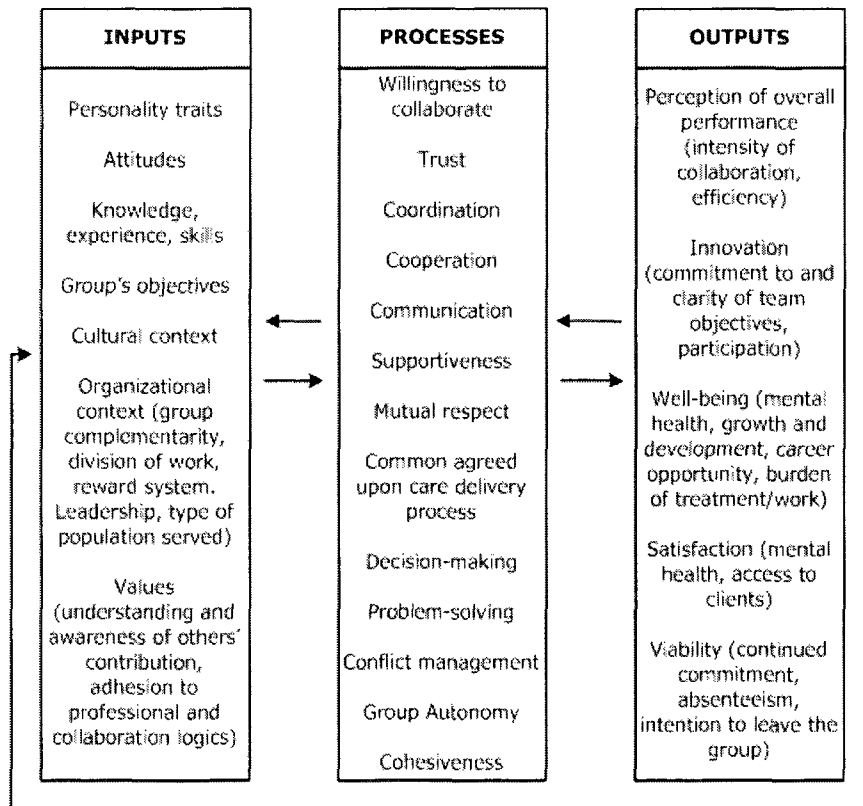
innovation, well-being, and viability of the team (West et al., 1998; Haward et al., 2003). Nonetheless, no consensus could be reached on how to measure this construct (Healey et al., 2004). Of note, research suggests that the definition of effectiveness should be as reflective as possible of the organization under study. Therefore, different organizations with varying teams may require different measures of team effectiveness.

Using the IPO as a guiding structure, Figure 2 (Chapter 1) provides the framework of a model that has been assembled from others' research, as well as examples of how inputs, processes, and outputs have been assessed in relation to collaboration in healthcare (West et al., 1998; Hojat et al., 1999; Schofield & Amodeo, 1999; Sicotte et al., 2002; Haward et al., 2003; Branson & Armstrong, 2004; Dieleman et al., 2004; Healey et al., 2004; San Martin-Rodriguez et al., 2005; Mulkins et al., 2005). It is important to note that the IPO model could be used to study collaboration at various level of analysis - individual, team, or organization. For pragmatic reasons, due to the small number of IHC teams in Canada, the framework assembled for this thesis was restricted to the individual (practitioner) level of analysis.

Relationship-Centered Care model

In 1994, the Pew-Fetzer Task Force on Psychosocial Health Education was given the mandate to develop a new approach to healthcare, based on the fact that interpersonal relationships are a prerequisite to effective care and healing (Tresolini & Pew-Fetzer Task Force, 2000). This work centered on relationships among practitioners, the patients, and their communities. According the RCC philosophy, the various entities within the healthcare

Figure 2. Example of constructs related to the study of interprofessional collaboration



system should share a common understanding of the meaning of health and illness, in order to be successfully therapeutic. However, since different practitioners and patients have different conceptions of health – albeit sometimes overlapping - a shared understanding is more likely to be realized when healthcare professionals work together with one another, rather than referring the patient to one another (Tresolini & Pew-Fetzer Task Force, 2000). The model hence focuses on three different dimensions: Relationship between the practitioner and 1) his/her patient; 2) his/her team and; 3) his/her patient communities. The thesis mainly drew upon the second dimension of the RCC model.

Each dimension operationalizes interprofessional collaboration through various knowledge, attitudes, and skills that practitioners should aim to acquire and develop, in order to

establish significant and productive relationships with their colleagues and achieve an optimal shared understanding of the patient's experience of illness. More specifically, in order to collaborate effectively, the RCC model highlights that health professionals should know about their own healing approach and the approaches of other professions and cultures, be aware of historical inequities across professions, know the value of others' work and continuously learn from the experience of working with people with another healthcare paradigm. Additionally, to engage in a process of team building, practitioners must be able to listen openly, communicate effectively, and learn cooperatively.

In 2006, Beach and colleagues proposed a list of knowledge, attitudes, behaviors and skills, and anticipated outcomes that are central to the definition of RCC (Beach & Inui, 2006).

The components of the second dimension of the model are reproduced in Table 1 (Chapter 1).

Continuum of models of team healthcare practice

Boon and colleagues recently developed a conceptual framework that assembled from the literature seven different models of practicing IHC along a continuum (Boon et al., 2004a).

The continuum is characterized by four key components of IHC from the provider's level: philosophy and values, structure, process, and outcomes. The seven models are described in Table 2 (Chapter 1).

Table 1. Knowledge, attitudes, behaviors and anticipated outcomes of the practitioner/practitioner dimension of the Relationship-centered care model

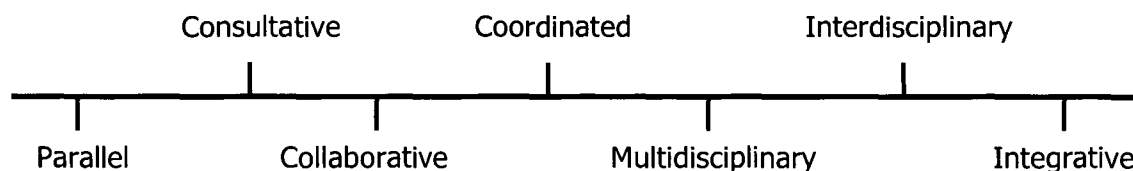
Knowledge	<ul style="list-style-type: none"> · Power inequities across health disciplines · Power of understanding the other's perspective · Healing approaches of various health disciplines · Team building dynamics and approaches to shared leadership
Attitudes	<ul style="list-style-type: none"> · Affirm importance of self-awareness · Value diversity and interdisciplinarity · Appreciate importance of shared mission · Openness to others' ideas · Affirm importance of mutual respect and trust · Believe in importance of sustaining capacity for recognition, reconciliation, and prevention of error
Behaviors/Skills	<ul style="list-style-type: none"> · Reflect on self and personal/professional needs · Continually learn from personal experience and that of others · Learn cooperatively · Derive personal meaning from the work of others · Communicate effectively with the other members of the team · Work collaboratively, share responsibility · Recognize and work to resolve conflicts · Provide space in meetings for new thoughts, ideas · Employ appreciative inquiry to imagine improvements · Continuously examine whether the organizational values are reflected in day-to-day work
Outcomes	<ul style="list-style-type: none"> · Productive resolution of disagreements · Minimal staff turnover · Improved ease of staff recruitment · Staff satisfaction · Colleagues reach personal and professional goals regularly · Team members report being treated fairly and respectfully · Enhance capacity for working across a broad array of challenges · Enhanced patient safety and quality of care

Table 2. Models of team healthcare practice

Model	Characteristics
Parallel	<ul style="list-style-type: none"> · Practitioners work in the same setting, but independently · Roles are formally defined
Consultative	<ul style="list-style-type: none"> · Expert advice is shared between practitioners via personal contact, letter of referral note
Collaborative	<ul style="list-style-type: none"> · Patient is seen independently by each practitioner · Practitioners share information concerning the treatment of a particular patient
Coordinated	<ul style="list-style-type: none"> · Administrative structure stimulates collaboration · Patients' files are shared between practitioners · Liaison between practitioner is ensured by a manager
Multidisciplinary	<ul style="list-style-type: none"> · Leader in charge of the planning of patient care · Each practitioner independently ensures patient's treatment according to his expertise · Formalized extension of the coordinated model
Interdisciplinary	<ul style="list-style-type: none"> · Planning of patient care is decided by a group of practitioners, via face-to-face meetings · Extension of the multidisciplinary model
Integrative	<ul style="list-style-type: none"> · Non-hierarchical holistic collaboration of practitioners · Practitioners and patient contribute to patient care · Extension of interdisciplinary model

Along the framework of models, the authors hypothesized a series of assumptions related to the continuum of integration of the biomedical and CAM paradigms. Thus, when moving from the left end side to the right end side of the continuum (Figure 3 – Chapter 1):

- 1) emphasis on the whole person, and diversity of healthcare paradigm should increase; therefore, reliance on the biomedical model should decrease;
- 2) complexity of the structure of the clinic should increase and presence of hierarchical links between practitioners should decrease;
- 3) the communication process and the number of participants involved should increase; thus, practitioner autonomy should decrease;
- 4) complexity and diversity of the outcomes (mostly related to the patients) should increase.

Figure 3. Continuum of models of healthcare practice

Although often cited to refer to a particular model of teamwork in an IHC context, the framework and particularly the gradient of integration expected at the philosophy, structure, process, and outcome levels have not been empirically tested.

Organization of the thesis

The current chapter introduces the topic of the dissertation including the rationale for the thesis. It presents the objectives of the project and the methodologies involved. It summarizes the literature on interprofessional collaboration on which the project drew upon and offers an overview of IHC and its current practice. Finally, the chapter concludes with the three main conceptual models on which the dissertation is based.

Chapter 2 presents the results of the first phase of the dissertation that aim to formulate a framework of collaboration within Canadian IHC clinics. The article uses a qualitative inquiry to highlight 11 components of interprofessional collaboration specific to the IHC context.

Chapter 3 presents the results of the second phase of the dissertation. Using the components of collaboration common to the first phase of the thesis and to the RCC model,

a survey of 31 Canadian IHC clinics was conducted to build and test a framework of interprofessional collaboration.

Chapter 4 triangulates the data obtained from the qualitative and quantitative inquiries described above to validate the Continuum of models of healthcare practice presented above.

Chapter 5 includes a discussion of the primary findings of the thesis and its strengths and weaknesses, as well as a perspective of the future of IHC, from an organizational viewpoint. The chapter also addresses how the results of this dissertation add to the Population Health literature. Finally, it presents recommendations for future studies of IHC.

References

- Baer, H. (2004). The Popularization of Holistic Health and New Age Movements. In *Toward an Integrative Medicine: Merging Alternative Therapies with Biomedicine* (pp. 1-23). Walnut Creek: AltaMira Press.
- Baggs, J. G. & Schmitt, M. H. (1997). Nurses' and resident physicians' perceptions of the process of collaboration in an MICU. *Res.Nurs.Health, 20*, 71-80.
- Baldwin, D. W. (1996). Some historical notes on interdisciplinary and interprofessional education and practice in health care in the USA. *J.Interprof.Care, 10*, 179-187.
- Barrett, B. (2003). Alternative, complementary, and conventional medicine: is integration upon us? *Journal of Alternative & Complementary Medicine, 9*, 417-427.
- Barrett, B., Marchand, L., Scheder, J., Appelbaum, D., Plane, M. B., Blustein, J. et al. (2004). What complementary and alternative medicine practitioners say about health and health care. *Annals of Family Medicine, 2*, 253-259.
- Barrett, B., Marchand, L., Scheder, J., Plane, M. B., Maberry, R., Appelbaum, D. et al. (2003). Themes of holism, empowerment, access, and legitimacy define complementary, alternative, and integrative medicine in relation to conventional biomedicine. *Journal of Alternative & Complementary Medicine, 9*, 937-947.
- Barrett, J., Curran, V., Glynn, L., & Godwin, M. (2007). *CHSRF Synthesis: Interprofessional Collaboration and Quality Primary Healthcare* Ottawa: Canadian Health Services Research Foundation.

Beach, M. C. & Inui, T. (2006). Relationship-centered care. A constructive reframing.

J.Gen.Intern.Med., 21 Suppl 1, S3-S8.

Ben-Arye, E., Frenkel, M., Klein, A., & Scharf, M. (2008). Attitudes toward integration of complementary and alternative medicine in primary care: perspectives of patients, physicians and complementary practitioners. *Patient Education & Counseling, 70*, 395-402.

Berndtson, K. (1998). Complementary and alternative medicine. Integrative medicine: business risks and opportunities. *Physician Executive, 24*, 22-25.

Bezold, C. (2001). Evolving Demands and Demographics in Health Care. In N.Faass (Ed.), *Integrating Complementary Medicine into Health Systems* (pp. 22-31). Gaithersburg: Aspen Publishers.

Boon, H., Verhoef, M., O'Hara, D., & Findlay, B. (2004a). From parallel practice to integrative health care: a conceptual framework. *BMC Health Services Research, 4*, 15.

Boon, H., Verhoef, M., O'Hara, D., Findlay, B., & Majid, N. (2004b). Integrative healthcare: arriving at a working definition. *Alternative Therapies in Health & Medicine, 10*, 48-56.

Boon, H. S. & Kachan, N. (2008). Integrative medicine: a tale of two clinics. *BMC Complement Altern.Med., 8*, 32.

Branson, R. & Armstrong, D. (2004). General practitioners' perceptions of sharing workload in group practices: qualitative study. *BMJ, 329*, 381.

- Cohen, M. H., Hrbek, A., Davis, R. B., Schachter, S. C., Kemper, K. J., Boyer, E. W. et al. (2005). Emerging credentialing practices, malpractice liability policies, and guidelines governing complementary and alternative medical practices and dietary supplement recommendations: a descriptive study of 19 integrative health care centers in the United States. *Archives of Internal Medicine*, *165*, 289-295.
- Cole, K. D., Waite, M. S., & Nichols, L. O. (2003). Organizational structure, team process, and future directions of interprofessional health care teams. *Gerontol.Geriatr.Educ.*, *24*, 35-49.
- Coulter, I. D., Ellison, M. A., Hilton, L., Rhodes, H., & Ryan, G. (2007). *Hospital-based Integrative Medicine: A case study of the barriers and the factors facilitating the creation of a center* Santa Monica.
- Coulter, I. D., Singh, B. B., Riley, D., & Der-Martirosian, C. (2005). Interprofessional referral patterns in an integrated medical system. *J.Manipulative Physiol Ther.*, *28*, 170-174.
- D'Amour, D., Ferrada-Videla, M., San Martin, R. L., & Beaulieu, M. D. (2005). The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. *J.Interprof.Care*, *19 Suppl 1*, 116-131.
- Dieleman, S. L., Farris, K. B., Feeny, D., Johnson, J. A., Tsuyuki, R. T., & Brilliant, S. (2004). Primary health care teams: team members' perceptions of the collaborative process. *J.Interprof.Care*, *18*, 75-78.
- Donabedian, A. (2005). Evaluating the quality of medical care. 1966. *Milbank Q.*, *83*, 691-729.

Evans, C. R. & Dion, K. L. (1991). Group cohesion and performance. *Small group research*, 22, 175-186.

Foley, C. (1999). Patient demand for integrative medicine. *Minnesota Medicine*, 82, 50-51.

Frenkel, M. & Cohen, L. (2008). Incorporating complementary and integrative medicine in a comprehensive cancer center. *Hematol.Oncol.Clin.North Am*, 22, 727-736.

Gage, M. (1998). From independence to interdependence. Creating synergistic healthcare teams. *J.Nurs.Adm*, 28, 17-26.

Gamus, D. & Pintov, S. (2007). Integration of complementary and alternative medicine services in the hospital setting in Israel. *Isr.Med.Assoc.J*, 9, 169-170.

Gavin, J. A. & Boon, H. (2005). CAM in Canada: places, practices, research. [Review] [40 refs]. *Complementary Therapies in Clinical Practice*, 11, 21-27.

Gladstein, D. L. (1984). Groups in Context: A Model of Task Group Effectiveness. *Administrative Science Quarterly*, 29, 499-517.

Greeson, J. M., Rosenzweig, S., Halbert, S. C., Cantor, I. S., Keener, M. T., & Brainard, G. C. (2008). Integrative medicine research at an academic medical center: patient characteristics and health-related quality-of-life outcomes. *J Altern.Complement Med.*, 14, 763-767.

Hall, P. (2005). Interprofessional teamwork: Professional cultures as barriers. *J.Interprof.Care, Supplement 1*, 188-196.

Haward, R., Amir, Z., Borrill, C., Dawson, J., Scully, J., West, M. et al. (2003). Breast cancer teams: the impact of constitution, new cancer workload, and methods of operation on their effectiveness. *Br.J.Cancer*, *89*, 15-22.

Healey, A. N., Undre, S., & Vincent, C. A. (2004). Developing observational measures of performance in surgical teams. *Qual Saf Health Care*, *13*, i33-i40.

Health Canada (n.d.). *Primary Health Care Transition Fund*. Retrieved September 15, 2008, from: www.hc-sc.gc.ca/hcs-sss/prim/phctf-fassp/index-eng.php.

Heinemann, G. D. (2002). Teams in Health Care Settings. In G.D.Heinemann & A. M. Zeiss (Eds.), *Team performance in health care: assessment and development* (pp. 3-17). New York: Kluwer Academic / Plenum Publishers.

Hojat, M., Fields, S. K., Veloski, J. J., Griffiths, M., Cohen, M. J., & Plumb, J. D. (1999). Psychometric properties of an attitude scale measuring physician-nurse collaboration. *Eval.Health Prof.*, *22*, 208-220.

Hojat, M., Nasca, T. J., Cohen, M. J., Fields, S. K., Rattner, S. L., Griffiths, M. et al. (2001). Attitudes toward physician-nurse collaboration: a cross-cultural study of male and female physicians and nurses in the United States and Mexico. *Nurs.Res.*, *50*, 123-128.

Hollenberg, D. (2006). Uncharted ground: patterns of professional interaction among complementary/alternative and biomedical practitioners in integrative health care settings. *Social Science & Medicine*, *62*, 731-744.

- Hollenberg, D. (2007). How do private CAM therapies affect integrative health care settings in a publicly funded health care system? *Journal of Complementary and Integrative Medicine*.
- Holloway, R. L. & David, A. K. (2005). The Complexion of Collaboration: An Overview of the Psychologist-Physician Relationship. *Clinical case studies*, 4, 115-125.
- Horrigan, B. (2004). The philanthropic collaborative for integrative medicine: partnering for health and healing. *Alternative Therapies in Health & Medicine*, 10, 82-83.
- Hui, K. K., Hui, E. K., & Johnston, M. F. (2006). The potential of a person-centered approach in caring for patients with cancer: a perspective from the UCLA center for East-West medicine. *Integr.Cancer Ther.*, 5, 56-62.
- Johnson, N. D. (1992). Collaboration--an environment for optimal outcome. *Crit Care Nurs.Q.*, 15, 37-43.
- Kelly, M., Hardwick, K., Moritz, S., Kelner, M., Rickhi, B., & Quan, H. (2005). Opinions of health policy makers on integration of complementary and conventional medicine. *Journal of Complementary & Integrative Medicine*, 2, Article 12.
- Kelner, M., Wellman, B., Boon, H., & Welsh, S. (2004). The role of the state in the social inclusion of complementary and alternative medical occupations. *Complementary Therapies in Medicine*, 12, 79-89.
- Kirby M.J.L. (2002). *The Health of Canadians – The Federal Role: Final Report* (Rep. No. 6: Recommendations for Reform). The Standing Senate Committee on Social Affairs, Science and Technology.

- Koithan, M., Bell, I. R., Caspi, O., Ferro, L., & Brown, V. (2007). Patients' experiences and perceptions of a consultative model integrative medicine clinic: a qualitative study. *Integr.Cancer Ther., 6*, 174-184.
- Kraus, W. A. (1980). *Collaboration in Organizations: Alternatives to Hierarchy*. New York: Human Sciences Press.
- Lappe, D. G. (1993). Managing the intensive care unit: nurse/physician collaboration. *Crit Care Med., 21*, S388.
- Le, T. M. (2003). The Conemaugh Health System Integrative Health Center. *Alternative Therapies in Health & Medicine, 9*, 116-117.
- Lemieux-Charles, L. & McGuire, W. L. (2006). What do we know about health care team effectiveness? A review of the literature. *Med.Care Res.Rev., 63*, 263-300.
- Long, K. A. (2001). A reality-oriented approach to interdisciplinary work. *J.Prof.Nurs., 17*, 278-282.
- Mainous, A. G., Gill, J. M., Zoller, J. S., & Wolman, M. G. (2000). Fragmentation of patient care between chiropractors and family physicians. *Arch.Fam.Med., 9*, 446-450.
- Maizes, V. & Caspi, O. (1999). The principles and challenges of integrative medicine. *Western Journal of Medicine, 171*, 148-149.
- Makowski, S. K. (2004). Assessing local market and organizational readiness for the integration of complementary and alternative medicine into ambulatory care centers. *Journal of Ambulatory Care Management, 27*, 4-11.

- McCaffrey, A. M., Pugh, G. F., & O'Connor, B. B. (2007). Understanding patient preference for integrative medical care: results from patient focus groups. *J.Gen.Intern.Med.*, *22*, 1500-1505.
- McCallin, A. (2001). Interdisciplinary practice--a matter of teamwork: an integrated literature review. *Journal of Clinical Nursing*, *10*, 419-428.
- McGrath, J. E. (1964). *Social Psychology: a brief introduction*. New York: Holt, Rinehart and Winston.
- Micozzi, M. S. (2006). Issues in Integrative Medicine. In M.S.Micozzi (Ed.), *Fundamentals of Complementary and Integrative Medicine* (3rd ed., pp. 18-23). St-Louis: Saunders Elsevier.
- Mills, M. E. (1990). The CNS and collaborative practice. *Clin.Nurse Spec.*, *4*, 194-195.
- Mills, W. (2003). Integrative medicine clinic requires solid business plan. *Physician Executive*, *29*, 38-41.
- Mizrachi, N., Shuval, J. T., & Gross, S. (2005). Boundary at work: alternative medicine in biomedical settings. *Sociol.Health Illn.*, *27*, 20-43.
- Mulkins, A., Verhoef, M., Eng, J., Findlay, B., & Ramsum, D. (2003). Evaluation of the Tzu Chi Institute for Complementary and Alternative Medicine's Integrative Care Program. *Journal of Alternative & Complementary Medicine*, *9*, 585-592.
- Mulkins, A. L., Eng, J., & Verhoef, M. J. (2005). Working towards a model of integrative health care: critical elements for an effective team. *Complementary Therapies in Medicine*, *13*, 115-122.

Myklebust, M., Pradhan, E. K., & Gorenflo, D. (2008). An Integrative Medicine Patient Care Model and Evaluation of Its Outcomes: The University of Michigan Experience. *J Altern.Complement Med.*

Nedrow, A. R., Heitkemper, M., Frenkel, M., Mann, D., Wayne, P., & Hughes, E. (2007). Collaborations between allopathic and complementary and alternative medicine health professionals: four initiatives. *Academic Medicine, 82*, 962-966.

Oandasan, I., Baker, G. R., Barker, K., Bosco, C., D'Amour, D., Jones, L. et al. (2006). *Teamwork in Healthcare: Promoting effective teamwork in Healthcare in Canada - Policy Synthesis and Recommendations* Ottawa: Canadian Health Services Research Foundation.

Pelletier, K. R., Marie, A., Krasner, M., & Haskell, W. L. (1997). Current trends in the integration and reimbursement of complementary and alternative medicine by managed care, insurance carriers, and hospital providers. *Am.J.Health Promot., 12*, 112-122.

Peters, D. (2000). From holism to integration: is there a future for complementary therapies in the NHS? *Complementary Therapies in Nursing & Midwifery, 6*, 59-60.

Rakel, D. (2006). Perspectives on Integrative Practice. In D.Rakel & N. Faass (Eds.), *Complementary Medicine in Clinical Practice* (pp. 3-8). Sudbury: Jones and Bartlett Publishers.

Remen, R. N. (2008). Practicing a medicine of the whole person: an opportunity for healing. *Hematol.Oncol.Clin.North Am, 22*, 767-773.

- Romanov R.J. (2002). *Building on values: The Future of Health Care in Canada - Final Report*, Commission on the Future of Health Care in Canada. Ottawa
- Rossi, P. H., Freeman, H. E., & Lipsey, M. W. (1999). Monitoring Program Process and Performance. In P.H.Rossi, H. E. Freeman, & M. W. Lipsey (Eds.), *Evaluation: a systematic approach* (6th ed., pp. 190-232). Thousand Oaks: Sage Publications.
- Ruggie, M. (2005). Mainstreaming complementary therapies: new directions in health care. *Health Aff.(Millwood.)*, *24*, 980-990.
- San Martin-Rodriguez, L., Beaulieu, M. D., D'Amour, D., & Ferrada-Videla, M. (2005). The determinants of successful collaboration: a review of theoretical and empirical studies. *J.Interprof.Care*, *19 Suppl 1*, 132-147.
- Sarnat, R. L. & Winterstein, J. (2004). Clinical and cost outcomes of an integrative medicine IPA. *Journal of Manipulative & Physiological Therapeutics*, *27*, 336-347.
- Scherwitz, L. W., Cantwell, M., McHenry, P., Wood, C., & Stewart, W. (2004). A descriptive analysis of an integrative medicine clinic. *Journal of Alternative & Complementary Medicine*, *10*, 651-659.
- Schofield, R. F. & Amodeo, M. (1999). Interdisciplinary teams in health care and human services settings: are they effective? *Health Soc.Work*, *24*, 210-219.
- Shortell, S. M., Gilles, R. R., & Anderson, D. A. (1996). *Remaking health care in America*. San Francisco: Jossey-Bass.
- Sicotte, C., D'Amour, D., & Moreault, M. P. (2002). Interdisciplinary collaboration within Quebec Community Health Care Centres. *Social Science & Medicine*, *55*, 991-1003.

- Smeeding, S. & Osguthorpe, S. (2005). The development of an integrative healthcare model in the Salt Lake City Veterans Affairs Healthcare System. *Alternative Therapies in Health & Medicine, 11*, 46-51.
- Smith, M., Greene, B. R., & Meeker, W. (2002). The CAM movement and the integration of quality health care: the case of chiropractic. *J.Ambul.Care Manage., 25*, 1-16.
- Stahelski, A.J. (1990). Predictors of cooperation in health care teams. *Small group research, 21*, 220-233.
- Stevens, L., Duarte, H., & Park, J. (2007). Promising implications for integrative medicine for back pain: a profile of a Korean hospital. *Journal of Alternative & Complementary Medicine, 13*, 481-484.
- Tashakkori, A. & Teddlie, C. (1998). *Mixed methodology*. (vols. 46) Thousand Oaks: Sage Publications.
- Tataryn, D. J. & Verhoef, M. J. (2001). *Combining Conventional, Complementary, and Alternative Health Care: a Vision of Integration* (Rep. No. VII). Ottawa.
- Tresolini, C. P. & Pew-Fetzer Task Force (2000). *Health Professions Education and Relationship-Centered Care*.
- van Haselen, R. A., Reiber, U., Nickel, I., Jakob, A., & Fisher, P. A. (2004). Providing Complementary and Alternative Medicine in primary care: the primary care workers' perspective. *Complementary Therapies in Medicine, 12*, 6-16.

Verhoef, M. J., Mulkins, A., & Boon, H. (2005). Integrative health care: how can we determine whether patients benefit? *Journal of Alternative & Complementary Medicine, 11 Suppl 1*, S57-S65.

Vohra, S., Feldman, K., Johnston, B., Waters, K., & Boon, H. (2005). Integrating complementary and alternative medicine into academic medical centers: experience and perceptions of nine leading centers in North America. *BMC Health Services Research, 5*, 78.

Wagner, E. H. (2004). Effective teamwork and quality of care. *Med.Care, 42*, 1037-1039.

Weil, A. (2000). The significance of integrative medicine for the future of medical education. *American Journal of Medicine, 108*, 441-443.

Welton, W. E., Kantner, T. A., & Moriber Katz, S. (1997). Developing Tomorrow's Integrated Community Health Systems: A Leadership Challenge for Public Health and Primary Care. *The Milbank Quarterly, 75*, 261-288.

West, M. A., Borrill, C. S., & Unsworth, K. L. (1998). Team effectiveness in organizations. In C.L.Cooper & I. T. Robertson (Eds.), *International Review of Industrial and Organizational Psychology, volume 13* (pp. 1-48). Chichester: John Wiley & Sons.

Wheelan, S. A., Burchill, C. N., & Tilin, F. (2003). The link between teamwork and patients' outcomes in intensive care units. *Am.J.Crit Care, 12*, 527-534.

Willms, L. & St Pierre-Hansen, N. (2008). Blending in: is integrative medicine the future of family medicine? *Canadian Family Physician, 54*, 1085.

Yeatts, D. E. & Hyten, C. (1998). Contemporary Theories Explaining SMWT Performance. In D.E.Yeatts & C. Hyten (Eds.), *High-performing Self-Managed Work Teams* (pp. 24-46). Thousand Oaks: Sage Publications.

Zollman, C. & Vickers, A. (1999). ABC of complementary medicine. Users and practitioners of complementary medicine. *BMJ*, *319*, 836-838.

Chapter 2

Interprofessional collaboration within Canadian integrative health care clinics: key components²

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Interprofessional collaboration within Canadian integrative health care clinics: key components

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Abstract

Research in health care services shows that interprofessional collaboration has become an important factor in the implementation of effective health care models. To date, the literature has not focused on the collaboration between medical doctors and complementary and alternative medicine (CAM) health care practitioners, an example of interdisciplinary collaboration called integrative health care (IHC).

This paper describes how IHC is characterized by those working in such programs and explores Canadian IHC practitioners' experiences of collaboration to build a framework of interprofessional collaboration within Canadian IHC clinics.

In-depth, semi-standardized interviews were conducted with 21 practitioners working in Canadian IHC programs. The interview questions and analysis were guided by the Input, Process, Output theoretical framework drawn from the organizational management theory to study collaboration within teams.

Factors contributing to collaboration included practitioners' attitudes and educational background, as well as external factors such as the health care system and financial pressures. Major processes affecting collaboration included communication, patient referral and power relationships. These determinants of collaboration were found to result in learning opportunities for practitioners, modified burden of work and ultimately, higher affective commitment toward the clinic. In total, 11 constructs were captured under the key factors of the IPO model.

This pioneering exploration of interprofessional collaboration in IHC identified a broad array of key factors. This framework is critical to better understand the functioning of IHC clinics, and provides guidance for creation or maintenance of successful clinics.

Introduction

Collaboration, defined as the relationships and interactions that occur between co-workers, is a complex, dynamic process (D'Amour, Ferrada-Videla, San Martin & Beaulieu, 2005) that is not yet fully understood, much less operationalized. The earliest documented interprofessional collaboration in health care dates from the beginning of the last century, but it was only after World War II that there was a proliferation of work on multidisciplinary teams (Baldwin, 1996). This growth in the literature coincided with anecdotal reports of the effectiveness of teams evolving in different health care spheres. In the late 1970s and early 1980s, "rationalization" and cut-backs in the American health care sector significantly impacted interprofessional collaboration. Its practice was regarded as somewhat extravagant considering the scarcity of resources, and therefore many programs that promoted training in collaborative settings and the practice of interprofessional collaboration itself were discontinued.

Interest in interprofessional collaboration has resurged during the last two decades. This revival can be explained, in part, by the increasing complexity of patient care, necessitating the collaboration of various disciplines to address adequately the patients' physical, emotional, and spiritual needs. As well, rising health care costs for medical specialization and technologic advancements highlighted a need to shift the way health care is delivered (Foley, 1999; Gage, 1998; Johnson, 1992; Shortell, Gilles & Anderson, 1996; Smith, Greene & Meeker, 2002; Welton, Kantner & Moriber Katz, 1997). The collaborative practice of health care has been identified as a solution, to deliver more effective and appropriate care.

There is growing evidence that collaboration improves many aspects of the healthcare system, both from the patients' and the practitioners' perspectives. A recent review by Lemieux-Charles and McGuire (2006) on healthcare team effectiveness suggested that the main factor impacting patient care and organizational effectiveness is the type and diversity of practitioners involved in the team. The authors also demonstrated that collaboration processes are likely to influence staff satisfaction and perceived team effectiveness. Additional research complements these findings, demonstrating a relationship between teamwork and improvement in patient outcomes and satisfaction (e.g., Cohen, Feussner, Weinberger, Carnes, Hamdy, Hsieh et al. 2002; Gittell, Fairfield, Bierbaum, Head, Jackson, Kelly et al. 2000; Shortell, Jones, Rademaker, Gillies, Dranove, Hughes et al. 2000), improvement in practitioner's wellbeing and decreased staff turnover (e.g., Haward, Amir, Borrill, Dawson, Scully, West et al. 2003; Kathryn, Chou & Stone, 2007; Martin, Harris, Kirk, Lester, Nelles, Pedersen et al. 1989). Unfortunately, most of the studies are reports on interprofessional teams working in a hospital environment (e.g., Dieleman, Farris, Feeny, Johnson, Tsuyuki & Brilliant, 2004), or teams composed only of physicians and nurses (Anderson & Finn, 1983; Cole, Waite & Nichols, 2003; Haward et al., 2003; Johnson, 1992; Koerner, Cohen & Armstrong, 1986; Martin et al., 1989; San Martin-Rodriguez, Beaulieu, D'Amour & Ferrada-Videla, 2005; Sarnat & Winterstein, 2004; Stahelski A.J., 1990; Wheelan, Burchill & Tilin, 2003). Researchers and decision makers have called for a better understanding of the process of collaboration and its meaning to practitioners, in order to establish more clearly the links between interprofessional collaboration and outcomes for the patients and the healthcare providers (Boon, Verhoef, O'Hara, Findlay & Majid, 2004; D'Amour et al., 2005; Mulkins, Eng & Verhoef, 2005; Oandasan, Baker, Barker, Bosco, D'Amour, Jones et al. 2006; Silen-Lipponen, Turunen & Tossavainen, 2002).

Integrative healthcare (IHC), the combination of biomedical practice with various complementary and alternative medicine (CAM) therapies, is an example of interdisciplinary collaboration that differs from the type of teams that have been typically described in the literature. Healthcare professionals working in IHC often enter the collaboration with very different paradigms of healthcare and visions of health and illness (Zollman & Vickers, 1999). According to Hojat et al. (2001), intensity of collaboration is generally dependent upon the traditional pattern of relationships amongst various types of practitioners and the roles of the practitioners within the team. To some extent, this observation predicts the failure of interprofessional collaboration within IHC, blending biomedical and CAM healthcare. The paradigms and the ways in which practitioners are professionalized are, in certain respects, diametrically opposed. Some researchers have hypothesized that collaboration is more likely to occur when professionals share similar interests and philosophies (Lappe, 1993; Mills, 1990; Wagner, 2004), which makes IHC clinics a unique setting in which to studying interprofessional collaboration.

The research literature describing how interdisciplinary collaboration is experienced at the professional level within an IHC setting is modest (Maizes & Caspi, 1999). In 2004, Boon and colleagues (2004) conducted an extensive review of the literature with the purpose of conceptualizing this nascent but increasingly popular model of healthcare. They identified four key theoretical components of integrative care: philosophy and values, structure, process, and outcome to guide the development of a framework to which practitioners aiming to practice IHC could turn. Admittedly essential for a better understanding of IHC, most of the research simply describes examples of IHC programs (e.g., Cohen, Hrbek,

Davis, Schachter, Kemper, Boyer et al. 2005; Horrigan, 2004; Le, 2003) or discusses issues related to the implementation of such programs (e.g., Berndtson, 1998; Coulter, Ellison, Hilton, Rhodes & Ryan, 2007; Mills, 2003). There is little analysis of how IHC is actually practiced.

Researchers have largely left aside investigations of the main components of interprofessional collaboration particular to this healthcare working environment. Mulkins and colleagues (2005) were one of the first team of researchers to identify some organizational components of an IHC team that lead to a successful environment from a practitioner's perspective. Although very informative, the participants were selected from a single clinic that had closed its doors prior to the interviews; this may have biased the results toward what should have transpired rather than how collaboration actually took place between the practitioners.

Recently, Hollenberg (2006) addressed the paucity of research on interprofessional collaboration in IHC clinics by examining the functioning of two Canadian clinics. He focused on the process component of collaboration, and more specifically on the existence of dominance tactics between biomedical and CAM practitioners. His findings suggested that although attempts are made by biomedical and CAM practitioners to blend their respective health paradigms, the interprofessional relationships observed in the two study settings continued to reflect important patterns of downward exercise of power and control in the division of labour, that limited the full integration of CAM practitioners with conventional physicians.

Conceptual framework

This study draws upon a comprehensive and tested model that has helped significantly to shape the literature on teams evolving in various settings, including healthcare. The Input Process Output model (IPO) (McGrath, 1964) was created to improve the understanding of the interplay between and amongst team members, as well as between individuals and the rest of the team as a single functional entity. First published by McGrath in 1964, the IPO model was pioneered in studies of collaboration within interprofessional teams, and was also one of the most influential models of organizational theory (Yeatts & Hyten, 1998). Since then, the model has been tested repeatedly in various application fields where teams are present and has been adapted to different models of collaboration (e.g. the Quality-Caring Model © (Duffy & Hoskins, 2003) or the Integrated Team Effectiveness Model (Lemieux-Charles & McGuire, 2006)).

In its original form, the model was articulated around 7 components, which are grouped as 3 key factors of collaboration: input, process, and output (see Figure 1 – Chapter 2). The first factor, input, is characterized by 3 components. The *group structure* component of the model corresponds to the set of roles in a group and the total patterns of role interrelationships amongst the occupants of those positions. This component is about division of labour, distribution of power and relative authority, and the team's communication network. The *group composition* component encompasses the abilities, attitudes and background characteristics of the team's members. The group composition can also be measured in terms of the members' motivation, complementarity, and interdependence. Finally, the *task and environment* component of a team captures the goals of the team; their reasons for existence. To these three components of the input of

collaboration, the most recent versions of the IPO model added the professional cultural context, recognizing that the evolution of the team members is a factor affecting the processes of collaboration.

Under the theoretical framework the second key factor, processes, entails the flow of events during the team activities and the interactions among them within their environment.

Processes are shaped by the first three components of the model and will eventually lead the team to a certain series of outputs of collaboration, the third key factor of the IPO framework.

The first component of the outputs is the *group development* component, which includes the alterations in the pattern of relationship among members as well as the development of shared beliefs, attitudes, goals, and ways of perceptions. A second component of output is the *task performance* of a team which is assessed by the modifications in the groups' relation to its goals and environment. The IPO model suggests *effects on members* as the last component of outputs obtained by a combination of inputs and processes. This class of outputs was originally defined by McGrath by the changes in the abilities, attitudes and personalities of the team members.

The framework was used in this project to orient the dialogue on interprofessional collaboration with healthcare practitioners working in Canadian IHC clinics and as a place to start to classify the emerging themes. As discussed at length by the sociologist Blumer (1998), one cannot conduct a qualitative study without some sense of the concepts that will guide his/her investigation. These concepts often come from previous research, models, or

theories available to the researcher. These initial “sensitizing” concepts help get the research started, but they do not confine the research. These initial concepts, at a minimum, will be altered significantly or even discarded in the course of the research, as discussed in the *Data analysis* section below.

Objectives

The purpose of this study is to complement the work conducted thus far in the IHC literature by using a conceptual framework to guide the exploration and interpretation of a full array of factors that characterize the phenomenology of teamwork experienced by practitioners working in IHC clinics. Specifically, we examine the elements that were perceived by the practitioners to foster or limit collaboration, as well as the related benefits and drawbacks of collaboration.

Methods

Sampling frame and recruitment

The participants for the interviews were recruited from Canadian IHC programs. For the purpose of this qualitative research inquiry, an IHC program was defined as the collaboration of at least three different practitioners working in the same location, including the collaboration of at least one physician and healthcare provider(s) practicing a variant of CAM including (but not limited to): naturopathy, massage therapy, chiropractic, and Traditional Chinese Medicine, including acupuncture. Other practitioners coming from a biomedical healthcare background, such as nurse practitioner, physiotherapist or pharmacist were also eligible practitioners for the study.

Recruitment was performed using purposive sampling to recruit a broad group of practitioners from each Canadian province where IHC clinics are present. Additionally, maximum variation sampling was used to obtain a good range of both physicians and CAM practitioners, as the providers' expertise was thought to influence their perceptions of collaboration. Research ethics approval for the project was obtained from the Research Ethics Board, University of Ottawa, prior to contacting the IHC clinics. Informed written consent was obtained from each participant before the interview.

Procedures

Directors or managers of selected IHC programs were the entry point for each clinic, and facilitated the recruitment of practitioners. Interviews were conducted using a series of semi-structured open-ended questions. The interview guide was pre-tested with a practitioner from each therapeutic domain, not currently involved in an IHC program. A summary of the questionnaire is included in Table 1 (Chapter 2). Basic descriptive information about the practitioner's background, expertise, and years of experience were also collected at the beginning of the interview. Interviews took between 10 and 67 minutes (average 38 minutes) and were conducted at the providers' centres by a member of the research team (IG). Interviews were audio taped and transcribed. Audio tapes and transcripts were reviewed simultaneously to assess validity of the transcription process.

Data analysis

A phenomenological methodology was chosen to inform the research design of this study. This approach privileges inductive knowledge and the voice of the participants. Moreover, a

naturalistic descriptive design was selected over a quantitative approach to address the above-mentioned objectives because its methodology allows the researcher to probe and explore the interviewee's personal conception of a phenomenon and allows a rich description of their lived-experiences (Lincoln & Guba, 1985).

The analysis was conducted by the interviewer (IG) using the software NVivo (QSR International Pty Ltd. Version 7.0, 2006). Data analysis was conducted using directed content analysis procedures, which include a mix of deductive and inductive analysis techniques (Hsieh & Shannon, 2005). In the deductive phase, key concepts of the existing theoretical framework (i.e. the inputs, processes, and outputs of the IPO framework) were used to guide the creation of the initial coding categories. These coding categories were then used to categorize the excerpts of the transcript. All data were re-read several times for immersion. Excerpts that represented new themes or codes relevant to the research inquiry but that could not be categorized within the initial coding categories were given new codes in the second inductive phase of the analysis. An audit trail was compiled to record the steps taken and decisions made during the analytical process. A code tree grouping all emerging codes on a box diagram was also generated to facilitate the analysis. In addition, a codebook was compiled that included for each code a definition, directions regarding "when to use" and a "when not to use" sections that give instances in which the code might and should not be considered, respectively, and an example of quote(s) pulled from the data (Guest, Bunce & Johnson, 2006). Data saturation was considered to be reached when a code was discussed by at least 6 interviewees (Guest, Bunce & Johnson, 2006). Particular attention was made to compare themes between each participants' expertise group. Dissimilarities between groups, when noted, were documented.

To ensure the reproducibility of the analysis and coding, 3 interviews were independently coded and analyzed by a second member of the team (MB). In case of disagreement, consensus was reached between the two analysts through discussion. The overall coding scheme was discussed and approved by all the authors.

Findings

Clinics and participants

The interviews took place between January and March 2007. Seven clinics were contacted for the study but two refused to participate due to time limitations. Characteristics of the five participating clinics and interviewees are summarized in Table 2 (Chapter 2).

Participating clinics were located in urban areas in four provinces: British Columbia, Alberta, Ontario, and Quebec (2 clinics). All clinics were 'free-standing' and none were affiliated with a university. All clinics were led by physicians, with the exception of one where the leadership was shared among practitioners (clinic 4). The clinics reflected a broad array of team-oriented models of collaboration. On average, participating clinics had been in business for 13.5 years (range 3.5, 26 years) at the time of the interviews.

Of the twenty-two participants approached in the clinics, one declined to participate because he was not available the week the researcher was visiting the clinic for the interviews. Among the participants, eleven had CAM as their main expertise, seven were physicians licensed in Canada, and three had other biomedical therapy backgrounds (psychology and dentistry). Of the seven physicians met, six also practiced some form of CAM at the clinic. Two practitioners had worked for another IHC clinic outside Canada

before they started working at the IHC clinic in which they were interviewed. Twelve participants had had solo practices in the past, some of which were continuing alongside work in the IHC clinic at the time of the interview.

Inputs

Based on the theoretical framework, the inputs of collaboration are the elements present at the individual, clinic, and/or societal level that characterize individuals within the team and the team as a whole. The inputs affect the process of collaboration within the organization. For the practitioners in this sample, the dominant themes discussed were awareness of one's clinical paradigm, education and training, and factors external to the clinic inherent to the Canadian healthcare system.

Group composition characteristics were brought up by all practitioners interviewed.

Awareness of one's own limitations related to one's medical paradigm and similarly for colleagues' abilities was described by the participants as affecting the level of collaboration observed among the clinic staff. Practitioners explained that professional maturity and intellectual curiosity play a significant role in collaborative practice. Capacity to be able to acknowledge one's own limits was identified as a major personality characteristic that stimulates appropriate patient referral and safer care for the patient. As one physician put it:

"You need to believe in what you're offering and know it's the way to handle the scope of it. You know when you reach your boundaries and when you say [to a patient], "I think you might be well served by also working with this person or maybe I'm not giving you any more and try this person." (Clinic 3, BM1)

Additionally, comprehensive understanding and knowledge of colleagues' healthcare abilities, and perspectives based on their medical paradigm was vital to the team cohesion.

"The more that each individual knows what type of things that we handle, what types of things that we do, then it makes it easier for me to utilize someone else within the facility, when I am faced with that decision."(Clinic 3, CAM 1)

One way to increase practitioners' awareness of other healthcare paradigms is through education and training. Many practitioners expressed their preference to collaborate with clinicians who have pursued further training and/or have been exposed to clinical paradigms different from their primary training. In this context, dual-training was thought by all but one participant to enhance communication among the team members, to stimulate appropriate referrals, and to increase openness and awareness among co-workers. One physician described the benefits of obtaining extra-curricular training in Traditional Chinese Medicine:

"Now I know, I have enough confidence when Chinese medicine says this, I understand it, first of all because I am studying it, and I see how it comes in and I do not question it. And I understand what a naturopathic doctor is, I understand, I know enough about what they do now. It actually affects my practice as a western practitioner."(Clinic 2, BM 1)

The only physician who did not see the necessity of dual-training justified his opinion by providing an example of one CAM practitioner working at his clinic who had not received any formal training in biomedicine. He believed that his CAM colleague did not experience any barriers related to his single paradigm training. This perception may be explained by

the fact that this interviewee had pursued extra-curricular training beside his education in biomedicine. This training could potentially account for the reasons why he had not experienced any communication problems with the rest of his team or felt quite knowledgeable about what the other colleagues' expertise might bring to the practice.

Environmental conditions are the final component of the inputs of interprofessional collaboration. The healthcare system in which IHC clinics evolve emerged as an external factor that had the potential to impact negatively the collaboration within the clinics sampled. The discussion focused mainly on financial limitations for both patients and practitioners working in a Canadian IHC clinic. The lack of a universal reimbursement plan for holistic medicine in general, and CAM practitioners' services in particular, was considered by most of the interviewees to be a major impediment to teamwork. As one naturopath put it:

"We have a healthcare system that is not set up to compensate for preventive health [care] or practitioners' time when they are not actually seeing patients or treating patients. How do you compensate people for reading the file, reading what other people have written, sitting, around talking about it for an hour? The hour that they take to discuss one patient, I could see presenting to a couple... to ten people in that time. They could be paid for it."

(Clinic 2, CAM1)

Similarly, a physician added that IHC programs are probably even more costly for biomedical professionals in the clinic compared to the CAM providers because the biomedical practitioners are generally in a better position financially to pay for the clinic's overhead costs (Clinic 5, BM 2). He suggested that the physicians' financial contribution was

sometimes the only way to sustain the activities of such a program, given that the Canadian system does not currently support CAM practitioners with its healthcare coverage plan.

Complementing this observation, one CAM practitioner (clinic 4) noted that a referral barrier is present between biomedical practitioners and CAM providers. Indeed, the former (especially physicians) are in general working under a fee for service method of reimbursement from the government, as opposed to CAM practitioners who are limited to reimbursement from patients' insurance plans and personal payments. This reality was considered by the interviewee as the main barrier to collaboration, as it limits interprofessional referrals when patients' ability to pay is perceived to be limited. Clinic 1 has attempted to thwart this obstacle by creating a 10-day program that includes consultations with all practitioners for a set price. At the time of the interviews, clinic 2 was in the process of implementing similar "packages of clinicians" to offer to their patients.

Another element of collaboration related to the environmental conditions within which IHC clinics are developed concerned the provincial Colleges of Physicians and Surgeons. These organizations were held responsible by many practitioners, both biomedical and CAM, for inhibiting the collaborative practice of integrative medicine. Anecdotes of audits were shared during the interviews from half of the physicians. One physician (clinic 5) who has been audited commented that the Colleges were very scared of the practice of integrative medicine by their members. He suggested that for the Colleges, the practice of IHC was often associated with charlatanism. As another one said:

"...if you do not [follow the College's guidelines], then your license is on the line. What that means is that it is basically illegal for people to do holistic medicine." (Clinic 1, BM 1)

When asked to discuss their vision of the impact of that factor on the process of collaboration, CAM practitioners felt that it certainly limits the scope of practice or the use of therapeutic approaches among practitioners working in the same clinic, hence perhaps limiting innovations that are hoped to be fostered in the context of collaborative work. As one CAM practitioner articulated it:

"[Physicians] are, to a large extent, bound by existing protocols, bound by existing rules as set by their colleges, and they can't just wildly go off. There's a conservative element to their behaviour, and they were trained to follow certain rules and they to continue to follow those rules."(Clinic 3, CAM 4)

Of note, none of the CAM practitioners brought up similar imposed boundaries from their professional colleges or associations limiting collaboration with other colleagues within the clinic.

Processes

Processes are the actions taken by the team as a whole as well as members; the interpersonal behaviours to perform its tasks (i.e., delivering healthcare). Processes are shaped by the interplay of the inputs. For the practitioners in this sample, the process of collaboration was predominantly apparent in mode and frequency of communication, patient referrals, and power relationships.

The mode and frequency of communication within a team occupies an important place in the research on interprofessional collaboration. Indeed, a prerequisite for effective team work mentioned by most participants was to have dedicated time and opportunities for

knowledge and patient-related information sharing. For most of the clinicians interviewed, this exchange of information took the form of hallway conversations, although some clinics organized more structured meetings where practitioners discussed difficult cases, clinic coordination issues, or healthcare specific topics. Interactions among team members were seen by practitioners as privileged moments not only to strengthen their clinical knowledge and design a more integrative care plan for the patients, but also to foster the relationships between the individuals in the team.

"Here, even if you did not want to collaborate, you would be forced to, because somebody is going to be asking you, like, hey, what are you doing because it is really working! Everyone is so interested in expanding their own knowledge base, that it is ensuring communication between each other and passing on of knowledge. Not a day goes by [but] that I hear "I do not know a lot about your [technique], but I'm going to contact you".

(Clinic 3, CAM2)

In the larger clinics, some practitioners complained about the lack of overlapping schedules between practitioners that sometimes prevented collaboration by limiting the interaction to letters or notes in the patients' charts. This situation could become even more problematic should sharing of charts not be permitted among practitioners.

On that note, sharing patients' chart between biomedical and CAM practitioners working at the same clinic without patient consent is not allowed due to confidentiality guidance in all Canadian provinces. To simplify the communication process and facilitate data exchange, the practitioners of three clinics in the study encourage their patients to sign an agreement

on their first appointment, stipulating that their medical information can be shared among the clinic's clinicians.

Related to the mode of communication, the literature reports that one of the main barriers to collaboration within healthcare practitioners coming from different backgrounds is a terminology barrier (Hall, 2005; Mainous, Gill, Zoller & Wolman, 2000). However, for most of the biomedical and CAM practitioners in the study, it did not appear to be problematic.

According to one physician:

"I think if you're a good practitioner, you're going to be sitting there speaking to your patients and you better figure out how to speak to them in English. Any of the practitioners should be able to explain themselves well enough to the other practitioners who may not be trained in their area. So, if the Chinese medicine practitioner's talking about liver stagnation, he's going to need to explain to us what that means, or we're going to be clueless, right?"

(Clinic 3, BM1)

Other practitioners who agreed with this statement also mentioned that this ability to use a common medical language is often a pre-requisite for an individual who wishes to join an IHC program. Nonetheless, this finding could also be interpreted to mean that CAM practitioners tend to be eventually assimilated to the biomedical language or that the complete sample of physicians interviewed had pursued extra-curricular training that facilitates exchanges between practitioners. Only one Traditional Chinese Medicine doctor admitted that, in order to facilitate dialogue, particular efforts are required to maintain the flow of communication between practitioners:

"I'm often a little bit hesitant to state things the way I would state them. For example, there might be something called liver chi stagnation and while it might be the easiest way for me to communicate my point in a meeting, I might choose not to do that. And I might choose, instead, to try and say something that I feel would be more understandable..."

(Clinic 3, CAM 4)

A concrete illustration of collaboration within an IHC clinic is patient referral. A majority of the CAM practitioners in this sample identified a two-way system of referrals as a benefit of working in a collaborative setting, compared to some of their peers working outside IHC programs, who might sometimes feel isolated. When this topic was discussed in the interview, all participants commented that the patients were the ultimate winners in a collaborative relationship between the practitioners.

Despite this observation, and even though patients could self-refer and specifically request to see a CAM specialist in all of the 5 clinics visited, the designated entry practitioner for 2 clinics was the medical doctor. One manager interviewed depicted his clinic's referral system as if the medical doctors were the orchestra conductors responsible for ensuring continuity of care and integrative care. Nevertheless, this system was not found by these two clinics' other interviewees to interfere appreciably with the cooperative climate of the clinics, at least at the clinical level. In a third clinic where the leadership was shared between practitioners, one CAM interviewee showed some disappointment regarding his clinic's referral system dynamic: *"[The medical doctors] could be a little bit more open when it comes to my practice and also refer more people"*. (Clinic 4, CAM 2)

Opinions were split between practitioners with regards to power relationships within the clinic. It was observed that power relationships were different between CAM and biomedical professionals depending on the professional legitimacy of the former, and the degree of formal organization. Indeed, downward exercise of power from biomedical practitioners seems to be less significant toward legitimized or semi-legitimized CAM practitioners (e.g. chiropractors and naturopaths of certain Canadian provinces) than with partially professionalized practitioners (e.g. massage therapists) (Baer, 2004). For instance, when asked to describe their experience of medical decision making in the context of an interprofessional clinic, all chiropractors and naturopaths interviewed admitted that a lot of latitude was given to them and that conflict was nonexistent when the team of practitioners attempted to reach consensus on patient treatment plans.

This perception of a more equitable power relationship was not shared by at least one non-regulated and partially professionalized CAM practitioner. While commenting on potential competition for patients among the clinicians, he depicted his relationship with the biomedical members of the team with these words:

"The doctors are more and more seeing that [the CAM practitioners of this clinic] are not pretending to take away the way they are... Actually, we are their servant. We do the hard work. Can you imagine a doctor pulling and rubbing somebody for an hour?"(Clinic 4, CAM 1)

Outputs

Blended together in the context of an IHC clinic, inputs and processes of collaboration have various effects on the practitioners' experience of collaboration. The interviews purposefully

focused on the effect of teamwork on group members rather than outcomes related to patients' health or satisfaction. This corresponds to the task performance component of the IPO model. Collaboration within Canadian IHC clinics was found to impact practitioners' satisfaction with their work environment by modifying the burden of work, providing the clinicians with opportunities for intellectual stimulation and growth, and enhancing affective commitment to the clinic.

Practitioners were divided in their opinions regarding how collaboration modifies burden of work and efficiency in delivering healthcare services. Some practitioners reported that a collaborative work setting requires a lot more interactions and time to create and maintain the group dynamic than a solo practice. Additionally, one CAM practitioner pointed out that the amount of information gathered on patients could rapidly become cumbersome to handle and summarize, because each practitioner would collect patients' histories according to their own healthcare paradigm. However, most of these practitioners recognized that spending this time was "the nature of collaboration" and since it was in the patient's interest, they perceived spending extra time a necessary and positive consequence of working in a team. As one physician explained when asked to discuss the challenges of interprofessional collaboration:

"[Spending time to exchange with a colleague about a patient] is enjoyable, it's part of our communication, it's interesting, so it's not a problem. It's part of our game."(Clinic 3, BM 1)

In contrast, some CAM practitioners suggested that they felt more efficient in an integrative setting, because referrals to various colleagues within the clinic, and feedback related to those referrals, occurs more quickly. One of them articulated this advantage as follows:

'You can come to each other and get some immediate feedback that does not require going through a system. I guess, in the traditional conventional medicine, if you want a second opinion or, well, no problem, you are going to go to specialist A, B, C, D, and you will be in there next July 17th, and the follow-up will be in October. Whereas here, the cases that we work with and we collaborate on are... it is a little more time sensitive. The feedback in this case is immediate. You can get an opinion from a different modality or profession or whatever we choose to call it, fairly quickly.'(Clinic 3, CAM 1)

Most study participants described the constant knowledge exchange as a key benefit of collaboration. Some interviewees drew attention to the fact that an integrative approach necessarily translated into various devices and therapies, which cannot be mastered by a single individual. Therefore, collaboration was not only a way to discover these new features through colleagues, but also to become more familiar with *"a lot of therapies and approaches that [they] would not otherwise been exposed to"* (Clinic2, CAM 2).

Another way of gathering knowledge was related to the patient population attending IHC clinics. One physician described that population as: *"There is a group of [patients] that are ridiculously healthy and just want to stay healthy and be healthier and there is a group of them that are really quite sick and desperate."*(Clinic 3, BM 2) Practitioners explained that treating patients in the integrative setting was a professional challenge through which they could expand their clinical knowledge and maintain intellectual stimulation they would not usually enjoy when working in a non-integrative setting. All together, these factors create a working environment that was portrayed by the interviewees as challenging, gratifying, and

healthy as the IHC clinic made them "*a better person, but [also] a better therapist.*" (Clinic 3, CAM 2)

Research in classic organizational behavior has clearly shown a negative correlation between job satisfaction, measured through affective commitment to the organization, and staff turnover. Most participants had no intention of leaving their integrative practice to return to solo practice or a practice that was not oriented towards holistic medicine. As one naturopath said "*I think it would be a step in the past.*" (Clinic 3, CAM 3). Another massage therapist agreed by stating: "*You know I would probably give up all the other jobs before I would give up the [job here]. Financially pretty stupid, but in terms of heart and soul decisions, it is a no-brainer*"; (Clinic 1, CAM 2) which actually shows a high level of commitment. This opinion was similar across all practitioners, regardless of their years of experience at the clinic or healthcare paradigm. Finally, according to the clinicians interviewed, the main two reasons to explain why practitioners leave were a lack of fit with the team or because of financial reasons:

"I know that the reason that several people have moved on is because this is not terribly financially remunerative. It's a struggle to be working in this kind of way and so the money was the reason they chose to move on."(Clinic 1, CAM 1)

Discussion

This paper is the first to explore and categorize a broad array of key factors associated with interprofessional collaboration, as experienced by clinicians working in an IHC setting. The IPO conceptual model proved useful to inform the design and analysis of this research and laid the ground for understanding interprofessional collaboration between biomedical and

CAM practitioners. Additionally, this study pioneered the use of organizational theory to inform the literature on the benefits and drawbacks of IHC interprofessional collaboration from the perspective of the practitioners. In total, 11 constructs were captured under each of the three key factors of the IPO model (Figure 2 – Chapter 2) that guided the description of the distinct characteristics of interprofessional collaboration within an IHC clinic. The following sections offer an interpretation of the findings and areas where additional research is required, organized around the three key components (inputs, processes, and outputs) of collaboration as defined by the conceptual framework of this project.

Dual education and/or training was found to be an input of teamwork that facilitated interprofessional collaboration within IHC clinics. It is important to stress that although this is a key factor, it is not sufficient to resolve fully communication issues highlighted here and elsewhere (Hall, 2005; Hollenberg, 2006; Mulkins et al., 2005). Integrative medicine, defined as a synergistic approach for curing and healing, goes beyond the technical incorporation of selected elements from both biomedical and CAM treatments. We believe it is important to acknowledge that some of the techniques used in IHC belong to complex healthcare systems (such as Traditional Chinese Medicine) with inherent theories and practices, and that their intrinsic philosophies and practices cannot be mastered by a single individual. As a consequence, terminology barriers and conflicts related to different – and sometimes divergent – healthcare paradigms are likely to occur in an IHC context. Dual education is one way to reduce those barriers and conflicts, and to contribute to an increased awareness to other clinical paradigms, which was thought to be imperative for IHC by the practitioners of the sample. Those two factors could in turn ease the process of

collaboration by improving the quality of the relationship between practitioners and stimulating appropriate referrals.

The processes of collaboration that emerged from this project validate some of the findings from Hollenberg's study (2006) with regards to power relationships and patient referral patterns within IHC clinics. Interpersonal relationships within some of the clinics visited showed some signs of a hierarchy imposed on the CAM practitioners by their biomedical peers. However, the novel findings of this paper are that the implicit hierarchical rapport either affects CAM practitioners differently based on their professions or is enacted differently by the biomedical practitioners based on their CAM peers' profession. In this sample, chiropractors and naturopaths showed less reliance on the biomedical practitioners and perceived the latter more as co-workers with similar rights and weights in the decision making process for the clinic and the patient treatment plans elaborated by the team. In contrast, massage therapists, for example, appeared to depend more on the referrals and sympathy of both their biomedical and licensed CAM colleagues. Yet, it is plausible that practitioners who belong to occupational groups that have obtained, or are in the process of obtaining, legitimacy through licensing, certification, or registration may be seen differently by their biomedical peers. The licensing process may give them credibility in the eyes of the biomedical community and therefore justify a more egalitarian rapport between the practitioners. Further research is required to investigate this hypothesis. Additionally, it was observed that stability in the membership of the team may also positively modulate power relationships and patient referral patterns within the group. That could be due to a higher level of awareness of one another's skills and knowledge that translates into a higher level of trust among the team members.

Intellectual stimulation and personal growth were the key outputs that keep the practitioners sampled working in an IHC clinic, despite the financial limitations of the model of practice. A better understanding of the subjective outcomes of interprofessional collaboration most important for practitioners could assist in the development of more efficient IHC teams. Establishing an optimal working environment where practitioners are encouraged to exchange and where conflicts are minimal could in turn positively impact patient outcomes.

Limitations

The main limitation of this study pertains to the sampling frame. None of the clinics sampled were in hospital-based settings. As such the results may only be applicable to 'free-standing' clinics. Another limitation is related to the selection of the interviewees. The study was advertised to all practitioners working within clinics and interested participants were asked to volunteer for the project. This selection process may have resulted in participants with a more 'extreme' view (either positive or negative) of interprofessional collaboration within IHC clinics. However, given that saturation was obtained in the study, it appears that possible under-representation of more "neutral" practitioners did not likely modify significantly the framework resulting from the analysis.

The IPO conceptual framework provided a structure to uncover and refine most of the broad components of collaboration within IHC clinics from practitioners' perspectives. As the purpose of the project was to construct a framework of interprofessional collaboration within Canadian IHC clinics, a focus was made on general patterns that characterized the

experience of collaboration common to the five included clinics included. A limitation of this approach is to leave aside the study of the microcosm of collaboration particular to each clinic.

Although participants were probed to illuminate the group structure of their clinic, this component of the conceptual framework needs to be explored further to enhance the understanding of interprofessional collaboration in an IHC context. Relatively short individual interviews with a sample of the team precluded a clear understanding of the roles of all members. Additionally, the clinics visited appeared to operate under different models of collaboration (Boon, Verhoef, O'Hara & Findlay, 2004), which may provide an explanation to why general patterns of group structure could not emerge from the interviews.

Implication for further research

This assessment of the constructs of interprofessional collaboration within IHC clinics will aid the development of organizational theories imbedded in this healthcare context. However, as interprofessional collaboration is described as a dynamic concept, research is needed to evaluate how these constructs 1) evolve over time and as the membership of the team is modified; and 2) how the outputs of collaboration underscored by this project feed the IPO iterative loop. In other words, how do outputs of collaboration modify the IHC group composition and structure? Moreover, how do they transform the processes of collaboration? A few scholars in the field of organizational theory have proposed new research models that cover the dynamic nature of interprofessional collaboration (Ilgen, Hollenbeck, Johnson & Jundt, 2005; Kozlowski, Gully S.M., Nason & Smith E.M., 1999).

These models should be consulted for the design of longitudinal (more likely positivist) studies in IHC.

Given the appearance of a gradient of integration of clinical paradigms across the clinics visited, ethnographic studies of IHC clinics operating under different models of collaboration might clarify the group structure component of the proposed framework. Additionally, observation of the interpersonal dynamics within the practitioners of a given clinic would help to refine the group development component suggested by the conceptual framework. Another theoretical and possibly methodological approach should be considered as the next strategy to explore particularities of different models of collaboration in terms of the structure of the team and how it impacts collaboration.

It is also important to understand how the constructs of the framework express themselves and relate to each other. In order to investigate this further, we are undertaking a nationwide survey of Canadian IHC clinics in the hopes of discovering how some of the constructs of the framework are empirically linked and to what extent they are observed in a broader sample of practitioners. Such a survey will help to validate the framework assembled for this paper.

This framework of collaboration could be used in the creation of new IHC clinics or implementation of change in existing ones, as it highlights the main factors that shape IHC interprofessional collaboration through the practitioners' experience. Indeed, the components of the framework include both factors that were thought to foster team cohesion and issues related to teamwork in a context of IHC with which practitioners have

been struggling. Additionally, the framework offers some suggestions from which both biomedical and CAM educators could draw, to inform the development of courses that aim to increase efficient collaboration between their respective students and graduates.

Conclusion

Various models of interprofessional collaboration between biomedical and CAM practitioners working in a common setting exist within our healthcare system. Within these models, 11 constructs were examined to assemble a framework of interprofessional collaboration specific to these particular teams of practitioners. We believe that this framework will facilitate hypothesis generation and testing to assess the empirical link between these factors and ultimately patient health outcomes. This framework is critical for a better understanding of the functioning of IHC clinics, with key factors for creating or maintaining further successful clinics.

Acknowledgements

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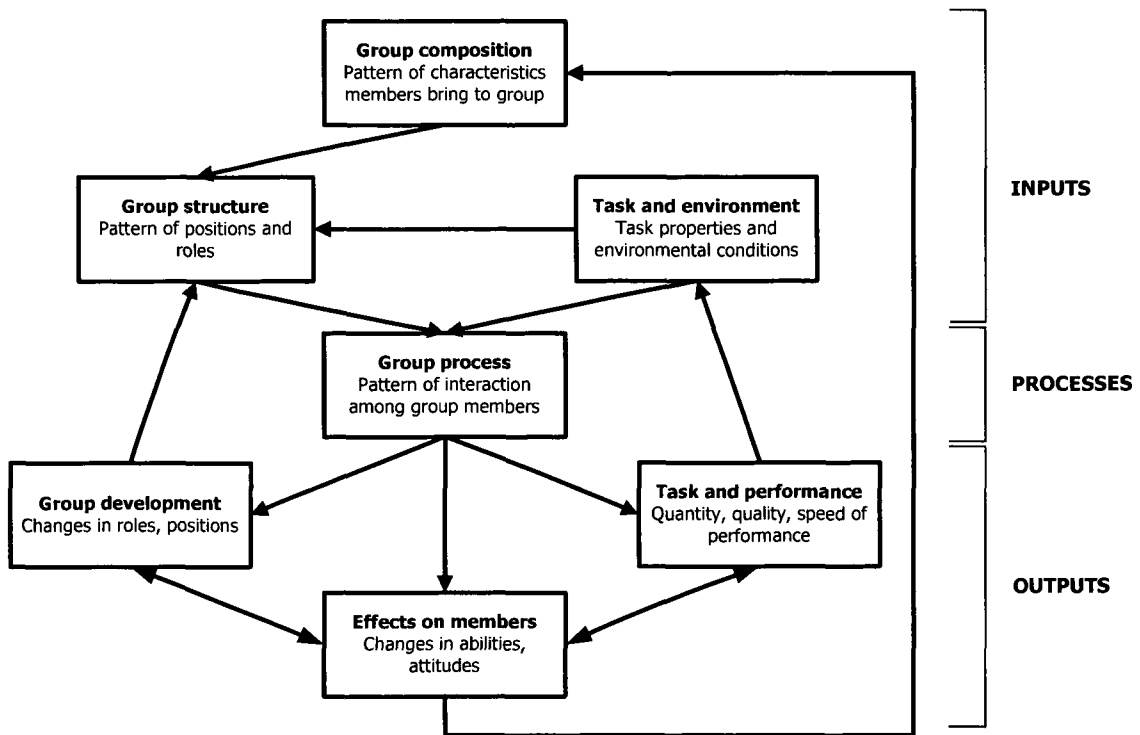
Notes

Portions of this paper have been presented at the Fourth Annual IN-CAM Research Symposium – *Coming of Age: Emerging Issues and New Directions in CAM Research* – in Vancouver on November 1-2, 2007. The related abstract has also been published in Verhoef

M, Boon H. "Coming of Age – Emerging Issues and New Directions in CAM Research: Abstract from the Fourth Annual IN-CAM Symposium November 1 & 2, 2007, Vancouver, Canada", *Journal of Complementary and Alternative Medicine* 2007, 4(1): article 9.

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Figure 1. IPO conceptual framework



Adapted from McGrath (1964)

Figure 2. Framework of interprofessional collaboration in IHC clinics

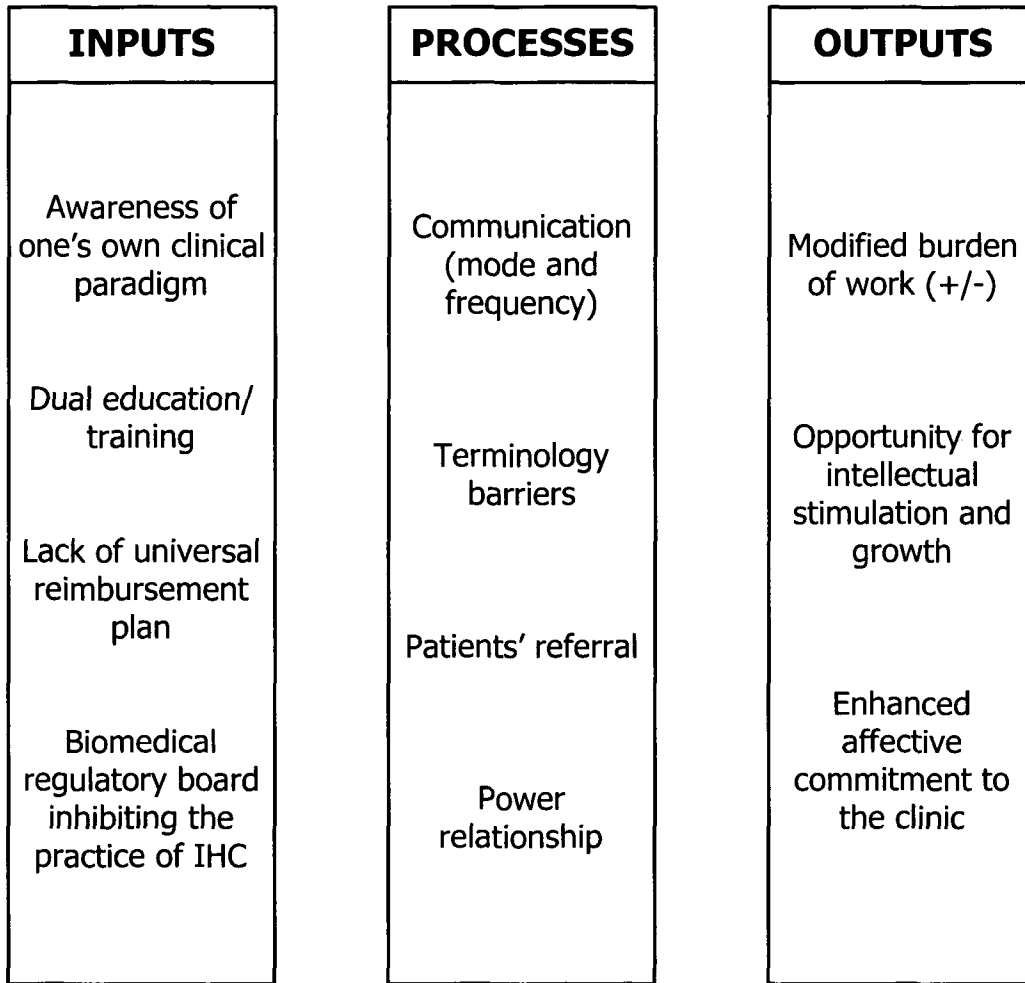


Table 1. Summary of the interview guide

Tell me about your clinic, your colleagues?

Could you give me examples that illustrate how you collaborate with your colleagues at the clinic?

What do you think fosters collaboration within the clinic?

What do you think challenges collaboration within the clinic?

As a practitioner working in a collaborative setting, what do you think the benefits of collaboration are?

As a practitioner working in a collaborative setting, what do you think the drawbacks of collaboration are?

Are there any last minute thoughts we haven't explored you would like me to know about your experience of collaboration within the clinic?

Table 2. Clinics' and interviewees' characteristics

	Clinic 1	Clinic 2	Clinic 3	Clinic 4	Clinic 5
Clinic years in operation	26	11	3.5	5	22
Number of staff	2 BM 4 CAM	6 BM 16 CAM	3 BM 7 CAM	4 BM 2 CAM	2 BM 6 CAM
Shared patients' charts	Yes	Within CAM and within BM but not between	Yes	No	Yes
Staff meeting for clinical purposes	Yes, weekly	Yes, bi-weekly	Yes, monthly	No	On an as-need basis
Interviewees' expertise	2 BM 2 CAM	2 BM 3 CAM	2 BM 4 CAM	1 BM 2 CAM	2 BM 1 CAM
Years of interviewees' experience at the clinic (range)	(17, 26)	(0.5, 11)	(0.25, 3)	(4.5, 5)	(6, 22)

BM, biomedical practitioners; CAM, complementary and alternative practitioners

REFERENCES

Anderson,D.J., & Finn,M.C. (1983). Collaborative practice: developing a structure that works. *Nurs.Adm Q.*, 8(1), 19-25.

Baer,H. (2004). Partially Professionalized Therapeutic Systems: The Struggles for Legitimacy.Toward an Integrative Medicine: merging alternative therapies with biomedicine (pp.57-88). Walnut Creek: AltaMira Press.

Baldwin,D.W. (1996). Some historical notes on interdisciplinary and interprofessional education and practice in health care in the USA. *J.Interprof.Care*, 10(2), 179-187.

Berndtson,K. (1998). Complementary and alternative medicine. Integrative medicine: business risks and opportunities. *Physician Executive*, 24(6), 22-25.

Blumer, H. Symbolic interactionalism: perspective and method. Berkeley: University of California Press

Boon,H., Verhoef,M., O'Hara,D., & Findlay,B. (2004). From parallel practice to integrative health care: a conceptual framework. *BMC Health Services Research*, 4(1), 15.

Boon,H., Verhoef,M., O'Hara,D., Findlay,B., & Majid,N. (2004). Integrative healthcare: arriving at a working definition. *Alternative Therapies in Health & Medicine*, 10(5), 48-56.

Cohen,H.J., Feussner,J.R., Weinberger,M., Carnes,M., Hamdy,R.C., Hsieh,F., Phibbs,C., Courtney,D., Lyles,K.W., May,C., McMurtry,C., Pennypacker,L., Smith,D.M., Ainslie,N., Hornick,T., Brodtkin,K., & Lavori,P. (2002). A controlled trial of inpatient and outpatient geriatric evaluation and management. *N.Engl.J.Med.*, 346(12), 905-912.

Cohen,M.H., Hrbek,A., Davis,R.B., Schachter,S.C., Kemper,K.J., Boyer,E.W., & Eisenberg,D.M. (2005). Emerging credentialing practices, malpractice liability policies, and guidelines governing complementary and alternative medical practices and dietary supplement recommendations: a descriptive study of 19 integrative health care centers in the United States. *Archives of Internal Medicine*, 165(3), 289-295.

Cole,K.D., Waite,M.S., & Nichols,L.O. (2003). Organizational structure, team process, and future directions of interprofessional health care teams. *Gerontol.Geriatr.Educ.*, 24(2), 35-49.

Coulter,I.D., Ellison,M.A., Hilton,L., Rhodes,H., & Ryan,G. (2007). Hospital-based Integrative Medicine: A case study of the barriers and the factors facilitating the creation of a center. In RAND Corporation (Ed.), (p.iii-171). Santa Monica.

D'Amour,D., Ferrada-Videla,M., San Martin,R.L., & Beaulieu,M.D. (2005). The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. *J.Interprof.Care*, 19 Suppl 1 116-131.

- Dieleman,S.L., Farris,K.B., Feeny,D., Johnson,J.A., Tsuyuki,R.T., & Brilliant,S. (2004). Primary health care teams: team members' perceptions of the collaborative process. *J.Interprof.Care*, 18(1), 75-78.
- Duffy,J.R., & Hoskins,L.M. (2003). The Quality-Caring Model: blending dual paradigms. *ANS Adv.Nurs.Sci.*, 26(1), 77-88.
- Foley,C. (1999). Patient demand for integrative medicine. *Minnesota Medicine*, 82(5), 50-51.
- Gage,M. (1998). From independence to interdependence. Creating synergistic healthcare teams. *J.Nurs.Adm*, 28(4), 17-26.
- Gittell,J.H., Fairfield,K.M., Bierbaum,B., Head,W., Jackson,R., Kelly,M., Laskin,R., Lipson,S., Siliski,J., Thornhill,T., & Zuckerman,J. (2000). Impact of relational coordination on quality of care, postoperative pain and functioning, and length of stay: a nine-hospital study of surgical patients. *Med.Care*, 38(8), 807-819.
- Hall,P. (2005). Interprofessional teamwork: Professional cultures as barriers. *J.Interprof.Care, Supplement 1* 188-196.
- Haward,R., Amir,Z., Borrill,C., Dawson,J., Scully,J., West,M., & Sainsbury,R. (2003). Breast cancer teams: the impact of constitution, new cancer workload, and methods of operation on their effectiveness. *Br.J.Cancer*, 89(1), 15-22.
- Hojat,M., Nasca,T.J., Cohen,M.J., Fields,S.K., Rattner,S.L., Griffiths,M., Ibarra,D., de Gonzalez,A.A., Torres-Ruiz,A., Ibarra,G., & Garcia,A. (2001). Attitudes toward physician-nurse collaboration: a cross-cultural study of male and female physicians and nurses in the United States and Mexico. *Nurs.Res.*, 50(2), 123-128.
- Hollenberg,D. (2006). Uncharted ground: patterns of professional interaction among complementary/alternative and biomedical practitioners in integrative health care settings. *Social Science & Medicine*, 62(3), 731-744.
- Horrigan,B. (2004). The philanthropic collaborative for integrative medicine: partnering for health and healing. *Alternative Therapies in Health & Medicine*, 10(1), 82-83.
- Hsieh,H.F., & Shannon,S.E. (2005). Three approaches to qualitative content analysis. *Qual.Health Res.*, 15(9), 1277-1288.
- Ilgen,D.R., Hollenbeck,J.R., Johnson,M., & Jundt,D. (2005). Teams in organizations: from input-process-output models to IMO models. *Annu.Rev.Psychol.*, 56 517-543.
- Johnson,N.D. (1992). Collaboration--an environment for optimal outcome. *Crit Care Nurs.Q.*, 15(3), 37-43.
- Kathryn,M., Chou,S.S., & Stone,P.W. (2007). Organizational climate and health care outcomes. *Jt.Comm J.Qual.Patient.Saf*, 33(11 Suppl), 45-56.

Koerner,B.L., Cohen,J.R., & Armstrong,D.M. (1986). Professional behavior in collaborative practice. *J.Nurs.Adm*, 16(10), 39-43.

Kozlowski,S.W.J., Gully S.M., Nason,E.R., & Smith E.M. (1999). Developing Adaptive Teams: A Theory of Compilation and Performance Across Levels and Time. In D.R. Ilgen, & Pulakos E.D. (Eds.), *The Changing Nature of Performance: Implications for Staffing, Motivation, and Development* (pp.240-292). San Francisco: Jossey-Bass Publishers.

Lappe,D.G. (1993). Managing the intensive care unit: nurse/physician collaboration. *Crit Care Med.*, 21(9 Suppl), S388.

Le,T.M. (2003). The Conemaugh Health System Integrative Health Center. *Alternative Therapies in Health & Medicine*, 9(5), 116-117.

Lemieux-Charles,L., & McGuire,W.L. (2006). What do we know about health care team effectiveness? A review of the literature. *Med.Care Res.Rev.*, 63(3), 263-300.

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. New York: Sage.

Mainous,A.G., Gill,J.M., Zoller,J.S., & Wolman,M.G. (2000). Fragmentation of patient care between chiropractors and family physicians. *Arch.Fam.Med.*, 9(5), 446-450.

Maizes,V., & Caspi,O. (1999). The principles and challenges of integrative medicine. *Western Journal of Medicine*, 171(3), 148-149.

Martin,E.G., Harris,A.M., Kirk,R.K., Lester,L.B., Nelles,S., Pedersen,A., Walton,M.L., & Ahern,E.L. (1989). Retention strategies that work. *Nurs.Manage.*, 20(6), 72I, 72L-72M, 72P.

McGrath,J.E. (1964). *Social Psychology: a brief introduction*. New York: Holt, Rinehart and Winston.

Mills,M.E. (1990). The CNS and collaborative practice. *Clin.Nurse Spec.*, 4(4), 194-195.

Mills,W. (2003). Integrative medicine clinic requires solid business plan. *Physician Executive*, 29(4), 38-41.

Mulkins,A.L., Eng,J., & Verhoef,M.J. (2005). Working towards a model of integrative health care: critical elements for an effective team. *Complementary Therapies in Medicine*, 13(2), 115-122.

Oandasan,I., Baker,G.R., Barker,K., Bosco,C., D'Amour,D., Jones,L., Kimpton,S., Lemieux-Charles,L., Nasmith,L., San Martin-Rodriguez,L., Tepper,J., & Way,D. (2006). *Teamwork in Healthcare: Promoting effective teamwork in Healthcare in Canada - Policy Synthesis and Recommendations*. Ottawa: Canadian Health Services Research Foundation.

San Martin-Rodriguez,L., Beaulieu,M.D., D'Amour,D., & Ferrada-Videla,M. (2005). The determinants of successful collaboration: a review of theoretical and empirical studies. *J.Interprof.Care*, 19 Suppl 1 132-147.

- Sarnat,R.L., & Winterstein,J. (2004). Clinical and cost outcomes of an integrative medicine IPA. *Journal of Manipulative & Physiological Therapeutics*, 27(5), 336-347.
- Shortell,S.M., Gilles,R.R., & Anderson,D.A. (1996). Remaking health care in America. San Francisco: Jossey-Bass.
- Shortell,S.M., Jones,R.H., Rademaker,A.W., Gillies,R.R., Dranove,D.S., Hughes,E.F., Budetti,P.P., Reynolds,K.S., & Huang,C.F. (2000). Assessing the impact of total quality management and organizational culture on multiple outcomes of care for coronary artery bypass graft surgery patients. *Med.Care*, 38(2), 207-217.
- Silen-Lipponen,M., Turunen,H., & Tossavainen,K. (2002). Collaboration in the operating room: the nurses' perspective. *J.Nurs.Adm*, 32(1), 16-19.
- Smith,M., Greene,B.R., & Meeker,W. (2002). The CAM movement and the integration of quality health care: the case of chiropractic. *J.Ambul.Care Manage.*, 25(2), 1-16.
- Stahelski A.J. (1990). Predictors of cooperation in health care teams. *Small group research*, 21(2), 220-233.
- Wagner,E.H. (2004). Effective teamwork and quality of care. *Med.Care*, 42(11), 1037-1039.
- Welton,W.E., Kantner,T.A., & Moriber Katz,S. (1997). Developing Tomorrow's Integrated Community Health Systems: A Leadership Challenge for Public Health and Primary Care. *The Milbank Quarterly*, 75(2), 261-288.
- Wheelan,S.A., Burchill,C.N., & Tilin,F. (2003). The link between teamwork and patients' outcomes in intensive care units. *Am.J.Crit Care*, 12(6), 527-534.
- Yeatts,D.E., & Hyten,C. (1998). Contemporay Theories Explaining SMWT Performance. In D.E. Yeatts, & C. Hyten (Eds.), *High-performing Self-Managed Work Teams* (pp.24-46). Thousand Oaks: Sage Publications.
- Zollman,C., & Vickers,A. (1999). ABC of complementary medicine. Users and practitioners of complementary medicine. *BMJ*, 319(7213), 836-838.

Chapter 3

Interprofessional collaboration within Canadian integrative healthcare clinics through the lens of the Relationship-centered care model³

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Title: Interprofessional collaboration within Canadian integrative healthcare clinics through the lens of the Relationship-centered care model

Running title: The RCC model within IHC clinics

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Abstract

Teamwork is a contemporary way to try to improve the healthcare system, not only for the patients, but also for the practitioners involved. A new type of interprofessional working arrangement, integrative healthcare (IHC) clinics, has emerged in the last two decades. The literature on interprofessional collaboration is steadily increasing, but little is known about the collaborative organization of the biomedical and complementary and alternative (CAM) practitioners that make up the teams of those clinics. The Relationship-Centered Care model was used to guide an exploration of the interprofessional teamwork within a Canadian IHC setting. A sample of 31 Canadian IHC clinics and 228 biomedical and CAM practitioners were included. This study established that the processes of collaboration are the main factors associated with measures of job satisfaction and conflicts related to an interprofessional IHC practice. The results of the study also underscored the importance of interdisciplinary education for healthcare practitioners who have been expected to serve a clientele that is increasingly interested in being both *cured* and *healed* by the integration of biomedical and CAM paradigms and approaches.

Word count: 4538

Key words: integrative healthcare, interprofessional team, survey, healthcare services, Canada

Introduction

Teamwork, defined as "*the interaction between health professionals who work interdependently to provide care,*" has received considerable attention over the last two decades and is now recognized as a key strategy in the renewal of the Canadian healthcare system (Oandasan et al., 2006). The implementation of teamwork has also been recommended in several other countries as part of healthcare reforms (Shortell et al., 1996; Saltman & Figueras, 1997; Romanow R.J., 2002; Kirby M.J.L., 2002).

There is limited evidence regarding the impact of a collaborative working arrangement on both the healthcare system and patients, and whenever available, it is generally applicable only to teams that include only physicians and nurses. Zwarenstein and Bryant (2000) were among the first to ascertain the importance of collaboration in the improvement of the healthcare processes. More recently, Lemieux-Charles and McGuire (2006) identified processes of collaboration that most likely affect staff satisfaction and team effectiveness. Additionally, they reviewed the context (e.g. patient-centered culture or unit type) in which teams were found to influence patient care and organizational success, a factor found to be fundamental to the studies of healthcare teams.

A comprehensive report on teamwork described the benefits of collaboration on patient morbidity, satisfaction, and safety (Oandasan et al., 2006). From an organizational perspective, the report found that collaboration is likely key to addressing problems such as staff shortage, work-related stress, and burn-out in the healthcare workforce. Furthermore, teamwork could contribute to the reduction of workload and could increase staff loyalty toward the employer. The report underlined that interprofessional collaboration was a

function of the complexity of patient healthcare needs, the number of members in the team, and their expertise. That observation provides compelling reasons to believe that results obtained from the physicians/nurses models might not be transferable to other models of interprofessional collaboration.

In North America, the 1990s saw the emergence of a new type of healthcare team within integrative healthcare (IHC) clinics. The novelty of those clinics lies in the wide-ranging array of services and products offered to users, incorporating both biomedical and complementary and alternative medicine (CAM) therapies. The appearance of IHC clinics coincided with a significant demand from individuals for healthcare that goes beyond curing, focusing on healing and wellness (Foley, 1999; Peters, 2000; Weil, 2000; Baer, 2004).

Although there is a steady increase in the number of such clinics in the Canadian healthcare system, little is known about their functioning, especially from an organizational perspective (Shuval et al., 2002; Hollenberg, 2006). In the present era of cataloging the potential outcomes of IHC with respect to patients' health and wellness (Mulkins et al., 2003; Scherwitz et al., 2004; Verhoef et al., 2005), we think it is important to better understand the interdisciplinary process as experienced by practitioners before we attempt to explore any possible links to improved health. Indeed, the mechanics of interprofessional collaboration in an IHC context are still ill-defined in the literature. This needs to be operationalized before we attempt to assess causality between collaborative processes and patient outcomes.

Analytical framework

This project draws upon the Relationship-Centered Care (RCC) model as the theoretical and analytical framework. The RCC model delineates potentially important constructs relevant to interprofessional collaboration within Canadian IHC clinics (Tresolini & Pew-Fetzer Task Force, 2000). The model is based on the assumption that interpersonal relationships are a prerequisite to effective care and healing. The model focuses on three different dimensions: relationships between each practitioner and 1) his/her patients, 2) his/her team, and 3) his/her patients' communities. Each dimension of the RCC model operationalizes interprofessional collaboration through various knowledge, attitudes, and skills that practitioners should aim to acquire and develop in order to establish significant and productive relationships and to achieve an optimal shared understanding of the patient's experience of illness (Beach & Inui, 2006). The second dimension of the model (the relationship between practitioners and their teams) is the focus of this project.

The objectives of the study were to assess the extent to which practitioners working in IHC clinics practice according to the RCC model; and to explore the relationship between knowledge, attitudes, behaviors and skills, and outcomes central to the definition of RCC and pertinent to an IHC setting (Figure 1 – Chapter 3). We hypothesized that knowledge, attitudes, behaviors, and skills would correlate with outcomes of collaboration, such as job satisfaction, personal growth, intention to leave the clinic, and conflicts associated with teamwork. We also expected that knowledge and attitudes would play roles in the manifestation of behaviors and skills related to the RCC model.

_____ *Include Figure 1 here* _____

Methods

Sampling strategy

Participants were recruited from Canadian IHC clinics. For the purpose of this project, an IHC clinic was defined as at least three different practitioners working together in the same location, including at least one physician plus one or more healthcare practitioners practicing a variant of CAM including (but not limited to): naturopathy, massage therapy, chiropractic, and traditional Chinese medicine, including acupuncture. To be included in the sample, the clinic had to have been in operation for at least a year at the time of data collection.

Due to the rapid growth of IHC clinics in North America, it is difficult to keep an up-to-date list of them (Cohen et al., 2005; Ruggie, 2005). Therefore, various methodologies were used to compile a comprehensive list of clinics. First, members of a Canadian network for CAM research (IN-CAM, www.incamresearch.com) and a Quebec discussion forum on health promotion and disease prevention (Passeport Santé, www.passeportsante.net) were contacted. Five Canadian IHC clinics were identified. Next, discussions with the president of the Association of Complementary Physicians of British Columbia identified an additional clinic. Networking with experts and at various conferences that attract IHC practitioners, and key Canadian opinion leaders took place. Lastly, searches on the Internet using the keywords "integrative clinic *or* center", "integrated clinic *or* center", "chelation", and "integrative *or* integrated" along with the names of every major city in Canada were performed to identify more clinics. When necessary, clinics were screened by telephone to ensure that they met the study inclusion criteria.

One week prior to the survey launch, the administrative assistant and/or healthcare coordinator of each identified clinic was sent an invitation letter to participate in the survey. These clinic representatives were subsequently contacted by telephone by a member of the research team (IG) to review the survey procedures. The surveys were then administered through that contact person to each practitioner of the clinic to ensure the anonymity of the respondents. Follow-up telephone calls were made with the contact person two weeks following the survey launch. Ethics approval was obtained from the local institution ethics board prior to contacting clinics.

Questionnaire

The selection of the constructs included in the questionnaire was based on the key themes of collaboration within IHC clinics that emerged in prior qualitative research (Gaboury et al.), and a review of the literature on interprofessional collaboration in healthcare that maps out the elements of the RCC model (Tresolini & Pew-Fetzer Task Force, 2000; Beach & Inui, 2006). These constructs are presented in Figure 1 (Chapter 3). A brief description of the scales used to measure the constructs as well as reliability estimates for the current project are provided in Table I (Chapter 3).

_____ *Include Table I here* _____

Two constructs (awareness and cooperation) were measured using selected items from existing scales and quotes from a previous study on interprofessional collaboration within IHC clinics since no suitable tools could be found in the literature (Gaboury et al.). Factor analysis with a principal axes factor extraction method and oblimin rotation was used to

identify the factors associated with their respective constructs (Costello & Osborne, 2005). Two measures of awareness were extracted: understanding of each other's healing approach, and awareness of the limitations of both biomedical and CAM paradigms. These two factors regrouped 5 items of the original scale (3 and 2 items respectively) and accounted for 69% of the total variance present in the scale. Similarly, three items were retained for the cooperation scale that accounted for 38% of the variance across all 3 items.

Respondents' demographic characteristics of the respondents such as sex and number of hours worked at the clinic in a typical week were also collected. The questionnaire was pilot-tested with three biomedical and four CAM practitioners not involved in an IHC clinic but working in collaboration with other practitioners. Minor modifications were made to the final version. A copy of the questionnaire can be obtained from the lead author upon request.

Response options for the items assessing the different constructs ranged along a 5-point Likert scale (Strongly disagree to Strongly agree, or Strongly dissatisfied to Strongly satisfied as appropriate). The experience of terminology barriers was measured using a 4-point Likert response scale (Never to Very often). Whenever necessary, modifications were made to the original questions to reflect the IHC setting (e.g. "clinicians" instead of "people", and "clinic" instead of "company").

Statistical analysis

Cronbach's alpha was used to estimate each measure's internal reliability. Descriptive statistics were used to summarize the respondents' characteristics and the distribution of

the overall results obtained for each scale used in the survey. The respondents' characteristics and profiles on the different study measures were compared between biomedical and CAM practitioners using Fisher's exact and Mann-Whitney tests. Although ideal for this study design and framework, the relatively small sample size precluded the use of structural equation modeling to assess the relationships between the constructs. Therefore, due to a 'ceiling effect' observed in the dependent variables and to help improve the fit of the data, nonlinear logistic sigmoid regression models were used to analyze the relationship between the scores of the framework constructs selected for the survey (Bates & Watts, 1988). Multivariate logistic regression models were used when the terminological barrier constructs were included as dependent variables. For both types of models, odds ratios (OR) are presented to describe the relationships between the constructs. The p-values are two-sided; they were deemed significant at or below a 5% level. Between 5% and 10% the relationship is reported as a trend.

Results

Response rate and sample

The survey was administered by postal mail between February and March 2008. In total, 31 clinic coordinators and/or administrative assistants were contacted to distribute the questionnaires among 228 healthcare practitioners within their respective clinics. One clinic refused to participate due to time constraints. Eighty-nine questionnaires were returned from 25 clinics, representing a 39% overall response rate and a 62% practitioner response rate (proportion of practitioners who responded within the clinics who participated). Two questionnaires were incomplete, so 87 were used for the analysis.

Demographic characteristics of the respondents broken down by expertise are shown in Table II (Chapter 3). Eighty-nine respondents were evenly split between biomedical and CAM expertise (principal occupation at the clinic was missing for two respondents). A fair proportion of respondents (60.5%) reported never having received formal education/training in a complementary area other than on the job training. The biomedical participants were more likely to be currently working (or formerly) in a hospital setting ($p=0.007$ and $p<0.001$, respectively). More than three quarters of the sample (77.6%) reported having some experience of working elsewhere in a group setting (hospital or clinic setting), currently or at some point during their career. The median number of years worked at the clinic was 3.5 years. The typical week averaged 23.5 hours of work at the IHC clinic.

_____ *Include Table II here* _____

Survey constructs

A description of the scores obtained for each survey construct is presented in Table III (Chapter 3). With the exception of the physician centrality, intent to leave current employment and level of conflict measures, a higher score represents a positive outcome. Scores were not found to differ between the biomedical and CAM respondents (data not shown) with the exception of dual education and communication barriers (with respect to terminology) for CAM practitioners. Biomedical respondents were more likely to have pursued extra-curricular training to complement their biomedical education ($p=0.041$). However, only 17% of them reported experiencing no difficulty communicating with their CAM colleagues (versus 40% in the CAM respondents, $p=0.044$).

_____ *Include Table III here* _____

Regression models

Seven regression models were tested to assess relationships between knowledge, attitudes, and personal characteristics; and behavior and skills, as well as four for the outputs selected for the survey (job satisfaction, opportunity for growth, intention to leave the clinic, and conflicts related to a collaborative practice). Behavior and skills were also linked to the outputs of the RCC model using four additional models.

Only one construct from the knowledge, attitudes, and personal characteristics was found to be significantly correlated with the behaviors and skills of the RCC model adapted for Canadian IHC clinics. A higher score for belief in the benefits of collaboration positively predicted knowledge sharing (OR = 1.24, 95%CI: 1.15, 1.34 for knowledge donating and OR = 1.16, 95%CI: 1.06, 1.26 for knowledge collecting), trust (OR = 1.18, 95%CI: 1.05, 1.32), and cooperation (OR = 1.12, 95%CI: 1.01, 1.25). Additionally, we observed a trend in practitioners who reported having received dual education/training to be more likely to contribute knowledge (OR = 1.76, 95%CI: 0.98, 3.18). Our data also suggested that practitioners with less experience tend to perceive themselves as good communicators of their knowledge (OR = 0.97, 95%CI: 0.94, 1.00).

When the relationships between the knowledge, attitudes, personal characteristics and the outputs of the RCC model were explored, only one construct yielded statically significant relationship. A higher score on the belief in the benefits of interprofessional collaboration positively predicted the practitioner's satisfaction (OR = 1.15, 95%CI: 1.02, 1.30) and

personal growth within the clinic (OR = 1.10, 95%CI: 1.01, 1.19). That same construct was inversely correlated with the level of conflict related to interdisciplinary practice of healthcare (OR = 0.87, 95%CI: 0.78, 0.97). In addition, practitioners with a high awareness of the limitations of both biomedical and CAM paradigms tend to be almost twice as likely to be planning to leave their position at the IHC clinic in the year following the survey (OR = 0.61, 95%CI: 0.35, 1.08). However, that correlation did not reach the statistical significance.

Among the four regression models designed to investigate relationships between outputs of collaboration and the behaviors and skills selected for the RCC model, several constructs were found to be significant. Higher trust was found to be correlated with three of the outputs: positively with job satisfaction (OR = 1.24, 95%CI: 1.12, 1.37), and negatively correlated with both perceived level of conflict (OR = 0.85, 95%CI: 0.80, 0.90), and intention to leave (OR = 0.79, 95%CI: 0.71, 0.87). A higher level of cooperation was also inversely associated with intention to leave the clinic (OR = 0.64, 95%CI: 0.49, 0.84). Practitioners with a higher level of trust in their colleagues tend to perceive more opportunities for personal growth within the clinic (OR = 1.07, 95%CI: 1.00, 1.14). Practitioners who reported a greater level of autonomy (low physician centrality) were also found to report higher satisfaction (OR = 1.27, 95%CI: 1.08, 1.50).

Various survey constructs related to communication between team members were found to predict outputs of collaboration. Respondents from clinics where records are shared between both biomedical and CAM practitioners were more likely to report higher level of satisfaction with their job (OR = 3.16, 95%CI: 1.14, 8.73), and more opportunities for

personal growth (OR = 1.92, 95%CI: 1.05, 3.52). Although not significant, practitioners working in clinics where interdisciplinary meetings are organized (regardless of the frequency) were more than twice as likely to report themselves satisfied with their working place (OR = 2.51, 95%CI: 0.94, 6.72). They were also significantly less likely to leave the clinic (OR = 0.22, 95%CI: 0.06, 0.76). The respondents who could participate in such meetings also tended to see more opportunities for personal growth within the clinic (OR = 1.72, 95%CI: 0.93, 3.21), although that result did not reach statistical significance. Additionally, respondents who experienced communication barriers with their biomedical colleagues were more likely to score highly on the satisfaction scale (OR = 3.10, 95%CI: 1.09, 8.82). Finally, we observed a trend that practitioners reporting a higher level of knowledge sharing experienced less conflict related to interdisciplinary practice (OR = 0.91, 95%CI: 0.82, 1.01 for knowledge donating) and greater opportunity for growth (OR = 1.16, 95%CI: 0.98, 1.37 for knowledge collecting).

Discussion

In this study, the RCC model was found to be useful to investigate the complex dynamics of interprofessional collaboration within Canadian IHC clinics, and to serve as a guide to operationalize the concept of interprofessional collaboration. We were able to determine that practitioners working in such an environment scored relatively highly on elements related to the RCC model, suggesting that principles of the model are likely to apply to Canadian IHC clinics. We also demonstrated that according to responses from practitioners, the behaviors and skills described by the model are the main factors associated with the outputs of interprofessional collaboration (job satisfaction, opportunity for growth, intention to leave the clinic, and conflicts related to a collaborative practice).

Similar to the findings of Sicotte and colleagues (2002), beliefs in the benefits of interdisciplinary collaboration were found to be quite high in the present sample surveyed. This result is not altogether surprising because almost half of our sample had pursued extra-curricular education and/or training. That training is likely to expose participants to the benefits of working collaboratively given the interaction with practitioners of different healthcare paradigms. Additionally, a previous qualitative study of the same population showed that most of the practitioners working in an IHC clinic are well aware of, and inspired by, the benefits of integrative therapies for their patients, which could account for the strong commitment from the practitioners for an interprofessional healthcare approach (Gaboury et al.). That would have been reflected in the scale since two of the 6 items are related to patient care. Alternatively, our result could be due to a survey response bias; practitioners motivated by interprofessional collaboration may have been more likely to respond to the survey or simply more likely to work in a collaborative setting such as an IHC clinic.

Our results also indicate that beliefs in the benefits associated with interdisciplinary collaboration predict how the practitioners share knowledge, trust, and cooperate with their colleagues; all behaviors identified in the RCC model. These findings are consistent with Sicotte's results in the evaluation of interprofessional collaboration within community healthcare centers.

These findings, and the fact that beliefs in the benefits of interdisciplinary collaboration were significantly correlated with a satisfactory working environment as perceived by the

practitioners, underscore the need for stimulating and increasing interdisciplinary teaching and opportunities for exposure to other healing approaches in the training of healthcare practitioners, both biomedical and CAM. As an extension to the results of recent studies showing the potential benefits of interprofessional education in healthcare (Oandasan & Reeves, 2005a; Oandasan & Reeves, 2005b; Reeves et al., 2008), it is possible to hypothesize that practitioners trained in such an environment would be more likely aware of their patients' holistic needs and of the various approaches that are available for healing and treating. Moreover, interdisciplinary education may impact on barriers to practicing IHC, such as terminological barriers, territorialism and prejudice (Tataryn & Verhoef, 2001; Barrett et al., 2003; Kelner et al., 2004; Barrett et al., 2004).

Of note, belief in the benefits of interdisciplinary collaboration is the only construct from the series of knowledge, attitudes, and personal characteristics selected from the RCC model that was found to be associated with the other constructs of interprofessional collaboration in our sample of clinics. This is consistent with other studies in conventional primary healthcare settings (Poulton & West, 1999; Sicotte et al., 2002; Lemieux-Charles & McGuire, 2006). This suggests that in further studies on interprofessional collaboration, focusing on the processes rather than the structure of the team is more likely to show significant effects on patient outcomes.

The principle assumption of collaboration is that teamwork is based on shared power and authority, and is non-hierarchical in nature (Kraus, 1980). It is expected that high functioning non-hierarchical teams would score lower on the Physician centrality sub-scale used in this study (Heinemann et al., 1999). On average, practitioners surveyed did report

relatively low impact of the physician authority amongst the team members. In fact, the score in this sample is similar to the mean score obtained when the scale was originally tested among biomedical practitioners, but lower than the scores obtained in geriatric interdisciplinary programs and trainee programs where scores ranged from 10.3 to 16.5 (Leipzig et al., 2002; Fulmer et al., 2005; Tanaka & Yokode, 2005).

As one could expect in an IHC context where practitioners aim for egalitarian rapport within the team despite divergence of clinical paradigms, our results confirm that physicians working in IHC might be less influential than in other perhaps less integrated healthcare settings. There are two possible explanations for this: the nature of the task, and physician socialization. It is been shown in the organizational management and interprofessional collaboration literature that the nature of the task could impact on the intensity of collaboration (Gladstein, 1984). Thus, we could hypothesize that the IHC environment in *and of itself, in which integration of therapies and visions is favored and medical dominance is even less encouraged than in a uni- or multi-disciplinary collaborative setting without CAM practitioners, would account for the differences observed.* One could also hypothesize that physicians working in an IHC setting have been socialized over time to engage more actively in a collaborative process with their CAM colleagues, and have defined their roles differently, compared with biomedical colleagues not exposed to such an environment.

Our findings suggest that the biomedical and CAM practitioners shared the perception of relatively equal clinical autonomy. However, this appears to contradict what has been found in previous qualitative studies (Mizrachi et al., 2005; Hollenberg, 2006). Again, this may be due to the fact that practitioners with positive experiences of collaboration were more likely

to respond to the survey, or that the tool is not sensitive enough to detect such a difference. Secondly, this study was the first one using the Physician centrality scale in a population of non-biomedical practitioners. Validation of the scale in that population against a gold standard would help the interpretation of the results.

An intriguing result is that CAM practitioners who experienced terminological misunderstandings with biomedical colleagues also reported higher satisfaction at work. Although some post-hoc analyses were conducted to determine the presence of a potential confounder or effect modifier in that relationship (namely with dual education, experience at the clinic or expertise, frequency of interdisciplinary meetings), the explanation for the association between the two constructs remains unclear. Although the relationship was statistically significant, it is possible that this is a chance finding.

Half of the survey constructs that were found to significantly predict the outputs of collaboration pertain to the theme of communication: terminological misunderstanding, shared medical charts, and organization of interdisciplinary meetings. In addition, we observed a trend with the two knowledge sharing constructs to be correlated with outputs of collaboration as well. Those findings corroborate previous studies that demonstrated the importance of communication in increasing team members' level of satisfaction with their job and work place affective commitment (Levine & Moreland, 2004; Xyrichis & Lowton, 2008). Furthermore, the results underscore one more time the weight of that theme in interprofessional collaboration, especially in the context of IHC (Robotin & Penman, 2006). Nonetheless, in an era of digitalizing medical records, our study was (to our knowledge) one of the first to report the benefits from a practitioner's perspective of centralizing the

patient's medical information and offering access to all practitioners working at the clinic. It is reasonable to believe that those benefits could extend to patients' health outcomes, although mixed results have been reported in studies on the impact of electronic (shared) medical record systems (Sanders & Marvel, 1997; Bringay et al., 2006; Jaspers et al., 2006).

Study limitations

With numerous constructs among all three elements of the RCC model, there is substantial potential for type-II error in assessing the relationships between those variables. This is somewhat mitigated by the fact that all relationships were hypothesized *a priori*. Given the novelty of the results in a context of IHC, we elected not to adjust the results for multiple testing so that future research project could benefit from our findings and appropriately power their study to detect significant associations between various constructs. As such our results should be interpreted cautiously.

Some of the survey's constructs involving communication were dictated by the clinic setting where the respondents practiced rather than being purely measured at the practitioner's level (e.g. organization of interdisciplinary meetings and shared medical records). As such an ecological fallacy may have occurred when variables measured at different levels are (erroneously) associated with one another. Unfortunately, the literature does not offer any optimal adjustment for that potential problem and even suggests that attempts to correct that bias may in fact worsen it (Greenland & Morgenstern, 1989; Wakefield, 2003). We therefore encourage the interpretation of those findings with caution.

Another limitation associated with the study lies in the relatively low response rate obtained for the survey. Nonetheless, even when using multiple methods and repeated contacts to reach potential respondents, such a response rate was commonly obtained when surveying various populations of healthcare practitioners (Asch et al., 1997). We cannot assume that the 89 respondents (62% of the participating clinics' healthcare providers) are representative of all Canadian practitioners working in an IHC setting. However, a demographic assessment of the clinics from which no surveys were returned suggested that clinics where interprofessional collaboration is more likely to occur between biomedical and CAM practitioners (from a collaborative to an integrative setting, see Boon and colleagues (2004)) are well covered. Indeed, clinics with an overwhelming proportion of biomedical practitioners were less likely to respond to the survey and generalization of the findings to those particular clinics is likely to be limited.

Conclusion

The results of this study support the importance of both interdisciplinary education and interprofessional exposure. Educators should aim to increase the knowledge and awareness of future and current biomedical and CAM practitioners vis-à-vis integrative healthcare approaches, therapies, and paradigms. To date, very few concurrent educational activities are offered to Canadian medical students and CAM students. Integrating topics on integrative medicine in the curriculum of both types of students would impact not only practitioners working in an IHC context but also practitioners working in a uni-disciplinary biomedical or CAM context, since the integration of paradigms and therapies related to these two healthcare approaches are increasingly in demand by the Canadian healthcare consumers. Additionally, we showed that strategies that stimulate communication (verbal

and written) between practitioners working in an IHC clinic positively relate to the outputs of collaboration from a practitioner's perspective (job satisfaction, opportunity for growth, intention to leave the clinic, and conflicts related to a collaborative practice). Therefore, current and future IHC clinics should explore opportunities to improve team members' interactions. Future research might explore further the role of those factors on patients' level of satisfaction and health outcomes. The use of the RCC model is recommended since it also includes a practitioner/patient relationships dimension. Analyses at the team level also warrant further inquiry.

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Figure 1. Analytical framework of the RCC model applied to Canadian IHC clinics

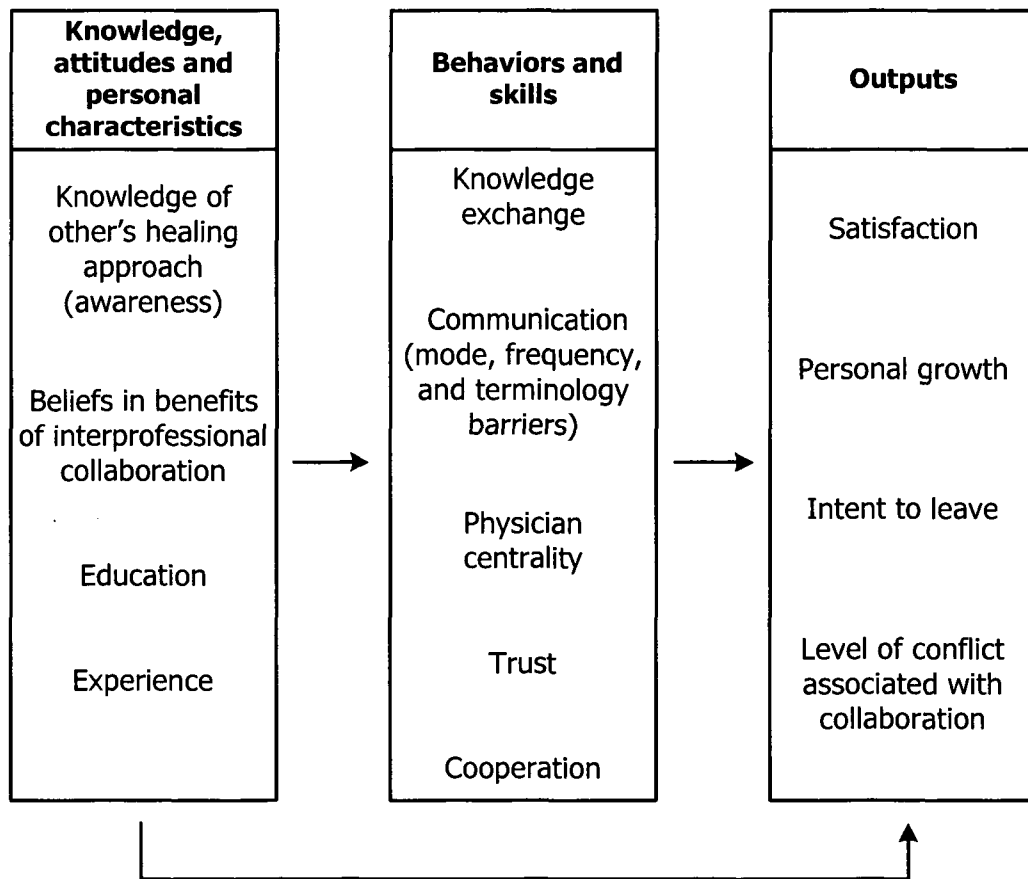


Table I. Questionnaire content

RCC elements	Survey construct	Description	Cronbach's α for current study
Knowledge, attitudes, and personal characteristics	Knowledge of each other's healing approach	Combination of selected items of Hsiao's sub-scale of openness and awareness (Hsiao et al., 2005) with quotes from the first phase of this research project (Gaboury et al.). Two measures were extracted from the factor analysis: understanding of each other's healing approach (UA) and awareness of the limitations of both biomedical and CAM approaches (AL).	0.824 (UA) 0.808 (AL)
	Believes in benefits of interprofessional collaboration	Measure that captures the extent to which practitioners surveyed see strengths in multidisciplinary collaboration, both from a patient and practitioner perspective (Sicotte et al., 2002).	0.882
	Education	List of the different certificates and degrees obtained by the respondent. Dual education and/or training, defined as some credential or training in both biomedicine and CAM, was subsequently determined by a member of the research team (IG).	N/A
	Experience	Number of years worked at the IHC clinic	N/A
Behaviors and skills	Knowledge exchange	Measure using the Knowledge donating (KD) and Knowledge collecting (KC) sub-scales (Van den Hooff & De Ridder, 2004) that assessed the respondent's perception of the extent to which knowledge is shared between the individuals of a given environment. One item was <i>a posteriori</i> removed from the total score ("When a colleague is good at something, I ask him to teach me how to do it.") to increase the reliability of the scale.	0.815 (KD) 0.751 (KC)
	Communication	<ul style="list-style-type: none"> Assessment of whether interdisciplinary meetings take place to discuss patient cases and frequency of those meetings Information with regards to sharing patients' chart between biomedical and CAM practitioners Experience of communication barriers (with respect to terminology) with biomedical and CAM colleagues (dichotomized for analyses purposes: never, not very often vs. often, very often) 	N/A
	Trust	Measure using Cook & Wall's interpersonal trust in colleague scale (1980). One question was removed from the original scale ("Most of my colleagues would get on with their work even if the supervisors were not around") because it was judged not to be pertinent in the context of an IHC clinic.	0.911

Table I. cont'd

RCC elements	Survey construct	Description	Cronbach's α for current study
Behavior and skills (cont'd)	Physician centrality	Measure derived from a sub-scale that determines the level of acceptance of sharing of authority and leadership amongst the members of the team (Heinemann et al., 1999). The wording of two items ("In this clinic, the physicians do not always have the final word in decision made by the healthcare team", "The physicians of this clinic have the right to alter patient care plans develop by the team") was slightly modified to avoid the possibility that the scope of responsibility of primary healthcare workers (e.g. physicians or naturopaths in Ontario) dictates the answer.	0.682
	Cooperation	Combination of two items of the Chatman and Flynn cooperative team norms scale (2001) and four items of the Torres work-related behavior in nursing scale (Torres, 1990). Whenever applicable, questions were modified to reflect a cooperative behavior exerted by the practitioner rather than a perception of the cooperation within the team (e.g. "I try to maintain harmony within the clinic").	0.750
Outputs	Satisfaction	Overall satisfaction with work via a 3-item scale developed by Cammann et al. (1983)	0.713
	Personal growth	Sub-scale from the Job Diagnostic Survey, developed by Hackman and Oldham (1974). The scale measures the respondent's perception of the opportunities for achievement and challenge in their working milieu.	0.792
	Intent to leave	Intention to leave the clinic in the following year was measured by a 3-item scale created by Bishop and colleagues (2000)	0.787
	Level of conflict associated with collaboration	Extent to which issues related to interdisciplinary collaboration (such as competition and sharing of responsibilities) could lead to conflicts within a healthcare clinic. Developed in a previous survey of community healthcare centers in Québec (Sicotte et al., 2002)	0.886

Table II. Respondent demographic characteristics

Characteristic*	Biomedical respondents n = 43	CAM respondents n = 42	Total** n = 87
Male, n (%)	18 (41.9)	20 (47.6)	38 (44.7)
Dual education/training, n (%)	21 (50.0)	11 (27.5)	32 (39.0)
Experience at this clinic in years, median (range)	5 (1, 31)	3 (1, 32)	4.5 (1, 32)
Work solo, n (%)			
In the past	14 (32.6)	21 (50.0)	36 (41.4)
Currently	6 (14.0)	14 (33.3)	21 (24.1)
Work in a hospital, n (%)			
In the past	20 (46.5)	4 (9.5)	25 (28.7)
Currently	10 (23.3)	1 (2.4)	11 (12.6)
Work in a group setting, n (%)			
In the past	27 (62.8)	21 (50.0)	48 (55.2)
Currently	15 (34.9)	16 (38.1)	31 (35.6)
First position as healthcare practitioner, n (%)	5 (11.6)	9 (21.4)	14 (16.1)
Number of hours worked in a typical week, median (range)	25 (2, 60)	22 (2, 50)	24 (2, 60)

* Frequencies may not add up to the total number of respondents due to non-response.

** The expertise (biomedical vs. CAM) of two respondents was missing.

Table III. Descriptive statistics of the survey constructs

RCC elements	Construct	Results*
Knowledge, attitudes, and personal characteristics	Understanding of each other's healing approach	4.54 (0.59)
	Awareness of limitations of biomedicine and CAM	4.81 (0.36)
	Beliefs in benefits of interprofessional collaboration	4.76 (0.44)
	Dual education/training, n (%)	32 (39.0)
	Experience at this clinic in years, median (range)	4.5 (1, 32)
Behaviors and skills	Knowledge exchange	
	Knowledge donating	4.33 (0.62)
	Knowledge collecting	4.50 (0.59)
	Physician centrality	8.89 (4.84)
	Interdisciplinary meetings organized at the clinic, n (%)	46 (54.1)
	Patients' charts are shared among all staff, n (%)	48 (57.8)
	Experienced terminological barriers with biomedical colleagues, n (%)	
	Never	25 (29.4)
	Not very often	48 (56.5)
	Often	11 (12.9)
	Very often	1 (1.2)
	Experienced terminological barriers with CAM colleagues, n (%)	
	Never	24 (28.6)
	Not very often	55 (65.5)
	Often	5 (6.0)
Very often	0 (0.0)	
Trust	22.7 (3.4)	
Cooperation	4.76 (0.38)	
Outputs	Satisfaction	4.66 (0.62)
	Personal growth	4.59 (0.47)
	Intent to leave	1.38 (0.64)
	Level of conflict associated with collaboration	1.68 (0.76)

* Mean (standard deviation) presented unless otherwise mentioned. Means were calculated from the average of scale items or the total score (Trust) from a negative anchor (1) to a positive anchor (5). The sum of the items is presented for the Physician centrality scale from a negative anchor (0) to a positive anchor (4) for a maximum score of 24.

References

- Asch, D. A., Jedrzewski, M. K., & Christakis, N. A. (1997). Response rates to mail surveys published in medical journals. *J Clin.Epidemiol.*, *50*, 1129-1136.
- Baer, H. (2004). The Popularization of Holistic Health and New Age Movements. In *Toward an Integrative Medicine: Merging Alternative Therapies with Biomedicine* (pp. 1-23). Walnut Creek: AltaMira Press.
- Barrett, B., Marchand, L., Scheder, J., Appelbaum, D., Plane, M. B., Blustein, J. et al. (2004). What complementary and alternative medicine practitioners say about health and health care. *Annals of Family Medicine*, *2*, 253-259.
- Barrett, B., Marchand, L., Scheder, J., Plane, M. B., Maberry, R., Appelbaum, D. et al. (2003). Themes of holism, empowerment, access, and legitimacy define complementary, alternative, and integrative medicine in relation to conventional biomedicine. *Journal of Alternative & Complementary Medicine*, *9*, 937-947.
- Bates, D. M. & Watts, D. G. (1988). *Nonlinear Regression Analysis and its Applications*. New York: John Wiley & Sons.
- Beach, M. C. & Inui, T. (2006). Relationship-centered care. A constructive reframing. *J.Gen.Intern.Med.*, *21 Suppl 1*, S3-S8.
- Bishop, J. W., Scott, K. D., & Burroughs, S. M. (2000). Support, Commitment, and Employee Outcomes in a Team Environment. *Journal of Management*, *26*, 1113-1132.

- Boon, H., Verhoef, M., O'Hara, D., & Findlay, B. (2004). From parallel practice to integrative health care: a conceptual framework. *BMC Health Services Research*, 4, 15.
- Bringay, S., Barry, C., & Charlet, J. (2006). Annotations for the collaboration of the health professionals. *AMIA Annu.Symp.Proc*, 91-95.
- Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1983). Assessing the attitudes and perceptions of organizational members. In S.Seashore, E. Lawler, P. Mirvis, & C. Cammann (Eds.), *Assessing organizational change: A guide to methods, measures and practices* (pp. 84). New York: John Wiley.
- Chatman, J. A. & Flynn, F. J. (2001). The Influence of Demographic Heterogeneity on the Emergence and Consequences of Cooperative Norms in Work Teams. *Academy of Management Journal*, 44, 956-974.
- Cohen, M. H., Hrbek, A., Davis, R. B., Schachter, S. C., Kemper, K. J., Boyer, E. W. et al. (2005). Emerging credentialing practices, malpractice liability policies, and guidelines governing complementary and alternative medical practices and dietary supplement recommendations: a descriptive study of 19 integrative health care centers in the United States. *Archives of Internal Medicine*, 165, 289-295.
- Cook, J. & Wall, T. (1980). New work attitude measures of trust, organizational commitment and personal need non-fulfillment. *Journal of Occupational Psychology*, 53, 39-52.
- Costello, A. B. & Osborne, J. W. (2005). Best Practices in Exploratory Factor Analysis: Four Recommendations for Getting the Most From Your Analysis. *Practical assessment, research & evaluation*, 10.

- Foley, C. (1999). Patient demand for integrative medicine. *Minnesota Medicine*, 82, 50-51.
- Fulmer, T., Hyer, K., Flaherty, E., Mezey, M., Whitelaw, N., Jacobs, M. O. et al. (2005). Geriatric interdisciplinary team training program: evaluation results. *J Aging Health*, 17, 443-470.
- Gaboury, I., Bujold, M., Boon, H., & Moher, D. (n.d.). Interprofessional collaboration within Canadian integrative health care clinics: key components. *Manuscript submitted for publication*.
- Gladstein, D. L. (1984). Groups in Context: A Model of Task Group Effectiveness. *Administrative Science Quarterly*, 29, 499-517.
- Greenland, S. & Morgenstern, H. (1989). Ecological bias, confounding, and effect modification. *Int.J Epidemiol.*, 18, 269-274.
- Hackman, J. R. & Oldman, G. R. (1974). *The Job Diagnostic Survey: An instrument for the diagnosis of job redesign projects* (Rep. No. 4). New Haven, CT: Yale University, Department of Administrative Sciences.
- Heinemann, G. D., Schmitt, M. H., Farrell, M. P., & Brallier, S. A. (1999). Development of an Attitudes Toward Health Care Teams Scale. *Eval.Health Prof.*, 22, 123-142.
- Hollenberg, D. (2006). Uncharted ground: patterns of professional interaction among complementary/alternative and biomedical practitioners in integrative health care settings. *Social Science & Medicine*, 62, 731-744.

- Hsiao, A. F., Hays, R. D., Ryan, G. W., Coulter, I. D., Andersen, R. M., Hardy, M. L. et al. (2005). A Self-Report Measure of Clinicians' Orientation toward Integrative Medicine. *Health Serv.Res.*, *40*, 1553-1569.
- Jaspers, M. W., Knaup, P., & Schmidt, D. (2006). The computerized patient record: where do we stand ? *Yearb.Med.Inform.*, 29-39.
- Kelner, M., Wellman, B., Boon, H., & Welsh, S. (2004). The role of the state in the social inclusion of complementary and alternative medical occupations. *Complementary Therapies in Medicine*, *12*, 79-89.
- Kirby M.J.L. (2002). *The Health of Canadians – The Federal Role: Final Report* (Rep. No. 6: Recommendations for Reform). The Standing Senate Committee on Social Affairs, Science and Technology.
- Kraus, W. A. (1980). *Collaboration in Organizations: Alternatives to Hierarchy*. New York: Human Sciences Press.
- Leipzig, R. M., Hyer, K., Ek, K., Wallenstein, S., Vezina, M. L., Fairchild, S. et al. (2002). Attitudes toward working on interdisciplinary healthcare teams: a comparison by discipline. *J Am Geriatr.Soc.*, *50*, 1141-1148.
- Lemieux-Charles, L. & McGuire, W. L. (2006). What do we know about health care team effectiveness? A review of the literature. *Med.Care Res.Rev.*, *63*, 263-300.
- Levine, J. M. & Moreland, R. L. (2004). Collaboration: the social context of theory development. *Pers.Soc.Psychol.Rev.*, *8*, 164-172.

- Mizrachi, N., Shuval, J. T., & Gross, S. (2005). Boundary at work: alternative medicine in biomedical settings. *Sociol.Health Illn.*, 27, 20-43.
- Mulkins, A., Verhoef, M., Eng, J., Findlay, B., & Ramsum, D. (2003). Evaluation of the Tzu Chi Institute for Complementary and Alternative Medicine's Integrative Care Program. *Journal of Alternative & Complementary Medicine*, 9, 585-592.
- Oandasan, I., Baker, G. R., Barker, K., Bosco, C., D'Amour, D., Jones, L. et al. (2006). *Teamwork in Healthcare: Promoting effective teamwork in Healthcare in Canada - Policy Synthesis and Recommendations* Ottawa: Canadian Health Services Research Foundation.
- Oandasan, I. & Reeves, S. (2005a). Key elements for interprofessional education. Part 1: the learner, the educator and the learning context. *J Interprof.Care*, 19 Suppl 1, 21-38.
- Oandasan, I. & Reeves, S. (2005b). Key elements of interprofessional education. Part 2: factors, processes and outcomes. *J Interprof.Care*, 19 Suppl 1, 39-48.
- Peters, D. (2000). From holism to integration: is there a future for complementary therapies in the NHS? *Complementary Therapies in Nursing & Midwifery*, 6, 59-60.
- Poulton, B. C. & West, M. A. (1999). The determinants of effectiveness in primary health care teams. *J Interprof.Care*, 13, 7-18.
- Reeves, S., Zwarenstein, M., Goldman, J., Barr, H., Freeth, D., Hammick, M. et al. (2008). Interprofessional education: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev.*, CD002213.

- Robotin, M. C. & Penman, A. G. (2006). Integrating complementary therapies into mainstream cancer care: which way forward? *Med.J Aust.*, *185*, 377-379.
- Romanow R.J. (2002). *Building on values: The Future of Health Care in Canada - Final Report* Commission on the Future of Health Care in Canada.
- Ruggie, M. (2005). Mainstreaming complementary therapies: new directions in health care. *Health Aff.(Millwood.)*, *24*, 980-990.
- Saltman, R. S. & Figueras, J. (1997). *European Health Care Reform. Analysis of Current Strategies.* (Rep. No. 72). WHO Regional Publications.
- Sanders, D. & Marvel, M. K. (1997). Integration of mental health and medical records: practices and opinions of behavioral scientists. *Fam.Med.*, *29*, 496-499.
- Scherwitz, L. W., Cantwell, M., McHenry, P., Wood, C., & Stewart, W. (2004). A descriptive analysis of an integrative medicine clinic. *Journal of Alternative & Complementary Medicine*, *10*, 651-659.
- Shortell, S. M., Gilles, R. R., & Anderson, D. A. (1996). *Remaking health care in America.* San Francisco: Jossey-Bass.
- Shuval, J. T., Mizrachi, N., & Smetannikov, E. (2002). Entering the well-guarded fortress: alternative practitioners in hospital settings. *Social Science & Medicine*, *55*, 1745-1755.
- Sicotte, C., D'Amour, D., & Moreault, M. P. (2002). Interdisciplinary collaboration within Quebec Community Health Care Centres. *Social Science & Medicine*, *55*, 991-1003.

Tanaka, M. & Yokode, M. (2005). Attitudes of medical students and residents toward multidisciplinary team approach. *Medical Education*, 39, 1255-1256.

Tataryn, D. J. & Verhoef, M. J. (2001). *Combining Conventional, Complementary, and Alternative Health Care: a Vision of Integration* (Rep. No. VII). Ottawa.

Torres, G. (1990). Exploring the Effects of Fear of Success on Nursing Behaviors. In C.F.Waltz & O. L. Strickland (Eds.), *Measuring Clinical Skills and Professional Development in Education and Practice* (pp. 232-258). New York: Springer Publishing Company.

Tresolini, C. P. & Pew-Fetzer Task Force (2000). *Health Professions Education and Relationship-Centered Care*.

Van den Hooff, B. & De Ridder, J. A. (2004). Exploring the eagerness to share knowledge: The role of ICT and social capital of knowledge sharing. In M.H.Huysman & V. Wulf (Eds.), *Social capital and information technology* (pp. 163-186). Cambridge, MA: MIT Press.

Verhoef, M. J., Mulkins, A., & Boon, H. (2005). Integrative health care: how can we determine whether patients benefit? *Journal of Alternative & Complementary Medicine*, 11 Suppl 1, S57-S65.

Wakefield, J. (2003). Sensitivity analyses for ecological regression. *Biometrics*, 59, 9-17.

Weil, A. (2000). The significance of integrative medicine for the future of medical education. *American Journal of Medicine*, 108, 441-443.

Xyrichis, A. & Lowton, K. (2008). What fosters or prevents interprofessional teamworking in primary and community care? A literature review. *Int.J Nurs.Stud.*, 45, 140-153.

Zwarenstein, M. & Bryant, W. (2000). Interventions to promote collaboration between nurses and doctors. *Cochrane.Database.Syst.Rev.*, CD000072.

Chapter 4

Integrative healthcare in Canada: are all models the same?⁴

⁴ Formatted for Integrative Cancer Therapies

Integrative healthcare in Canada: are all models the same?

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Abstract

The definition of Integrative healthcare (IHC) has undergone several iterations of refinement since this contemporary way of practicing healthcare emerged. However, academic and clinical communities have yet to arrive at a common understanding of what IHC is and how it is practiced. Multiple frameworks have been created to describe, compare, and evaluate the different models of practice offered to the public. The Models of Team Healthcare Practice framework is a conceptual representation of seven various ways healthcare practitioners could elect to practice IHC, from an organizational perspective. This paper aimed to verify the hypotheses arising from the framework to contrast the models along a continuum.

A cross-sectional survey of 25 Canadian IHC clinics measured different constructs related to the 4 different dimensions of the framework: philosophy, structure, process, and outcomes. The content of 21 face-to-face interviews with Canadian IHC practitioners was analyzed using basic content analysis to triangulate and complement the results of the survey. The findings were used to compare and contrast the constructs between three pooled groups of the framework's practice models.

Differences in constructs between models were found chiefly from those who thought that their clinic was best represented by a model on the right hand side of the continuum, compared with a parallel or consultative model. This suggests that fewer than seven different models might be occurring in the Canadian IHC field. Information sharing process was the only construct found to vary significantly across all three pooled groups of models.

The Models of Team Healthcare Practice framework should be used with caution to guide the evaluation of the impact of each model on both subjective and objective outcomes of IHC. Pooled models may be more useful, because clinics may not “fit” under a single model when more than one model of collaboration occurs at a single site. The addition of a hypothesis regarding power relationships between practitioners should be considered. Further validation is required so that integrative practice models are well described with appropriate terminology, in order that the work of healthcare practitioners, managers, policy makers and researchers may progress with common understanding.

Introduction

"Integrative medicine" was defined as "*The practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing*" by the Consortium of Academic Health Centers for Integrative Medicine, in 2005.¹ Definitions of "Integrative Medicine," or from a broader perspective "Integrative Healthcare" (IHC), have been refined through several iterations since the inception of IHC in the late 1990s.²⁻⁴ However, the academic and clinical community have yet to arrive at a common understanding of what IHC is and how it is practiced.^{5,6}

In the absence of a consensus working definition, IHC clinics have developed in an *ad hoc* fashion, practicing biomedicine and complementary and alternative medicine (CAM) in an integrated manner. Multiple frameworks have been created to describe, compare, and evaluate the different models of practice offered to the public. A comprehensive review of the literature revealed seven different frameworks that were published over the last twenty years. These frameworks are summarized as follows.

The oldest framework was a 4-level classification simply listing the types of services offered at a clinic.⁴ The framework presents clinic models on a continuum from an amalgamation of CAM services with no specific biomedical practitioner on site (the complementary health services model), to a model wherein most care is offered by a medical or osteopathy doctor who also delivers upon occasion some CAM therapies (the integrative medical/osteopathy doctor-centric service delivery model).

Novey refined this classification in a discussion of four program models, presented at the 4th Complementary and Alternative Medicine Meeting of the Institutes of Medicine in 2003.⁷ The models were broadly categorized by the types of services offered, as well as by the interaction network among the clinic's members and within the clinical setting: 1) the consultant model, 2) the primary care model, 3) the fitness model, and 4) the virtual model. A similar model has also been published elsewhere.⁸

In 2003, the Philanthropic Collaborative for Integrative Medicine commissioned Clohesy Consulting to "identify, confirm, organize and document the existing landscape of the rapidly developing field of Integrative Medicine." Similar to previous works, this report cataloged IHC clinics in the American setting at that time.⁹ The novelty of this framework was the integration of the patient as a team member within various models, and the placing of greater emphasis on the economic implications of different forms of collaboration. In this framework, five different models were highlighted, ranging from team members representing multiple disciplines working under a patient-centered approach, but financially independent from each other; to a model where healthcare is integrated by the patient and supported by a "concierge" or "advocate" who is responsible for liaising between the team of practitioners and the patient. Another model documented by the report was described as a group of patients meeting with a practitioner to exchange ideas about their problems. It is debatable whether this model could be considered to be the delivery of IHC, since IHC is the therapeutic collaboration of various healthcare practitioners, not patients with a single practitioner.

A fifth framework worthy of mention focused on how patients could access IHC treatments in our contemporary and future healthcare system.¹⁰ This work defined treatments as both therapies and products offered by the biomedical and CAM businesses, in four different macro-models: 1) the market model; 2) the regulated model; 3) the assimilated model; and 4) the patient-centered model. The pros and cons of the four models were examined, with regard to patient safety and government regulation.

Lastly, our review of the frameworks available to describe the different approaches to delivery of IHC included a conceptual framework assembled from the literature. The Models of Team Healthcare Practice framework (MTHP) includes seven different models of IHC practice, along a continuum.¹¹ It is not simply an inventory of the types of IHC clinics in a particular healthcare system or country. The MTHP is not specific to a particular model of practice of IHC; rather, it proposed an abstract representation of the various ways healthcare practitioners could elect to practice IHC, from an organizational perspective. The framework is similar to the series of models proposed by Mann and colleagues,¹² but focused on team models only. The original goal of MTHP framework was to facilitate research on and evaluation of IHC clinics by providing stakeholders with a common language to identify and compare clinics, and the particulars of their respective collaborative models. In addition, the MTHP aimed to differentiate between the practices in various clinics, for practitioners interested in becoming involved in such a healthcare setting, knowing which model is likely to fit their expectations in terms of healthcare delivery and level of interdisciplinary collaboration in the work place. This systematic top-down approach (from theory to practice) to classify IHC clinics had not been explored by the previous frameworks in the literature.

A summary of the characteristics of each team-oriented practice model is presented in Table 1 (Chapter 4). The continuum is characterized by four key components of IHC from the practitioner's perspective: philosophy and values, structure, process, and outcomes. Along the framework of potential models of practice, the authors posited a series of hypotheses under each of the four key components of the framework. Moving from the left to the right along the continuum (Figure 1 – Chapter 4):

- 1) emphasis on the whole person, and diversity of healthcare paradigm should increase; therefore, reliance on the biomedical model should decrease;
- 2) complexity of the structure of the clinic should increase and presence of hierarchical links between practitioners should decrease;
- 3) the communication process and the number of participants involved should increase; thus, practitioner autonomy should decrease;
- 4) complexity and diversity of the outcomes (mostly related to the patients) should increase.

The MTHP has been cited to describe particular models of teamwork in an IHC context. However the framework, in particular the level of integration expected at the philosophical, structural, procedural, and outcome levels, has not yet been empirically tested. The purpose of the present study was to compare and contrast constructs describing practitioners' philosophy, structure, process, and outcomes according to the MTHP framework of different models of IHC, using two different data collection techniques. Verification of hypotheses underlying the MTHP, confirming that the models are accurately defined and distinct from each other, was to be a preliminary step in the potential validation of the framework.

Methods

Study population

All participants were recruited from Canadian IHC clinics, operationally defined as clinics where at least three different practitioners work in the same location, with at least one physician licensed to practice in Canada. To be included in the study, other practitioners in the team must have practiced a type of complementary and alternative healthcare including (but not limited to): naturopathy, massage therapy, chiropractic, and Traditional Chinese Medicine, including acupuncture.

Design overview and study context

The research design used for this mixed methods study is what Tashakkori and Teddlie refer to as a sequential design for complementarity purposes, or examining overlapping and different facet of a phenomenon; and triangulation, or seeking convergence of the results.¹³ First, interviews with practitioners working in IHC clinics were conducted to explore their experience of interprofessional collaboration particular to that setting. The second phase of the project consisted of a survey of all Canadian IHC clinics, to determine the relationships between a series of components related to interprofessional collaboration that had been identified in the first phase. In this paper, the qualitative data are used to complement the quantitative results obtained in the second phase, to compare the IHC models from the conceptual framework under study and to identify areas where the research findings from the two phases converge. Research ethics approval for the project was obtained from the

Research Ethics board of the University of Ottawa and the Children's Hospital of Eastern Ontario prior to contacting practitioners for both phases of the project.

Phase I: face-to-face interviews

For the qualitative part of the project, purposeful and maximum variation sampling was used to recruit participants from each Canadian province where IHC clinics were present. These combined strategies helped to recruit a broad group of both physicians and CAM practitioners. Participants were recruited via their respective clinic directors or managers. Interviews were conducted using a series of semi-structured open-ended questions designed according to the Input Process Output (IPO) framework.¹⁴ That framework, central to organizational management theories, aimed to capture the essence of interprofessional collaboration within a team environment. Twenty-one practitioners from 5 different IHC clinics in 4 different provinces were interviewed. Almost half of them (n = 10) were primarily biomedical practitioners. All interviews were audio-taped and transcribed verbatim shortly after each meeting. In total, 11 constructs were captured under each of the three key factors of the IPO model that guided the description and classification of the concept of interprofessional collaboration within an IHC clinic. Further details on the analytical framework, methodology and results of that particular phase of the project are reported elsewhere.¹⁵

Phase II: survey

The second phase of the project consisted of a census of all identifiable Canadian IHC clinics. A snowball sampling approach was used to compile the list of all potential respondents until saturation of the list was obtained. The development of the questionnaire

was guided by the Relationship-Centered Care model¹⁶ as well as the major themes related to interprofessional collaboration gleaned from the qualitative phase of the project. Several constructs were measured at the practitioner's level, including understanding of each other's healing approaches,¹⁷ beliefs in the benefits of interdisciplinary collaboration,¹⁸ centrality of the physician in the team,¹⁹ communication mode and frequency,²⁰ level of perceived trust within the team members,²¹ level of conflict associated with collaboration,¹⁸ practitioner's satisfaction with his/her job,²² intention to leave his/her job,²³ and opportunity for personal growth.²⁴ Constructs used for the current project are presented in Table 2 (Chapter 4). Forty-three biomedical (e.g., physicians, nurses, and psychologists) and 42 CAM practitioners returned their completed questionnaires. The average length of experience at the clinic was 4 years and the average numbers of hours spent at the clinic per week was 24. Links between constructs inherent to the conceptual model used were explored using multiple regression models. We found that the behaviours and skills selected for the study were most likely to impact on the outputs of collaboration from a practitioner's perspective. Further details on the quantitative survey phase can be found elsewhere.¹⁷

Data collection and analysis

In addition to the constructs related to interprofessional collaboration and for the purpose of this study, the survey respondents were asked to select a model from the MTHP framework that best represented the collaboration model occurring at the clinic in which they worked. Respondents were blinded to the models' names to ensure they did not select models because of their names alone. Models were displayed in a table similar to Table 1.

All constructs selected from the previously reported quantitative phase of this project were found to have high reliability (Cronbach's alpha > 0.70). Constructs were summarized using descriptive statistics including frequencies and median (interquartiles range [IQR]). With the exception of the physician centrality, intent to leave current employment and level of conflict scales, a higher score represents a positive outcome. Given the relatively small sample size, team healthcare practice models were grouped into 3 categories *a priori*, to facilitate statistical comparisons. The first included the parallel and consultative models; the second included the collaborative, coordinated, multidisciplinary, and interdisciplinary models; and the final group was composed of respondents who chose the integrative model. Given the high ceiling effect observed in many of the survey constructs, a non-parametric approach (Kruskal-Wallis test) was used for comparisons across the 3 practice model groups. *Post-hoc* analyses using the Conover method were conducted to compare models in a pairwise fashion ²⁵. The healthcare practice model was imputed for respondents who chose not to answer the question or circled more than one model, by using the model that was most commonly selected by the other respondents working at the same clinic. Sensitivity analyses were conducted with and without those respondents.

Quotations from a secondary analysis of the qualitative phase of this project were used to supplement the quantitative findings. The data were analyzed by the interviewer using NVivo 7.0 and basic content analysis method ²⁶. Key themes of the analysis were defined according to the dimensions and underlying hypotheses arising from the continuum of the MTHP framework. All data were reread several times to reveal the excerpts that illustrated the concepts relevant to the continuum across the 3 pooled groups of models. As a quality control check, codes for 3 interviews were independently extracted by a second member of

the team, who also thoroughly reviewed the results. In cases of disagreement, consensus was reached between the two analysts through discussion. For the purpose of this analysis, interviewees were classified by the lead author according to the MTHP that appeared to best represent the clinic with which they were involved, based on field observations and discussions with the staff. Three pooled groups of models were created as for the quantitative analysis described above.

Findings

Healthcare providers responded from 25 different IHC Canadian clinics, 4 of which also took part in the qualitative phase of the project (another clinic was also involved but closed prior to the administration of the survey). The distribution of the responding clinics across the different MTHP is presented in Table 3 (Chapter 4). In total, 12 respondents thought their clinic was best represented by the parallel or consultative model, 24 identified with the collaborative, coordinated, multidisciplinary, or interdisciplinary model, and 45 perceived that the description of the integrative clinic fit well with their clinic set up. Agreement among practitioners as to the model of practice within their clinic varied. Overall statistical comparisons of the models according to the various measures administered through the surveys are presented in Table 4 (Chapter 4), and pairwise comparisons between pooled groups of models are discussed in the sections below, for each of the components of the framework.

Philosophy

The MTHP framework is built upon assumptions that within the interdisciplinary milieu of integrative clinics, a greater diversity of healthcare philosophies would foster a greater multiplicity of clinical paradigms as one moves from the left to the right of the continuum of MTHP.

With this in mind, the survey measured the extent to which the practitioners believed in the benefits of interprofessional collaboration, and the hypothesis was confirmed in that respondents identifying themselves as being from integrative groups scored higher on the beliefs in benefits scale than the respondents from the parallel and consultative models ($p=0.031$). However, the overall difference was no longer significant when the respondents who chose not to pick a model of practice were added to the sample ($p=0.094$). Similarly, no statistically significant difference was found between pooled groups in the respondents' perception of their knowledge of one other's healing approach ($p=0.889$).

The analysis of the qualitative data also revealed differences between models of practices in terms of the philosophy of the interviewees towards IHC, especially with regards to how they defined the practice and envisioned the place of IHC in the current Canadian healthcare system. In contrast to interviewees who classified their collaboration model as parallel or consultative, a majority of the participants from more highly integrated practices emphasized that they were practicing healthcare according to a patient-centered approach where the multiple facets of wellness were considered, a concept that the former did not bring up in discussions.

"Oftentimes your standard medical conventional treatment for certain ailments will treat the symptoms but, peripheral things [also] need to be addressed. [...] I think our current healthcare system is overwhelmed and I think that a lot of times we're doing damage control, but not in this clinic. I feel that the patients that walk into this clinic get the most cutting-edge care you can get because you get both sides of the coin without any animosity and that's what needs to happen for our medical system to progress. The doctors and naturopaths and osteopaths and chiropractors need to put their egos aside and work together for the betterment of the patients because that's what it's about." (Multidisciplinary clinic, Complementary and Alternative Medical practitioner [CAM] 1)

Similarly, the director of an integrative clinic described his model of practice as follows:

"[Our model is] effective and more real than the conventional model and is more attuned to complex multi-factorial chronic symptoms. [...] Every patient gets 5 acupuncture sessions, everybody gets 3 hellerwork sessions, everybody gets 6 counselling sessions and so on. What we do within those sessions is unique to the individual." (Integrative clinic, Biomedical practitioner [BM] 1)

A second corollary of the MTHP framework philosophy dimension was that the practitioners involved in a more highly integrated model clinic would tend not to rely as much on a purely biomedical paradigm for the care of their patients, rather to incorporate other clinical approaches into their conceptualization of disease. Our results were consistent with this hypothesis. For example, in many instances participants who stated working under a model from the right hand side of the continuum of models pointed out that their clinics were not offering healthcare services of two different kinds of medicine, but rather blended

approaches to healthcare where the practitioners serve as guides for the patient's healing process.

Furthermore, we found that the terminology related to "evidence-based medicine", a concept often associated with the biomedical scientific culture, was common in the discussion with the interviewees from clinics closer to the parallel model, but specifically from the collaborative to interdisciplinary types of models. These participants alluded to the fact that practicing within their scope of expertise and making decisions about the care of the patients according to validated methods was central to the clinic's ethos. Some of these CAM interviewees associated an evidence-based clinical approach with rigidity and criticized it either as a limitation for their own practice or as shackles of the biomedical system for their conventional medicine colleagues. However, the interviewees of the integrative clinic seemed to have a more open-minded view of the concept of an evidence-based practice:

The important thing is that [the staff] have reasonable training in conventional work so they are not kind of wishy washy, new age type, grounded, but that they also have to explore their own healing, for one reason or another, because it is only through the experience of process of finding their own healing that you ever understand the holistic perspective. [...]

The only kind of learning you can do in regular medicine is to see something you have not seen before. What you learn [in integrative medicine] is to get rid of everything you ever learned. The only thing you learn is that everything you ever learned needs to be trashed.

(Integrative clinic, BM1)

Structure

According to Boon's framework, a consequence of the co-existence of multiple disciplines and hence healthcare paradigms within an IHC team was an increase in the complexity of the team structure as one moves from the left to the right hand side of the continuum. In turn, this complexity of structure would coincide with blurring of the boundaries between the team members' roles and less formal hierarchical structures. Ultimately, the framework predicted that teams on the right hand side of the continuum would show greater trust and respect among their members. This last item was of particular interest in our survey.

Interpersonal trust between colleagues was found to be the lowest within respondents from the parallel/consultative models when compared both to those from the middle group of models ($p=0.045$) and to those from the integrative ones ($p=0.014$). No significant difference was found between the collaborative to interdisciplinary models and the integrative one ($p=0.720$).

Different perspectives of the structure dimension of the framework emerged from the qualitative data. The relative simplicity of the structure of the visited clinic identified as collaborative was striking. As one interviewee expressed it:

"We are 4 people sharing the expenses of one centre, that's all. We share the business expenses, we share the rent, other than that we do not have any dependency. I don't even know when they come and when they go. [...] We do not work for each other."

(Consultative clinic, BM2)

In contrast, participants from the clinic corresponding to the interdisciplinary model described the barriers met with regards to the clinic management of space and time as well as sustainability of particular healthcare services offered to the clientele:

"We have a nutritionist on staff. If we do not refer to our nutritionist then she is sitting there in a room not making any money for the clinic and nothing works. So paying for the rent or the space and being a not-for-profit clinic, we have to make sure that we do not go under budget and just break even."(Interdisciplinary clinic, CAM1)

"I think [working within a collaborative setting] is more time consuming, because you basically increase your load of patient care since you not only work a full day of patients, you also possibly help with other patients." (Interdisciplinary clinic, CAM2)

With regards to the business plans of the different models, we also noted contrasting ways of reimbursement for the delivery of care. In the single consultative clinic, CAM practitioners saw their fees reimbursed from patients' insurance plans and personal payments; whereas the physicians only invoiced the government for their services. In the three clinics corresponding to the middle group of the MTHP framework, we observed a mixture of reimbursement methods within each clinic with physicians sometimes invoicing the patients directly, especially when the care provided was not considered conventional medicine. For the clinic visited representing an integrative model, all practitioners were paid from the patient' personal payments or insurance plans, whenever possible.

The clinical hierarchical structure was not found to differ between models as expected from the framework and therefore, this assumption could not be validated with the sample of clinics. In fact, clinics from the middle group of team models were the only ones with either

a clinical (biomedical) director or a board of chief executive officers for one instance.

However, when this topic was discussed, all interviewees confirmed that this structure was in place for management purposes and did not interfere with clinical decision making. The other two clinics at the extreme poles of the continuum selected for the interviews did not have any formal chain of command in place. However, they were the two smallest clinics, with 6 staff members each, compared with a range of 8 to 22 in the other 3 clinics.

Process

Variations in the way collaboration takes place among practitioners were expected between models as per the MTHP framework. More specifically, the intensity of communication process and respect for the diversity of opinions was expected to increase as the level of integration of healthcare paradigms increases within the clinic. As a consequence, the individual ability of the practitioners to make independent clinical decisions for his/her patients was likely to decrease proportionally.

Through the survey results, we verified that knowledge sharing is closely related to the MTHP continuum. The manner in which information and knowledge is gathered and then shared among practitioners was measured with two different tools. The information donating measure was found to vary between clinics according to each pair of models ($p=0.017$ between the parallel/consultative models group and the collaborative to interdisciplinary models group; $p<0.001$ between the parallel/consultative models group and the integrative models; and $p=0.035$ between the collaborative to interdisciplinary models group and the integrative models) in the direction expected in the framework. The

second measure, knowledge gathering, was found to differ significantly only between the parallel/consultative models group and the integrative one ($p=0.006$).

The level of acceptance of sharing of authority amongst the members of the team and the clinical autonomy of the biomedical practitioners of the team compared with the CAM practitioners was not found to significantly differ between models ($p=0.169$). However, this was only one facet of practitioner autonomy. Independence in clinical decision making was found to slightly vary from a group of models to another. From the consultative clinic, the independency of practitioners was confirmed in many instances during the interviews: *"We all do our job and that's it. We don't have anything in common."* (Consultative clinic, BM1). Additionally, we found that reliance on colleagues' opinion or services between the biomedical and CAM practitioners of the consultative clinic to be almost nonexistent, which demonstrated important autonomy of the practitioners but small opportunity for synergy and building of trust within the team members.

In contrast, the concept of compromising was common in daily practice for a few interviewees working in other clinic models. *"For the practicality of the program, the decision might be more specific, hormone first before getting to the other stuff. So, if that was really important to me I might be upset, right? And it gets back to the whole ego and working as a group. It is just putting aside what I would normally do or see as a priority. The group would have to come together; everyone has to make that compromise."* (Interdisciplinary clinic, CAM3). However, that type of comment was not found to be consistent across the interviewees as most of them considered themselves independent of

their colleagues. The data suggested that the loss of autonomy would be for the sake of better answering the patients' needs:

"I think the main thing is that it's the client who does the healing, we don't. It's helping the client explore what they need to explore. It's not a case of "This is the right way to do it." We would certainly share with each other things like, "This approach might work better with this person." But it's not having a lot of, I guess investment in being right about how it should be done. I guess our main thing, in a way, is trying to support people to make it a safe enough place for them to do the degree of letting go and exploring that thing."

(Integrative clinic, CAM1)

Finally, we found that the level of conflict associated with collaboration, which we used as a proxy for the respect for the diversity of opinions among team members, was correlated with the models. In fact, conflicts within the team members seemed to occur more frequently within the clinics associated with a parallel or consultative model when compared to the clinics best described by the middle pooled group of models ($p=0.017$) or to clinics structured according to the integrative model ($p=0.012$).

Outcomes

The purpose of the framework was to delineate various models of practice that could be useful for patients and practitioners. Hence, the theoretical hypotheses related to the outcome dimension focused mainly on patient health outcomes and the cost-effectiveness of care. Our study did not include any of the measures related to healthcare or financial effectiveness of the clinics.

An important outcome from a practitioner perspective, job satisfaction, was higher for the respondents identifying themselves with an integrative clinic model compared to the parallel/consultative type of clinics ($p=0.050$). These later respondents also reported seeing significantly less opportunity for growth compared to the respondents on the right hand side of the continuum ($p=0.005$). These findings did not completely agree with the qualitative data since the vast majority of interviewees reported being quite satisfied with their job regardless of the clinic model elected for the purpose of this project. They described their working environment to be challenging, less stressful and frustrating, and more collegial, friendly and healthy. On the other hand, we noted that the interviewees working in a clinic on the left hand side of the continuum were less explicit in terms of the benefits of interprofessional collaboration for themselves compared to the other interviewees; rather they tended to refer more often to the positive aspects of their collaborative practice from a patients' perspective.

When asked of their intent to leave the clinic in the next year, respondents who selected a parallel/consultative model to represent their clinic were more highly varied in their responses; this group was not as homogeneous in their intent as the other respondents of the sample. Although we observed a significant difference between groups ($p=0.040$), it did not remain significant when the model was imputed for the respondents who did not choose a particular model of practice ($p=0.074$). Additionally, no significant differences could be found between clinic groups of models when compared in a pairwise fashion. No conflicting findings were found from analysis of the interviewees' discourse. In fact, when this theme was discussed, most interviewees emphasized that this current position

compared advantageously in many respects with other healthcare practice models they had worked within, currently or in the past.

Discussion

The main aim of this project was to validate hypotheses relating to the continuum of team healthcare practice models. The triangulation of two different data methodologies was shown to be effective to measure and analyse a broad array of characteristics meant to illustrate the differences between clinical models of practice around four key components of IHC: philosophy, structure, process and outcomes. The convergence of the results of the two methodologies also strengthened the credibility and applicability of the framework.

From an organizational perspective, respondents who identified themselves with a parallel or consultative clinical model differed significantly from practitioners in the other practice models proposed by Boon and colleagues' continuum with respect to most of the hypotheses inherent in the key components of the framework. Respondents who selected models on the right hand side of the continuum were found to be more comparable for most of the framework's components, with the exception of information sharing process that was happening more frequently within the integrative practice models. This suggests that less than seven different models might be occurring in the IHC field in Canada and that differences between those models are likely weaker than what the framework proposed.

We were careful not to present the labels of the clinical models in the survey questionnaire, so that the respondents would associate the clinic's practice model with the definition given and not the label itself. One intriguing result was a lack of agreement between practitioners within a clinic in terms of the practice model under which the team evolved. There are three

possible explanations for this. First, within an IHC clinic, different models may apply to interactions among various pairs of practitioners due to personal compatibility, paradigm complementarity or simply scheduling details that allow or preclude personal interactions. Second, the practice of IHC suggests individualization of patient care and thus, some patients may choose to access only one or a limited number of practitioners in the clinic, therefore modifying the collaborative patterns among the team members. Third, we cannot exclude the possibility that the description of each practice model is not specific enough to allow practitioners to select which model best represented their actual practice. For example, we found that an unexpectedly high number of respondents picked the integrative model to describe their practice. This could be because the description of this specific model was not sufficiently exclusive of some other models of the framework. Further validation of the specificities of the practice models' descriptions is required. *In-situ* case studies of different models classified *a priori* according to the framework and data triangulation within each model would allow a better assessment of subtle differences between clinics, and allow refinement of the description of each model. Nonetheless, we believe that the conclusions of this project are likely to remain valid, even in the eventuality that the integrative practice model description needs refinement, because most of the differences were found between the parallel and consultative models and the rest of the continuum's practice models. We assumed that sufficient details were given to the survey respondents concerning each model so that the integrative model would not be mistakenly selected in place of the parallel or consultative one if the former model of collaboration was truly occurring between the respondent and the rest of the team.

Organizational theory differentiates between the hierarchical structure of a team and the power relationships among the team members.¹⁴ The team structure explicitly defines the roles of the members and outlines the chain of command as in an organizational chart, if such a hierarchy exists. However, in practice team members may interact with each other according to implicit rules, not necessarily laid out in such a bureaucratic fashion. For example, dominance by a biomedical practitioner within a team where the leadership is, on paper, shared between healthcare providers is an example of a flat hierarchical team structure where power relationships are important to examine. A limitation of the framework was that it does not include any hypothesis on power relationships among the team members. In this project, we were not able to demonstrate any particular impact of the hierarchical organization of the clinics on the process of collaboration. As discussed by Block, our findings supported the hypothesis that the presence of a structural hierarchy within the clinic is less likely to impact the integration of healthcare as the concepts of clinical authority and influence are dissociated from the formal organizational structure of the clinic.⁵ In our sample, we observed that such a structure was often in place for administrative purposes rather than clinical decision making. In fact, none of the participants interviewed were able to identify a formal leader in the role of a clinical decision maker because those decisions were largely dependent on the patient case rather than the practitioners' role(s). However, since conflicts associated with a collaborative process are occurring within the clinics, as shown by our quantitative data, we could possibly relate them to power relationships, which had been found elsewhere to be a key component of the process of collaboration within Canadian IHC clinics.^{15, 27} Thus, we propose a hypothesis that power relationships are expected to be less apparent as one moves along the continuum towards increased integration of healthcare practices. This addition emphasizes

that the differences are likely to be observed in the process of collaboration rather than the structure of the clinic, as currently suggested by the framework.

Scientific disciplines and professions engage in various processes to delineate and distinguish intellectual activities and knowledge associated with their particular fields of practice.^{26, 27} This concept, called boundaries at work, has been explored by Mizrachi and Shuval in a hospital-based IHC setting, and by Hollenberg, in a Canadian context of IHC.²⁸
²⁹ Boundaries at work were observed in the interviews from the clinic characterized by the consultative model. These boundaries were apparent as lower awareness of each other's skills and knowledge, lack of integration of different healthcare paradigms and few opportunities to discuss patient cases and healing/curing techniques in general.

A more collaborative atmosphere was found among practitioners working within clinical models where the integration of healthcare paradigms, is likely to be higher. Indeed, practitioners from those clinics were more likely to use common themes to describe their experience of collaboration, and delineations between healthcare specialties were less apparent. In other words, from an organizational point of view, practitioners may find teamwork easier in a model closer to right hand end of the continuum, should they aim to practice under a fully integrated paradigm of healthcare.

It is important to note that the purpose of Boon and colleagues' continuum was not to determine the ideal model of care, but rather to identify that different models of care exist and to facilitate explorations of questions about what models of care are most appropriate in specific contexts or patient populations. This project also embraced that philosophy. The

authors clearly recognized that the optimal model of practice should be determined by both the patient's needs and the interpersonal styles and professional requirements of the practitioners involved in the team. On this note, our findings showed that caution must be taken when using the framework to label the type of collaboration occurring within a clinic since the model might vary depending on the patient's choice, the patient's condition, the dyad of practitioners, and the practitioner's personal and professional experience.

Regardless of the model under which the team chose to practice, a good practitioner/team fit remained crucial for the success of the IHC clinic and was a prominent theme of the qualitative analyses. Similarly to what has been found elsewhere, various practitioners of the sample referred to this as the need to assemble the "right people".²⁸ Successful interpersonal relationships appeared to be the driving force that made an IHC collaborative model possible, independently from the internal pressures (e.g. conflicts due to a collaborative practice of healthcare) and external pressures (e.g. lack of universal reimbursement plan and medical regulatory boards, see Gaboury et al.) imposed on this particular interprofessional work setting.

Study limitations

As with any hypothesis exploration study, there are a number of limitations. The relatively poor response rate at the participant level, may limit the validity of the quantitative results. However, we note that most of the non-respondents were from very large clinics with a majority of practitioners working under a parallel and consultative practice model (assessed throughout an introductory discussion of the project with the clinic's managers). Assuming that the respondents from the parallel and consultative clinics are those who are more likely

to collaborate and to believe in the benefits of IHC, in reality the differences between practice models are likely to be greater than those actually observed in this project.

The qualitative results suffered from the limitations of a secondary analysis.²⁹ Namely, saturation of the themes related to the characteristics of the framework was not systematically reached within each group of practice models. However, we believe that this limitation was countered by the richness of the information gathered, as well as the convergence obtained through data triangulation. Additionally, participants were not purposefully selected based on the practice model they are involved with and the possibility of our results not showing differences between practice models where in fact differences exist is not excluded. Consequently, changes along the continuum between models that could not be validated with this project may well emerge with a different sample of clinics.

Conclusion

Our results supported most of the hypotheses underlying the continuum of MTHP between 3 distinct pooled groups of models, and showed that the most striking differences lay between the parallel and consultative models and the five other models along the framework. Additional work is needed to assess whether as many as 7 distinct models of collaboration are truly occurring, since our evaluation could often not detect major differences between models on the right hand end of the continuum. Collapsing the 7 models into the 3 used in this work appears to reflect better the Canadian reality and would be more practical for research purposes. The findings suggest that such a framework should be used with caution to guide the evaluation of the impact of each model on both subjective and objective outcomes of IHC such as patients' functional status, quality of care,

and cost-effectiveness of care, because more than one model of collaboration could take place within a single clinic. On that note, an important voice missing in this project is that of the patients themselves, which was beyond the objectives of this project. The conceptual framework suggested that patients' roles change across the continuum of practice models, but this could not be verified with the data collected. Additionally, further validation is required to ensure that the description of the integrative practice model is well understood and that terminology is used appropriately and with a common understanding by healthcare practitioners, healthcare managers, policy makers and researchers.

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Figure 1. Continuum of models of healthcare practice

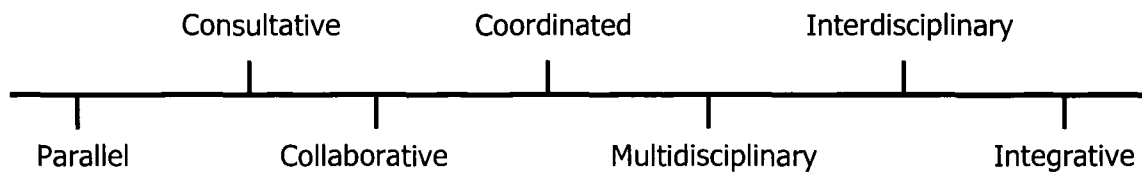


Table 1. Models of team healthcare practice in IHC

Model	Characteristics
Parallel	<ul style="list-style-type: none"> · Practitioners work in the same setting, but independently · Roles are formally defined
Consultative	<ul style="list-style-type: none"> · Expert advice is shared between practitioners via personal contact, letter of referral note
Collaborative	<ul style="list-style-type: none"> · Patient is seen independently by each practitioner · Practitioners share information concerning the treatment of a particular patient
Coordinated	<ul style="list-style-type: none"> · Administrative structure stimulates collaboration · Patients' files are shared between practitioners · Liaison between practitioner is ensured by a manager
Multidisciplinary	<ul style="list-style-type: none"> · Leader in charge of the planning of patient care · Each practitioner independently ensures patient's treatment according to his expertise · Formalized extension of the coordinated model
Interdisciplinary	<ul style="list-style-type: none"> · Planning of patient care is decided by a group of practitioners, via face-to-face meetings · Extension of the multidisciplinary model
Integrative	<ul style="list-style-type: none"> · Non-hierarchical holistic collaboration of practitioners · Practitioners and patient contribute to patient care · Extension of interdisciplinary model

Table 2. Quantitative constructs used for the triangulation project

Survey construct	Description
Philosophy	
Believes in benefits of interprofessional collaboration	Extent to which practitioners surveyed see strengths in multidisciplinary collaboration, both from a patient and practitioner' perspective ¹⁸
Knowledge of each other's healing approach	Selected items of Hsiao's sub-scale of openness and awareness ³⁰ mixed with quotes from the first phase of this research project ¹⁷
Structure	
Trust	Cook & Wall's interpersonal trust in colleague scale. ²¹ One question was removed from the original scale ("Most of my colleagues would get on with their work even if the supervisors were not around") because it was judged not to be pertinent in the context of an IHC clinic.
Process	
Knowledge exchange	Assessment of the respondent's perception of the extent to which knowledge is shared between the individuals of a given environment using the Knowledge donating (KD) and Knowledge collecting (KC) sub-scales. ²⁰ One item was <i>a posteriori</i> removed from the total score ("When a colleague is good at something, I ask him to teach me how to do it.") to increase the reliability of the scale.
Physician centrality	Derived from a sub-scale that determines the level of acceptance of sharing of authority and leadership among the members of the team. ¹⁹ The wording of two items ("In this clinic, the physicians do not always have the final word in decisions made by the healthcare team", "The physicians of this clinic have the right to alter patient care plans developed by the team") was slightly modified to avoid the possibility that the scope of responsibility of primary healthcare workers (e.g. physicians or naturopaths in Ontario) dictates the answer.
Level of conflict associated with collaboration	Extent to which issues related to interdisciplinary collaboration (such as competition and sharing of responsibilities) could lead to conflicts within a healthcare clinic. Developed in a previous survey of community healthcare centers in Québec in 2002. ¹⁸
Outputs	
Satisfaction	Overall satisfaction with work via a 3-item scale developed by Cammann and colleagues ²²
Personal growth	Sub-scale from the Job Diagnostic Survey (developed by Hackman and Oldham in 1974). ²⁴ The scale measures the respondent's perception of the opportunities for achievement and challenge in their working milieu.
Intention to leave in the following year	3-item scale created by Bishop and colleagues ²³

Table 3. Distribution of clinic models as perceived by the survey respondents

Clinic number	Model			Number of respondents who did not choose a model
	Parallel, Consultative	Collaborative, Coordinated, Multidisciplinary, Interdisciplinary	Integrative	
1	0	0	5	1
2	1	0	0	0
3	0	0	3	1
4	1	1	0	0
5	0	0	1	1
6	0	1	0	0
7	1	1	1	0
8	1	2	5	1
9	1	2	0	0
10	0	1	1	0
11	0	3	4	0
12	1	1	3	0
13	0	1	2	0
14	0	3	0	0
15	0	1	0	0
16	1	0	4	0
17	0	0	1	1
18	1	0	0	0
19	0	0	2	0
20	0	1	1	0
21	1	0	1	0
22	1	2	9	0
23	0	2	2	1
24	0	1	0	0
25	2	1	0	0

Table 4. Constructs distribution across models of team healthcare practice

Constructs*	Parallel, Consultative	Collaborative, Coordinated, Multidisciplinary, Interdisciplinary	Integrative	p-value
	Median (IQR)	Median (IQR)	Median (IQR)	
Beliefs in benefits of interprofessional collaboration	4.7 (3.9, 5)	5 (4.6, 5)	5 (4.9, 5)	0.029
Knowledge of each other's healing approach	14 (11.8, 15)	14 (12, 15)	15 (12, 15)	0.889
Conflict	2.6 (1.3, 3.1)	1.4 (1, 1.8)	1.4 (1, 2)	0.030
Trust	21 (19, 24)	24 (22, 25)	25 (22.3, 25)	0.034
Knowledge donating	3.8 (3.5, 4.2)	4.3 (3.8, 4.8)	4.8 (4.1, 5.0)	<0.001
Knowledge collecting	4 (3.7, 4.7)	4.7 (4, 5)	5 (4.3, 5)	0.014
Physician centrality	10.5 (9.8, 14)	8 (5, 12)	8 (3, 12)	0.169
Satisfaction	4.7 (3.8, 5)	4.8 (4.3, 5)	5 (5, 5)	0.015
Intention to quit	1.3 (1, 2.3)	1.3 (1, 2)	1 (1, 1)	0.040

* Scores were calculated from the average of scale items from a negative anchor (1) to a positive anchor (5) or from the total score of the items from the same anchors. The sum of the items is presented for the Physician centrality scale from a negative anchor (0) to a positive anchor (4) for a maximum score of 24. The maximum score for the Knowledge of each other's healing approach was 15.

References

- (1) Consortium of Academic Health Centers for Integrative Medicine: About us. Retrieved June 12, 2008, from <http://www.ahc.umn.edu/cahcim/about/home.html>
- (2) Boon H, Verhoef M, O'Hara D, Findlay B, Majid N. Integrative healthcare: arriving at a working definition. *Altern Ther Health Med* 2004 September;10(5):48-56.
- (3) Micozzi MS. Issues in Integrative Medicine. In: Micozzi MS, editor. *Fundamentals of Complementary and Integrative Medicine*. 3rd ed. St-Louis: Saunders Elsevier; 2006. p. 18-23.
- (4) Institute of Medicine of the National Academies. Integration of CAM and Conventional Medicine. *CAM in the US*. Washington: The National Academies Press; 2005. p. 196-225.
- (5) Block KI. On models for integrative medical practice. *Integr Cancer Ther* 2007 December;6(4):309-12.
- (6) Stumpf SH, Shapiro SJ, Hardy ML. Divining integrative medicine. *Evid Based Complement Altern Med* 2007;doi:10.1093/ecam/nem104.
- (7) Novey D. Strategies for Successful Integration. Available from <http://www.iom.edu/CMS/3793/4829/14061/14842.aspx>
- (8) Gamst A, Haahr N, Kristoffersen AE, Launso L. Integrative care and bridge building among health care providers in Norway and Denmark. *J Altern Complement Med* 2006 March;12(2):141-6.
- (9) Clohesy Consulting. Mapping the Emergence of Integrative Medicine: A Journey Toward a New Medicine. Philanthropic Collaborative for Integrative Medicine; 2003.
- (10) Leckridge B. The future of complementary and alternative medicine--models of integration. *J Altern Complement Med* 2004 April;10(2):413-6.
- (11) Boon H, Verhoef M, O'Hara D, Findlay B. From parallel practice to integrative health care: a conceptual framework. *BMC Health Serv Res* 2004 July 1;4(1):15.
- (12) Mann JD, Gaylord SA, Norton SK. Integrating Complementary & Alternative Therapies with Conventional Care (The Convergence of Complementary, Alternative & Conventional Health Care: Educational Resources for Health Professionals). University of North Carolina at Chapel Hill, Program on Integrative Medicine; 2004.
- (13) Tashakkori A, Teddlie C. *Mixed methodology*. Thousand Oaks: Sage Publications; 1998.

- (14) McGrath JE. *Social Psychology: a brief introduction*. New York: Holt, Rinehart and Winston; 1964.
- (15) Gaboury I, Bujold M, Boon H, Moher D. Interprofessional collaboration within Canadian integrative health care clinics: key components. *Manuscript submitted for publication*. (n.d.).
- (16) Tresolini CP, Pew-Fetzer Task Force. Health Professions Education and Relationship-Centered Care. 2000.
- (17) Gaboury I, Lapierre L, Boon H, Moher D. Interprofessional collaboration within Canadian integrative health care clinics through the lens of the Relationship-centered care model. *Manuscript submitted for publication*. (n.d.).
- (18) Sicotte C, D'Amour D, Moreault MP. Interdisciplinary collaboration within Quebec Community Health Care Centres. *Soc Sci Med* 2002 September;55(6):991-1003.
- (19) Heinemann GD, Schmitt MH, Farrell MP, Brallier SA. Development of an Attitudes Toward Health Care Teams Scale. *Eval Health Prof* 1999 March;22(1):123-42.
- (20) Van den Hooff B, De Ridder JA. Exploring the eagerness to share knowledge: The role of ICT and social capital of knowledge sharing. In: Huysman MH, Wulf V, editors. *Social capital and information technology*. Cambridge, MA: MIT Press; 2004. p. 163-86.
- (21) Cook J, Wall T. New work attitude measures of trust, organizational commitment and personal need non-fulfilment. *Journal of Occupational Psychology* 1980;53:39-52.
- (22) Cammann C, Fichman M, Jenkins D, Klesh J. Assessing the attitudes and perceptions of organizational members. In: Seashore S, Lawler E, Mirvis P, Cammann C, editors. *Assessing organizational change: A guide to methods, measures and practices*. New York: John Wiley; 1983. p. 84.
- (23) Bishop JW, Scott KD, Burroughs SM. Support, Commitment, and Employee Outcomes in a Team Environment. *Journal of Management* 2000;26(6):1113-32.
- (24) Hackman JR, Oldman GR. The Job Diagnostic Survey: An instrument for the diagnosis of job redesign projects. New Haven, CT: Yale University, Department of Administrative Sciences; 1974. Report No.: 4.
- (25) Conover WJ. *Practical nonparametric Statistics*. 3rd ed. New York: John Wiley & Sons; 1999.
- (26) Boyatzis RE. *Transforming Qualitative Information: Thematic Analysis and Code Development*. Thousand Oaks, CA: Sage; 1998.
- (27) Hollenberg D. Uncharted ground: patterns of professional interaction among complementary/alternative and biomedical practitioners in integrative health care settings. *Soc Sci Med* 2006 February;62(3):731-44.

- (28) Boon HS, Kachan N. Integrative medicine: a tale of two clinics. *BMC Complement Altern Med* 2008;8:32.
- (29) Szabo V, Strang VR. Secondary analysis of qualitative data. *ANS Adv Nurs Sci* 1997 December;20(2):66-74.
- (30) Hsiao AF, Hays RD, Ryan GW et al. A Self-Report Measure of Clinicians' Orientation toward Integrative Medicine. *Health Serv Res* 2005 October;40(5 Pt 1):1553-69.

Chapter 5
Integrated discussion and conclusions

CHAPTER 5

INTEGRATED DISCUSSION AND CONCLUSIONS

This chapter presents reflections on and implications of the results of this doctoral research for the field of population health and more specifically of integrative healthcare (IHC), in five sections. Integration of the results of the 3 projects is discussed, followed by the conceptual integrated framework that resulted from this work. This framework could be used for further research on interprofessional collaboration within IHC. The strengths and limitations of the research for this doctoral dissertation, followed by the contributions to the field of population health and IHC are then listed and discussed. Finally, further research questions and ideas for additional investigations are explored.

Collaboration has been studied from many different perspectives. For example, it was studied as a dependent variable by Sicotte et al. (2002), as a process variable by D'Amour (2005) and Lemieux-Charles & McGuire (2006); and finally as a full concept by others who focused on the organizational management of teams (e.g., Poulton & West, 1999; Haward et al., 2003). For the purpose of this thesis, I conceptualized collaboration as both a process and an outcome, as in the later examples, encompassing an array of contributing inputs, that I call "collaboration".

Integration of findings

The following section summarizes the results of the three inquiries for this thesis, with a critique of the methodology used and limitations in view of the overall objectives for this dissertation.

The first phase of research for this thesis explored the factors related to interprofessional collaboration within Canadian IHC clinics. Drawing on an existing theoretical model (the Input Process Output model – IPO – (McGrath, 1964)) that aims to represent three dimensions of interprofessional collaboration, the objectives of this qualitative inquiry were to characterize the concept of collaboration for both biomedical and complementary and alternative medicine (CAM) practitioners working in the context of IHC clinics. My analysis revealed four inputs of collaboration that dominated the discussion with practitioners: awareness of one’s clinical paradigm; education and training; and two factors external to the clinic but inherent in the Canadian healthcare system: lack of a universal reimbursement plan, and pressure from biomedical regulatory boards to restrict the practice of IHC. The processes highlighted by this inquiry pertained to communication (mode, frequency and terminology misunderstanding) and interaction process within practitioners (referral process and power relationships). Finally, interviewees described that their teamwork impacted satisfaction with their work environment by modifying the burden of work, increasing opportunities for intellectual stimulation and growth, and enhancing affective commitment to the clinic. The findings of this phase complement the work previously done on interprofessional collaboration within conventional and biomedical healthcare (Anderson & Finn, 1983; Cole et al., 2003; Haward et al., 2003; Martin et al., 1989; San Martin-Rodriguez et al., 2005; Stahelski A.J., 1990; Wheelan et al., 2003) and IHC teams (Boon & Kachan, 2008; Hollenberg, 2006; Mulkins et al., 2005) because they describe the teamwork through the lens of its particular environment (Lemieux-Charles & McGuire, 2006) and the work was guided by a systematic framework to uncover the elements characterizing the teamwork.

Although saturation of the constructs of interprofessional collaboration within IHC was obtained during the interviews, the applicability of a few of them onto another western healthcare system or hospital-based setting may be limited, especially those related to the inputs of collaboration. Additionally, given the linearity of the theoretical flow between the dimensions of the model (inputs, processes, outputs, inputs), domino effects are possible such that, for example, a modification of the inputs of collaboration would impact differently the other dimensions of collaboration.

The second phase of this thesis drew on the findings of the qualitative phase, as well as a theoretical model focusing on interpersonal relationships as the driving force of interprofessional collaboration, to build a questionnaire that was sent to all identifiable Canadian IHC clinics. This phase aimed to explore and test the relationships between the dimensions of collaboration as suggested by the practitioner-team facet of the Relationship-Centered Care (RCC) model (Tresolini & Pew-Fetzer Task Force, 2000). In particular, the survey enriched the findings of the qualitative phase of the thesis by linking the constructs that emerged from the first phase analysis to go beyond a simple description. Overall, the survey results indicated that the processes of collaboration (namely knowledge exchange, trust, cooperation, and level of autonomy in terms of clinical decision making) were the main factors associated with measures of outputs suggested by the theoretical model (job satisfaction, personal growth, presence of conflicts related to teamwork, and intent to leave the clinic). Additionally, the survey revealed that beliefs in the benefits of interdisciplinary collaboration played an important role in the success of a collaborative enterprise within IHC

clinics. The results also established that the RCC model is likely to be applicable to the clinics from which practitioners responded.

This survey was the first initiative to study practitioners working within Canadian IHC clinics. Compiling a list of all existing clinics constituted a challenge, considering the rapid growth with which these clinics emerged in the current healthcare system picture and the lack of a formal list or professional associations that would allow their identification. Nonetheless, the snowball approach used appears to have encompassed a number of clinics reasonable for the Canadian context when compared to the American one (as referenced by Hollenberg (2007)). The search was conducted until no additional clinic could be identified either in the literature, by experts in the research field, or by IHC practitioners themselves.

A potential weakness of this quantitative phase lies in the modest response rate at the practitioners' level that limits the generalization of the results. However, a careful exploration of this response rate revealed that respondents from clinics from which the integration of both biomedical and CAM paradigms is more likely to fully take place tended to complete the survey in greater numbers. Given that my interest lay principally in those clinics, I am confident that a higher response rate would not have considerably modified my conclusions or my ability to make inference at those clinics.

The primary purpose of the third inquiry was to assess the validity of an existing conceptual framework that aims to differentiate IHC clinics according to their organizational structure and level of integration of both biomedical and CAM paradigms. The analysis was undertaken using data collected for both the qualitative and quantitative phases of the

thesis using a triangulation method. Clinic model comparisons supported most hypotheses suggested by the Models of Team Healthcare Practice framework (MTHP) (Boon et al., 2004a). Suggestions to refine the description of the models, refine some hypotheses pertaining to the process of collaboration and collapse the number of models were made in light of the quantitative and qualitative findings.

Failure to validate some hypotheses evoked by the framework does not necessarily prove that the hypotheses are not valid, but may be due to the study design (secondary analysis) and/or the selection of the interviewees. In fact, a purposeful selection of the clinics was initially conducted to ensure a broad national representation of IHC clinics across the country and to include a balanced number of biomedical and CAM practitioners. Hence, clinic recruitment was not based on the model of team healthcare practice under which their staff is generally working. An in-situ case study of multiple clinics, each representing a different model of team practice would be required to fully appreciate the similarities and differences between clinic models. Moreover, the survey instrument relied on self report of the model of interprofessional collaboration and thus, may be susceptible to assessment bias. The primary objectives for this thesis did not include alternative means of data collection or deeper investigation of the inquiries generated by the findings. My interest was rather to explore whether the framework is empirically plausible and warranted further multi-method examinations.

Integrated framework and findings

This section introduces a conceptual framework that summarizes and integrates the results of the thesis work. It is followed by an interpretation of the major findings in the context of interprofessional collaboration within Canadian IHC clinics.

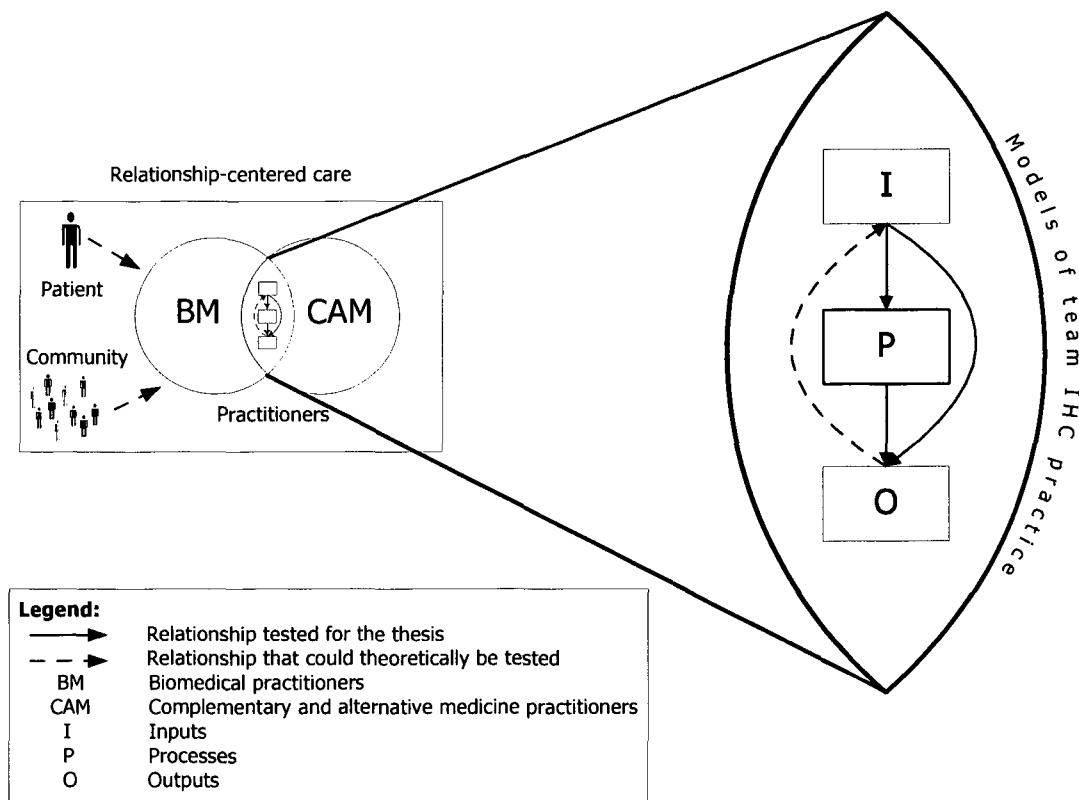
Integrated framework

The knowledge gained by this project enhances the understanding of interprofessional collaboration in a relatively novel field of the Canadian healthcare system, IHC. Figure 1 (Chapter 5) draws upon three theoretical and conceptual models and frameworks, to describe the operationalization of teamwork in IHC in a new integrated framework. This figure also shows the potential of investigations with regards to the collaborative experience within an IHC milieu as suggested by the Relationship-Centered Care (RCC) model, although these links were not tested in this thesis.

Overall this thesis has demonstrated that interpersonal relationships are central to the collaborative practice of healthcare delivery. Hence, collaboration within an IHC setting could be represented using the principles of the RCC model. This model offers an approach to understanding the delivery of healthcare rooted in the theory of complexity (Inui, 1996; Suchman, 2006). It is based on the fact that patterns of relationships are continuously self-organizing in the course of human interactions. The RCC suggests that these interactions occur between three principal actors in the healing process, where the practitioner is the pivot: a) the team of practitioners within the clinic; b) the patients; and c) the community. Moreover, as patterns of relating are continuously re-enacted, they may exhibit stability (continuity) or they may vary and sometimes altogether new patterns may arise

spontaneously. Regularity is eventually achieved by convergence of the dynamic patterns of relating. The theory of complexity underpinning the RCC model brings to the conceptual framework assembled for the thesis the notion that particular self-regulating patterns will be observed between the different actors of the healing relationship, and especially within and between the group of practitioners.

Figure 1. Integrated framework of interprofessional collaboration in IHC



Since the RCC model is relatively new (Wylie & Wagenfeld-Heintz, 2004; Beach & Inui, 2006) and that both the IPO and the RCC models are untested in the context of IHC, I chose to combine the two models to address theoretical gaps that exist in both that require elucidation in this context of healthcare.

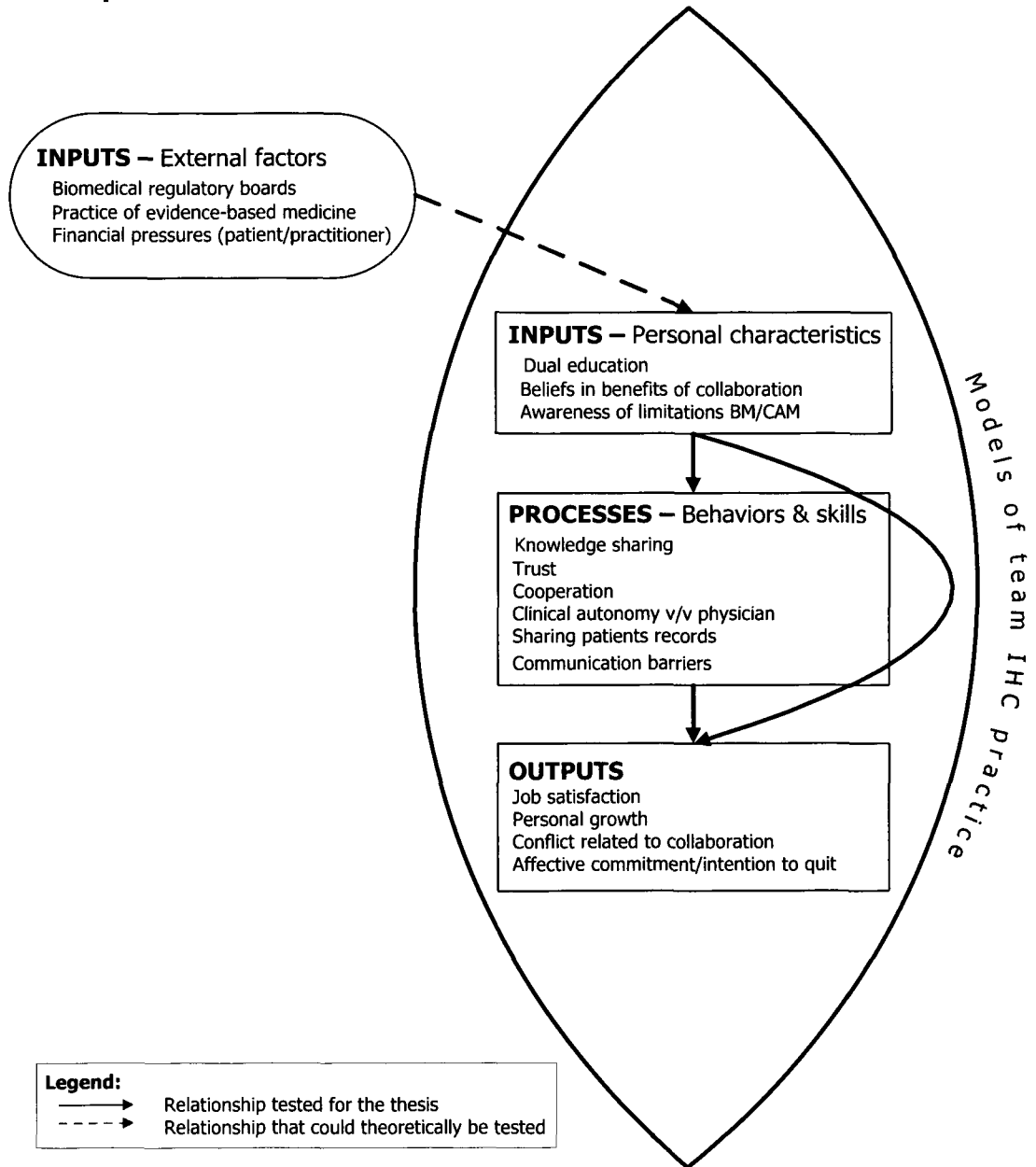
The complementarity and the juxtaposition of these models addresses these gaps and help to enrich our understanding of the phenomenon under study, for multiple reasons: 1) although the RCC model suggests the personal components necessary for interprofessional collaboration between health professional and patients (i.e., beliefs, attitudes, knowledge) this model lacked the broader system perspective and the theoretical associations that linked these components in a cohesive manner. The IPO model however, does provide a theory of the inputs, processes, and outputs that comprises interprofessional collaboration. By combining these models, a more comprehensive theory of collaboration is achieved; 2) the RCC model did not suggest a broad range of constructs related to the knowledge, attitudes and personal characteristics that could be measured quantitatively (e.g., power of understanding the other's perspective, openness to other's ideas); therefore, limiting the investigation of the inputs of collaboration for the thesis; and 3) I considered the RCC model to be more oriented toward healthcare issues raised by a collaborative practice than the IPO model, which is mainly focused on managerial issues of teamwork.

Figure 2 (Chapter 5) complements the previous figure by organizing the particular components of collaboration that emerged as strong themes in the thesis. The choice of constructs represented in this figure were chosen either because they were found to be crucial for the interviewees (first phase) and were seen as impacting on other constructs of collaboration (e.g., dual education could impact on the score on the beliefs in the benefits of interprofessional collaboration scale), or because of the statistical significance of the links between the constructs of collaboration demonstrated in the second phase of the thesis, or both. For example, dual education/training was retained in this integrated framework because of its potential to positively influence the beliefs in the benefits of interprofessional

collaboration, which was found to be associated to multiple processes and outputs of collaboration. Similarly, the external factors of collaboration (namely the pressure exerted by the biomedical regulatory boards and well as the financial limitations of the current Canadian IHC setting) were kept in the framework so that further investigations at the clinic level (which could not be covered in this thesis) could test their impact on the other constructs of collaboration.

Finally, for a comprehensive examination of the relationships between practitioners working in an IHC clinic and to enhance the study of IHC itself, it was deemed important to be able to classify clinics according to their organizational philosophy, structure, and process of collaboration. Indeed, it appears that various models are currently in operation (e.g., Chilton, 2002; Coulter et al., 2007; Edelblute, 2003; Le, 2003; Muscat, 1999a; Muscat, 1999b; Vohra et al., 2005) in North America and that the practice model – or the context within which the collaborative practice occurs – could modulate the process of collaboration. In the absence of a validated framework of models from the literature, I added to the integrated framework a conceptual classification of clinics. Figure 3 (Chapter 5) integrates the preceding figures of this chapter and shows how the different ways to practice IHC (layers) modulate the intensity of the constructs of interprofessional collaboration selected for this thesis and suggested by Boon et al.'s assumptions about the differences between the models of practice (2004a). The selection of the constructs shown in this figure is based on the fact that the constructs differ (either quantitatively or qualitatively) between the groups of models.

Figure 2. Components of collaboration within Canadian IHC clinics



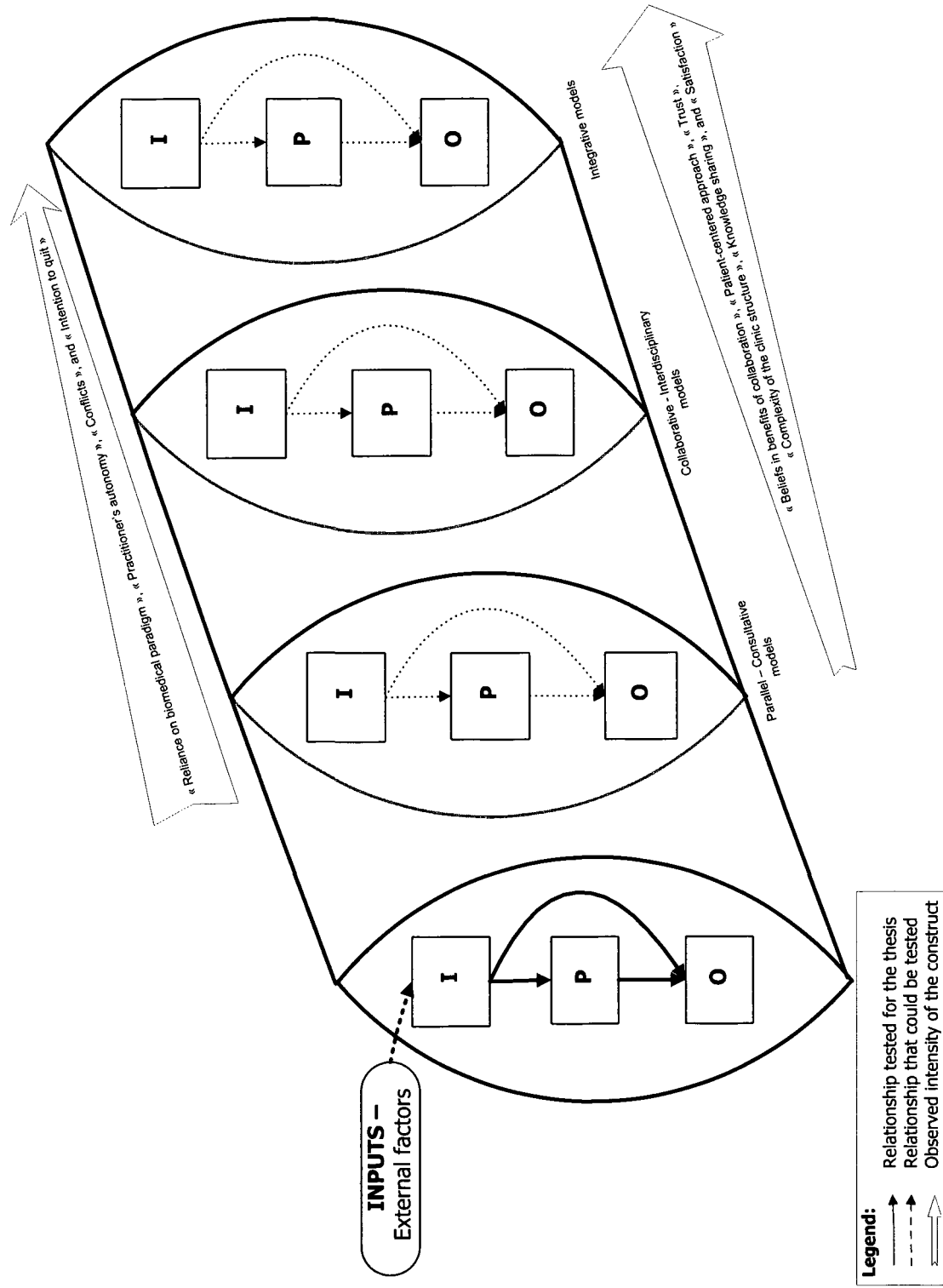
Integrated interpretation of the findings

This doctoral dissertation provided evidence for the importance of two major components of interprofessional collaboration in general, but more particularly in the field of IHC:

interdisciplinary education and exposure, and communication. These integrated findings should be considered at both societal and clinical levels.

Previous studies have shown the need for interdisciplinary education during the professionalization of future healthcare practitioners as a way to reduce barriers to collaboration (Hall, 2005; Leipzig et al., 2002; Oandasan & Reeves, 2005). This dissertation is one of the first to document it empirically from the practitioners' perspective, especially in the context of IHC. The importance of dual education and exposure was voiced by the practitioners interviewed during the qualitative phase and emerged as a major pattern during the analysis. The second phase of the thesis confirmed that biomedical practitioners were more likely to have pursued dual education when compared to their CAM peers, but also show that beliefs in the benefits of collaboration, which I believe is likely to be instilled by dual education and working experience, was the only input factor found to affect other components of collaboration. Therefore, increasing learning opportunities for future healthcare practitioners, across fields of expertise, has the potential to impact directly the success of interprofessional relationships. Exposing students to a variety of healthcare paradigms in the early stage of their training could instill a culture where professionals are more aware of the limitations of their own healing approaches, a factor found in this thesis to facilitate the process of collaboration. In turn, this is likely to favour future equalitarian rapport between practitioners and to create a culture of collaboration where roles are reciprocally understood and accepted.

Figure 3. Components of collaboration within Canadian IHC clinics according to different groups of models



The results of this thesis also show the importance for practitioners already involved in or interested in working in an IHC clinic for continued dual education and knowledge transfer opportunities. To this end, opportunities to stimulate interactions between practitioners within a team are greatly encouraged. Managers and the team should ensure, when possible, that practitioners' schedules regularly overlap at some point during a given period of time to facilitate knowledge sharing within the team. Additionally, and if the general practice model does not include patient case discussions, activities organized regularly for the team are recommended (e.g. lunch and learn, short presentation of a particular healing technique, how to better identify a particular ailment, etc). These sessions have the potential to *reduce terminological barriers and forge links of trust within the team*, which could in turn decrease tensions and conflicts related to a collaborative practice of healthcare and even attenuate power relationships within the team. All of these components emerged from this dissertation as important themes within IHC clinics.

Overall strengths and limitations of the research

This research is not without limitations. The following section describes the limitations of this thesis divided into two main sections: the study design and its applicability to different healthcare contexts. A discussion of the strengths of the thesis follows.

Study design and sampling

Both qualitative and quantitative data collection initiatives were limited to a cross-sectional design and thus only data related to teams who had been working for a significant amount of time (minimum 1 year) were recruited. Although the literature on teamwork increasingly shows that the concept of collaboration must be studied longitudinally, the lack of

frameworks that could inform the study design in the context of IHC prevented the conduct of such a longitudinal study. Some of my findings coupled with those of the literature suggest that the components of collaboration or their relative importance to the process of collaboration might differ depending on the team development stage (Kozlowski & Bell, 2003). However, capturing the nuances in the components of collaboration that pertain to the stage of development of IHC teams was beyond the scope of this project, considering the time constraints of a doctoral dissertation. As well, such a study would be challenging given the relatively small number of Canadian clinics in operation and thus a limited number of clinics representing each stage of development.

Similarly, considering the limited number of potential respondents across the country, I was concerned about losing statistical power due to a response rate that would inevitably be lower for a second contact (Olsen, 2005; Robinson et al., 2007). Therefore, I elected to concentrate my efforts on maximizing the response rate on a single contact. Thus, my findings are limited to cross-sectional ones and their generalizability may be limited to teams that have been in operation for a significant length of time. Moreover, I could not take into account the experience of the practitioner at the clinic, again because of statistical power concerns.

Additionally, the size of the sampling frame limited my selection of outputs to measures at the practitioners' level instead of measures at the team level, commonly found in the study of teams (e.g. cohesion, leadership). Again, I doubt that such a study could be conducted in the Canadian context at this time.

While I was screening for IHC clinics, it became obvious that a new type of model of practice is emerging. Indeed, I talked to a substantial number of clinics entirely staffed by CAM or biomedical practitioners, but that regularly offer on-site consultations from types of practitioners not represented within their clinic to their clients (for example, once every second week or once a month). It would seem to be unlikely that collaboration with off-site practitioners would be as intense as collaboration with on-site practitioners who are regularly encountered both formally and informally. Thus, the results of this thesis work may not extend to these types of clinics. Nevertheless, as a model of healthcare that is prevalent and appears to be growing in Canada, it is a model that deserves attention.

Applicability of the findings to another healthcare system

The context in which the team evolves is now recognized as an important factor to consider while studying collaboration. As mentioned above, I acknowledge that the applicability of my findings may be limited to the Canadian healthcare system. I found that dual education and training as well as the external environment (including funding) play roles in the success of a team. Since both elements are likely to differ significantly from what is available in Canada, further research is needed to confirm how such factors affect the practitioners and their teams in different countries.

Strengths

Several methodological strengths of the thesis at least partially offset its limitations. First of all, the credibility of the findings is largely enhanced by the use of mixed methods.

Methodological triangulation techniques are superior to a single method of data collection

since they increase the internal validity of a study, add rigour, and give new insights to complex phenomena that are beyond the scope of any single technique (Borkan, 2004). Since in-depth exploration of the components of collaboration was required, but the researcher is not a healthcare practitioner, the experience of collaboration at the practitioners' level was more readily assessed using qualitative methods. The secondary quantitative phase explored the relationships between the constructs that emerged from the first phase. This goal was better reached by using a positivism approach that helped to test the link between the constructs while reaching a bigger sample of respondents. Hence a better assessment of the patterns of interprofessional collaboration within IHC clinics was obtained. The benefits of the methodological triangulation were also used in the fourth chapter of this thesis, as data collected for both phases of the thesis contributed to analyses to clarify distinctions between clinic models. Since some of the hypotheses suggested by Boon's framework (2004a) could not be measured via quantitative survey tools, the use of both methods of data collection complemented the knowledge acquired in order to complete a more thorough evaluation of the framework.

A second strength of this dissertation is that recruitment of practitioners took place across the country (in each province from which the researcher and her committee were aware of the presence of IHC clinics) for both phases, and offered an opportunity to all practitioners to participate to the second phase, an innovation in the research field of Canadian IHC. Hence, the findings are not limited to the interprofessional dynamics of one or a restricted number of clinics, or to idiosyncratic provincial regulations or associations of professionals. This sampling frame therefore accounted for the diversity of clinic models and stages of

clinic development, which increases the generalizability of the findings to other clinics evolving in a similar setting.

Finally, the thesis benefited from the fact that it was built to align with the principles of the population health paradigm, where the researcher is encouraged to turn to transdisciplinary investigations to foster a better understanding of factors that affect the health of individuals and communities, which would eventually lead to the reduction of health inequities and improve the health and well-being of the healthcare system stakeholders (Canadian Institute for Health Information, 2008). The contribution to this field is reviewed in the following section.

Relevance to IHC, interprofessional collaboration, and population health

Findings of this thesis make a number of contributions to the fields of interprofessional collaboration, IHC, and population health. Interprofessional collaboration, which only “re-emerged” as an innovative answer to the lack of financial and human resources in healthcare (Baldwin, 1996; Health Canada, 2008a), is an important component in the delivery of IHC. In turn, the place occupied by IHC is rapidly expanding in many western healthcare systems as a result of the population demand. Thus, extensive research on how to assemble better IHC teams and to ensure their longevity, as well as acquiring a better understanding of the optimal position of IHC in the current healthcare setting are necessary. The following sections organize the contributions made by this doctoral thesis into two fields: teamwork in healthcare in general and in IHC, and population health.

Teamwork in healthcare and in IHC

This dissertation was one of the first in the area of IHC to examine the entire suite of dimensions of interprofessional collaboration (inputs, processes, and outputs) using conceptual and theoretical frameworks drawing on organizational studies literature to support its objectives and hypotheses. Failure to do so in previous studies was noted as an important weakness in the healthcare literature (Lemieux-Charles & McGuire, 2006).

There is now evidence showing that the context within which the team evolves determines the conditions that foster effective team functioning (Barrett et al., 2007; Lemieux-Charles & McGuire, 2006). Thus, researchers have called for more research with various team compositions and settings in order to demonstrate how findings on collaboration effectiveness apply to different settings and populations. This dissertation moves beyond the typically studied biomedical groups of practitioners to offer a different perspective on how care could be delivered in the primary healthcare setting and hence complements the knowledge already acquired on other conventional types of teams. The findings of this thesis substantiated the need for researchers to clarify their conceptualization of interprofessional collaboration before attempting to link it with effectiveness, cost-effectiveness and patient satisfaction outcomes. Often times researchers assume that teamwork is a one-dimensional concept and study its impact on healthcare, assuming that all teams will provide similar results. This is especially important as I showed that clinics (and even dyads of practitioners) appeared to differ in terms of their philosophy, structure, process and outcomes, depending on the model on collaboration elected for the clinic or a patient.

The practitioner-team relationships dimension of the RCC model has so far been poorly studied with regards to the model itself, but also in the general literature on teams. This dissertation addressed in part that gap by studying the components of collaboration through the lens of the practitioners by rigorously using qualitative, quantitative and mixed methodologies. Moreover, in 2006, Beach and colleagues reported that the circumstances under which RCC led to favorable outputs were still unknown. Although I could not test all elements defining RCC, this thesis was an important step toward answering this question. Special attention was also made to document power differentials within IHC teams, another theme poorly examined in healthcare service research (Barrett et al., 2007).

Specifically from an IHC perspective, this thesis made a unique contribution in that it is the first to compile a list of Canadian IHC clinics and survey their population. Although it was not accomplished without limitations, future researchers could built on the experience acquired to avoid unexpected pitfalls imposed by the thesis setting and sampling frame. Some of these pitfalls related to the way to approach clinics and to describe the content of the study to potential respondents and interviewees.

Another important contribution to the field of IHC was the evaluation of the Models of Team Healthcare Practice framework (Boon et al., 2004a). Although the taxonomy described by the model is increasingly used in the field of IHC and other biomedical collaborative settings, no formal validation had been conducted prior to this thesis. Chapter 4 provides some insightful answers to questions raised in the literature of teamwork with regards to the way different collaborative groups modulate outcomes of collaboration (Barrett et al.,

2007). Although the thesis did not cover both objective and subjective types of outcomes, it suggests that research in this area may be fruitful.

Population health

The framework that was created throughout this dissertation is consistent with the population health paradigm as it recognizes that healthcare assessment and delivery is the result not only of medical care but of multiple determinants that together contribute to patients' health and their society (Boon et al., 2004b; Silenzio, 2002).

The study of collaboration within IHC programs will hopefully assist with the development of more effective programs, responding more efficiently to patients' demands for more disease prevention/health promotion initiatives, holistic care and empowerment. Examining collaboration within the Canadian IHC system more closely opens up an opportunity to develop an enhanced understanding of the potential roles and credibility of complementary and alternative health approaches in the context of health promotion, disease prevention and management of health and health conditions, regardless of the individual's status in society related to the determinants of health (e.g. age, income, culture, genetic makeup). Developing better IHC programs will entail appropriately and rigorously challenging the scientific basis of medical orthodoxy and monopoly of conventional medicine, regarding both management of disease and financial issues (Foley, 1999; Giordano et al., 2003). On the other hand, improved collaboration is an opportunity for CAM practitioners to correct misinformation and to counter myths about CAM, to develop rigorous study designs to assess CAM effectiveness, and to shift within their own paradigm, since CAM practitioners have sometimes been accused of using individualistic, victim-blaming models that are

considered sterile from a population health and health promotion perspective (Hill, 2003; Silenzio, 2002).

By adequately and successfully combining both biomedical and CAM paradigms, the healthcare system will increase the opportunities for joint and appropriately designed research, which in turn will likely broaden the range of therapies offered to the public within a safer and evidence-based environment. This is all in the interest of improved public health.

Future research

While a number of suggestions for future research are made in chapters 2, 3, and 4, this thesis points to a need for more research in several other avenues that are discussed in this section.

As described in the introduction of this thesis, a number of projects have started to explore patient outcomes in the context of IHC (Mulkins et al., 2003; Scherwitz et al., 2004; Verhoef et al., 2005). However, most of those studies were descriptive and could not test the association between IHC and the identified list of outcomes. One of the goals of this doctoral dissertation was to better understand what is inside the “black box” of interdisciplinary collaboration within IHC clinics so that appropriate links could be tested in future research to possibly relate the workings of IHC clinics with the list of patient outcomes identified by previous studies.

Related to this, the choice of the RCC model was also motivated by future opportunities to expand this avenue of research to consider the patient-practitioner and the community-practitioner dimensions of the model. This would allow not only the exploration of the possible links between IHC and outcomes that pertain to patients, but also their role in the healing process and the collaborative model of practice. Such studies are necessary to establish whether and under what circumstances IHC is 'truly' a better answer to patients' needs than what is currently offered by conventional medicine or CAM alone. Of note, it would be important to investigate the perspective of the patient as a team member in the different models of practice (Boon et al., 2004a) to gain a better understanding of how the mechanisms of communication and joint decision-making process are modulated by the model when the patient is considered. This is even more critical given that my results suggested that the models of collaboration may not always apply to a clinic, but rather to a dyad of practitioners or to a practitioner-patient team.

Although it has been shown that collaboration in general has positive effects on the population health (e.g. Barrett et al., 2007; Lemieux-Charles & McGuire, 2006), others reported harms, especially in the context of IHC (personal communication with M Bujold, September 2008). Clearly, interprofessional collaboration in IHC or IHC itself should never be presented as the panacea for all types of medical conditions. In the same way, the optimal fit between the different collaboration models and particular patients' needs deserves further investigation. By highlighting major distinctions between healthcare practice models, this thesis laid the groundwork for such a study.

While the current dissertation demonstrated that different practice models are in operation in Canada, another element of the framework proposed by Boon et al. (2004a) has been left aside: the administration of the finances of each clinic. Could each model be identified and differentiated by its financial administration? Do the financial administrative models vary in parallel with the continuum of practices? A scan of all models in existence in the Canadian system would be required, but studies that explore their financial arrangements and the possible impact on the collaborative climate of the clinic would also provide insight into the assessment of the clinics' healthcare efficacy and cost-effectiveness.

In the same vein, a variety of objective outcomes measured at the team level should be investigated to refine the evaluation of IHC clinics. Outcomes such as efficacy, clinical quality of care, healthcare utilization and cost-effectiveness need to be measured. Longitudinal comparisons between IHC clinics and purely biomedical ones, although representing a significant methodological challenge, are necessary.

Finally, researchers should also explore further some themes that have been identified by this thesis, but remained relatively uncharted since they were outside the scope of this project. For example, the place occupied by "evidenced-medicine" among collaborating IHC practitioners, ethical concerns related to the integration of different healthcare paradigms (Ben-Arye et al., 2008), stigma experienced by some IHC practitioners from their colleagues and their Colleges and its impact on collaboration, as well as the interaction of the IHC teams with other practitioners and clinics were mentioned, but no particular patterns could be distinguished. In addition, my findings indicated that an upstream change of culture within Canadian regulatory boards as well as within academic institutions, both biomedical

and CAM, is necessary to implement the curricula modifications suggested above. Some discussions took place with regards to this topic (Frenkel & Ben, 2001; Guerrera et al., 2008; Kreitzer et al., 2008; Verhoef et al., 2004; Whitehead, 2007; Health Canada, 2008b; Willms & St Pierre-Hansen, 2008). This thesis opened the door to further investigations of these themes.

Conclusion

In this dissertation, I sought to answer several questions about interprofessional collaboration within Canadian IHC clinics. These answers laid the groundwork on how such a concept could be operationalized and how the research in this area can be moved forward as a part of the solution for the renewal of the Canadian healthcare system. Overall, it shows that mixing oil and water could be an appealing recipe when mixed under the right conditions. More research is warranted to answer with which dishes it is best served, and at what cost.

Statement of contributions and funding

Isabelle Gaboury, the doctoral candidate assumed responsibility for this research project. She was supported throughout her research by a thesis committee composed of members from various disciplines that included from the University of Ottawa, Dr. David Moher (supervisor, Faculty of Medicine), Dr. Jeremy Grimshaw (co-supervisor, Faculty of Medicine), Dr. Laurent Lapierre (member, Faculty of Management) and from the University of Toronto, Dr. Heather Boon (member, Faculty of Pharmacy). The committee provided its expertise in both qualitative and quantitative methodologies, and content (healthcare services, teamwork, and integrative healthcare). All four members were involved from the inception of the research project. Regular meetings were held throughout the course of the project to inform the committee about the unfolding of the project and to hold discussions to ensure the successful achievement of the project.

Isabelle Gaboury led the project through the data collection, data analysis and interpretation of the results steps. She assumed responsibility for writing the three manuscripts with guidance from the thesis committee members. Contributions were received for all chapters from all members who are co-authors of the manuscripts. Isabelle Gaboury drafted all 3 manuscripts. Respective co-authors critically reviewed the drafts and approved the final versions prior to the thesis and journal submission. M. Bujold, doctoral candidate from the Université Laval, verified the data coding of the first and third manuscripts, critically reviewed the drafts and approved the final versions. M. Sears, medical writer for the Children's Hospital of Eastern Ontario Research Institute, reviewed all chapters for style and English grammar.

This project was funded in part by the Canadian Interdisciplinary Network for Complementary and Alternative Medicine Research (IN-CAM) Graduate Student Research Funding Program. Financial support for Isabelle Gaboury by the Fonds de la recherche en santé du Québec (FRSQ) is also gratefully acknowledged.

Dissemination

In addition to the submission of the first two results chapter to peer-reviewed journals (Social Science & Medicine and Journal of Interprofessional Care, respectively), the findings of this thesis have been shared at various scientific meetings.

- Gaboury I, Boon H, Bujold M, Moher D. "Integrative healthcare in Canada: are all models the same?" North American Research Conference on Complementary and Integrative Medicine, Minneapolis, May 2009
- Gaboury I, Lapierre L, Boon H, Moher D. "Interprofessional collaboration within Canadian integrative healthcare clinics through the lenses of the Relationship-Centered Care model." Canadian Conference on Medical Education, Edmonton, May 2009
- Gaboury I, Lapierre L, Boon H, Moher D. "Interprofessional collaboration within Canadian integrative healthcare clinics: a survey of 31 practices." IN-CAM Annual Research Symposium, Toronto, November 2008 & Journal of Complementary and Integrative Medicine 2008: Vol. 5 : Iss. 1, Article 31.
- Gaboury I, Bujold M, Boon H, Grimshaw J, Moher D. "Inter-professional collaboration within integrative healthcare programs: key components." IN-CAM Annual Research Symposium, Vancouver, November 2007 & Journal of Complementary and Integrative Medicine 2007: Vol. 4 : Iss. 1, Article 9.

The integrated findings have also been discussed with clinicians from one of the participating clinics and with members of the Canadian Chiropractic Association during one of their monthly gatherings in Ottawa, in May 2008.

References

- Anderson, D. J. & Finn, M. C. (1983). Collaborative practice: developing a structure that works. *Nurs.Adm Q.*, *8*, 19-25.
- Barrett, J., Curran, V., Glynn, L., & Godwin, M. (2007). *CHSRF Synthesis: Interprofessional Collaboration and Quality Primary Healthcare* Ottawa: Canadian Health Services Research Foundation.
- Baldwin, D. W. (1996). Some historical notes on interdisciplinary and interprofessional education and practice in health care in the USA. *J.Interprof.Care*, *10*, 179-187.
- Beach, M. C. & Inui, T. (2006). Relationship-centered care. A constructive reframing. *J.Gen.Intern.Med.*, *21 Suppl 1*, S3-S8.
- Ben-Arye, E., Frenkel, M., Klein, A., & Scharf, M. (2008). Attitudes toward integration of complementary and alternative medicine in primary care: perspectives of patients, physicians and complementary practitioners. *Patient Education & Counseling*, *70*, 395-402.
- Boon, H., Verhoef, M., O'Hara, D., & Findlay, B. (2004a). From parallel practice to integrative healthcare: a conceptual framework. *BMC Health Services Research*, *4*, 15.
- Boon, H., Verhoef, M., O'Hara, D., Findlay, B., & Majid, N. (2004b). Integrative healthcare: arriving at a working definition. *Alternative Therapies in Health & Medicine*, *10*, 48-56.

- Boon, H. S. & Kachan, N. (2008). Integrative medicine: a tale of two clinics. *BMC Complement Altern.Med.*, 8, 32.
- Borkan, J. M. (2004). Mixed methods studies: a foundation for primary care research. *Ann Fam.Med.*, 2, 4-6.
- Canadian Institute for Health Information. Canadian Population Health Initiative. Retrieved September 9, 2008, from http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=cphi_about_e .
- Chilton, K. (2002). The Ommani Center: an integrative model of healthcare. *Alternative Therapies in Health & Medicine*, 8, 102-103.
- Cole, K. D., Waite, M. S., & Nichols, L. O. (2003). Organizational structure, team process, and future directions of interprofessional health care teams. *Gerontol.Geriatr.Educ.*, 24, 35-49.
- Coulter, I. D., Ellison, M. A., Hilton, L., Rhodes, H., & Ryan, G. (2007). *Hospital-based Integrative Medicine: A case study of the barriers and the factors facilitating the creation of a center* Santa Monica.
- D'Amour, D., Ferrada-Videla, M., San Martin, R. L., & Beaulieu, M. D. (2005). The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. *J.Interprof.Care*, 19 Suppl 1, 116-131.
- Edelblute, J. (2003). A holistic approach to health: The Scripps Center for Integrative Medicine. *Alternative Therapies in Health & Medicine*, 9, 112-113.
- Foley, C. (1999). Patient demand for integrative medicine. *Minnesota Medicine*, 82, 50-51.

- Frenkel, M. & Ben, A. E. (2001). The growing need to teach about complementary and alternative medicine: questions and challenges. *Academic Medicine, 76*, 251-254.
- Giordano, J., Garcia, M. K., Boatwright, D., & Klein, K. (2003). Complementary and alternative medicine in mainstream public health: a role for research in fostering integration. *Journal of Alternative & Complementary Medicine, 9*, 441-445.
- Guerrera, M. P., Glick, R. M., Sierpina, V. S., & Benn, R. (2008). Integrative medicine increasing in family medicine residency programs. *J Am Board Fam.Med., 21*, 170-171.
- Hall, P. (2005). Interprofessional teamwork: Professional cultures as barriers. *J.Interprof.Care, Supplement 1*, 188-196.
- Haward, R., Amir, Z., Borrill, C., Dawson, J., Scully, J., West, M. et al. (2003). Breast cancer teams: the impact of constitution, new cancer workload, and methods of operation on their effectiveness. *Br.J.Cancer, 89*, 15-22.
- Health Canada. (2008a) A 10-year plan to strengthen health care. Retrieved September 9, 2008 from www.hc-sc.gc.ca/hcs-sss/prim/phctf-fassp/index-eng.php
- Health Canada (2008b) Interprofessional Education for Collaborative Patient-Centered Practice. Retrieved September 15, 2008 from www.hc-sc.gc.ca/hcs-rhs/strateg/interprof/index-eng.php
- Hill, F. J. (2003). Complementary and alternative medicine: the next generation of health promotion? *Health Promotion International, 18*, 265-272.

- Hollenberg, D. (2006). Uncharted ground: patterns of professional interaction among complementary/alternative and biomedical practitioners in integrative health care settings. *Social Science & Medicine*, *62*, 731-744.
- Hollenberg, D. (2007). How Do Private CAM Therapies Affect Integrative Health Care Settings in a Publicly Funded Health Care System? *Journal of Complementary & Integrative Medicine*, *4*, Article 5.
- Inui, T. S. (1996). What are the sciences of relationship-centered primary care. *Journal of Family Practice*, *42*, 171-177.
- Kozlowski, S. W. J. & Bell, B. S. (2003). Work groups and teams in organizations. In W.C.Borman, D. R. Ilgen, & R. J. Klimoski (Eds.), *Comprehensive Handbook of Psychology: Industrial and Organizational Psychology* (pp. 333-375). New York: Wiley.
- Kreitzer, M. J., Sierpina, V., Maiers, M., Delagran, L., Baldwin, L., Evans, R. et al. (2008). Ways of knowing: integrating research into CAM education and holism into conventional health professional education. *Explore (NY)*, *4*, 278-281.
- Le, T. M. (2003). The Conemaugh Health System Integrative Health Center. *Alternative Therapies in Health & Medicine*, *9*, 116-117.
- Leipzig, R. M., Hyer, K., Ek, K., Wallenstein, S., Vezina, M. L., Fairchild, S. et al. (2002). Attitudes toward working on interdisciplinary healthcare teams: a comparison by discipline. *J Am Geriatr.Soc.*, *50*, 1141-1148.

- Lemieux-Charles, L. & McGuire, W. L. (2006). What do we know about health care team effectiveness? A review of the literature. *Med.Care Res.Rev.*, *63*, 263-300.
- Martin, E. G., Harris, A. M., Kirk, R. K., Lester, L. B., Nelles, S., Pedersen, A. et al. (1989). Retention strategies that work. *Nurs.Manage.*, *20*, 72I, 72L-72M, 72P.
- McGrath, J. E. (1964). *Social Psychology: a brief introduction*. New York: Holt, Rinehart and Winston.
- Mulkins, A., Verhoef, M., Eng, J., Findlay, B., & Ramsum, D. (2003). Evaluation of the Tzu Chi Institute for Complementary and Alternative Medicine's Integrative Care Program. *Journal of Alternative & Complementary Medicine*, *9*, 585-592.
- Mulkins, A. L., Eng, J., & Verhoef, M. J. (2005). Working towards a model of integrative health care: critical elements for an effective team. *Complementary Therapies in Medicine*, *13*, 115-122.
- Muscat, M. (1999a). The Osher Center for Integrative Medicine at UCSF: healing the whole person with 'relationship-centered' medicine. *Alternative Therapies in Health & Medicine*, *5*, 36-37.
- Muscat, M. (1999b). The Rainbow Healing Arts Center: integrating the science of medicine with the art of healing. *Alternative Therapies in Health & Medicine*, *5*, 30-31.
- Oandasan, I. & Reeves, S. (2005). Key elements of interprofessional education. Part 2: factors, processes and outcomes. *J Interprof.Care*, *19 Suppl 1*, 39-48.
- Olsen, R. J. (2005). The problem of respondent attrition: survey methodology is key. *Monthly Labor Review*, *128*, 63-70.

- Poulton, B. C. & West, M. A. (1999). The determinants of effectiveness in primary health care teams. *J Interprof.Care, 13*, 7-18.
- Robinson, K. A. Dennison, C. R., Wayman, D. M., Pronovost, P. J., & Needham, D. M. (2007). Systematic review identifies number of strategies important for retaining study participants. *J Clin. Epidemiol., 60*, 757-765.
- San Martin-Rodriguez, L., Beaulieu, M. D., D'Amour, D., & Ferrada-Videla, M. (2005). The determinants of successful collaboration: a review of theoretical and empirical studies. *J.Interprof.Care, 19 Suppl 1*, 132-147.
- Scherwitz, L. W., Cantwell, M., McHenry, P., Wood, C., & Stewart, W. (2004). A descriptive analysis of an integrative medicine clinic. *Journal of Alternative & Complementary Medicine, 10*, 651-659.
- Sicotte, C., D'Amour, D., & Moreault, M. P. (2002). Interdisciplinary collaboration within Quebec Community Health Care Centres. *Social Science & Medicine, 55*, 991-1003.
- Silenzio, V. M. (2002). What is the role of complementary and alternative medicine in public health? *American Journal of Public Health, 92*, 1562-1564.
- Stahelski A.J. (1990). Predictors of cooperation in health care teams. *Small group research, 21*, 220-233.
- Suchman, A. L. (2006). A new theoretical foundation for relationship-centered care. Complex responsive processes of relating. *J.Gen.Intern.Med., 21 Suppl 1*, S40-S44.

- Tresolini, C. P. & Pew-Fetzer Task Force (2000). *Health Professions Education and Relationship-Centered Care*.
- Verhoef, M., Brundin-Mather, R., Jones, A., Boon, H., & Epstein, M. (2004). Complementary and alternative medicine in undergraduate medical education. Associate deans' perspectives. *Canadian Family Physician, 50*, 847-5.
- Verhoef, M. J., Mulkins, A., & Boon, H. (2005). Integrative health care: how can we determine whether patients benefit? *Journal of Alternative & Complementary Medicine, 11 Suppl 1*, S57-S65.
- Vohra, S., Feldman, K., Johnston, B., Waters, K., & Boon, H. (2005). Integrating complementary and alternative medicine into academic medical centers: experience and perceptions of nine leading centers in North America. *BMC Health Services Research, 5*, 78.
- Wheelan, S. A., Burchill, C. N., & Tilin, F. (2003). The link between teamwork and patients' outcomes in intensive care units. *Am.J.Crit Care, 12*, 527-534.
- Whitehead, C. (2007). The doctor dilemma in interprofessional education and care: how and why will physicians collaborate? *Medical Education, 41*, 1010-1016.
- Willms, L. & St Pierre-Hansen, N. (2008). Blending in: is integrative medicine the future of family medicine? *Canadian Family Physician, 54*, 1085.
- Wylie, J.L. & Wagenfeld-Heintz, E. (2004). Development of relationship-centered care. *J Healthc. Qual., 26*, 14-21.

Appendix 1
Research Ethics Board Certificates

Université d'Ottawa University of Ottawa

January 16, 2007

David Moher
CHEO

Isabelle Gaboury

Object: Interprofessional Collaboration within Integrative Health Care Programs: A Qualitative and Quantitative Assessment: Phase II (file H 10-06-07)

Dear Doctor Moher and Miss Gaboury,

You will find enclosed the Health Sciences and Science REB ethical clearance for the abovementioned study.


During the course of the study, any modifications to the protocol or forms may not be initiated without prior written approval from the REB. You must also promptly notify the REB of any adverse events that may occur.

This certificate of ethical clearance is valid until January 16, 2008. Please submit an annual status report to the Protocol Officer in January 2008 to either close the file or request a renewal of ethics approval. This document can be found at:
http://web9.uottawa.ca/services/rgessrd/ethics/application_dwn.asp

A copy of this approval will be sent to research services, if necessary.
If you have any questions, you may contact the undersigned at the number 562-5387.

Sincerely yours,

Rita D' Alessandro
Protocol Officer for Ethics in Research
For Dr. Daniel Lagarec, Chair of the Health Sciences and Science REB



Université d'Ottawa University of Ottawa

HEALTH SCIENCES AND SCIENCE RESEARCH ETHICS BOARD

CERTIFICATE OF ETHICAL APPROVAL

This is to certify that the University of Ottawa Health Sciences and Science Research Ethics Board has examined the application for ethical approval of the research project entitled **Interprofessional Collaboration within Integrative Health Care Programs: A Qualitative and Quantitative Assessment: Phase II (file H 10-06-07)** submitted by Isabelle Gaboury and supervised by David Moher of the Children's Hospital of Eastern Ontario. The Board found that this research project met appropriate ethical standards as outlined in the Tri-Council Policy Statement and in the Procedures of the University of Ottawa Research Ethics Boards, and accordingly gave it a Category 1a (approval). This certification is valid one year from the date indicated below.

Rita D' Alessandro
Protocol Officer for Ethics in Research
For Dr. Daniel Lagarec, Chair of the
Health Sciences and Science REB

January 16, 2007
Date



*file
06/54X*

CHEO RESEARCH ETHICS BOARD APPROVAL – EXPEDITED REVIEW

Principal Investigator: Isabelle Gaboury
Proposal Number: #06/54X
Protocol Title: Interprofessional Collaboration within Integrative Health Care Programs: A Qualitative and Quantitative Assessment
Department or PSU: Chalmers Research Group
Approval date: August 25, 2006
Valid Until: August 24, 2007
Documents reviewed and approved: Research protocol submitted August 23, 2006

This is to notify you that the Children's Hospital of Eastern Ontario Research Ethics Board has granted approval to the above named research study on the date noted above. Your project was reviewed under the expedited stream, which is reserved for projects that involve no more than minimal risk to human subjects.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Further, investigators are asked to report the following to the REB:

- Proposed changes to the study procedures (including the recruitment strategy, inclusion criteria, etc.);
- Concerns or issues that arise in conducting the research;
- Changes to the consent documents and advertisement notices;
- Changes to the investigators who assume responsibility for the study; &
- An annual report.

Wishing you success in your project.

Regards,

Dr. Carole Gentile, C.Psych.
 Chair, Research Ethics Board

CG/smeH 25/08/06
 c.c. Pat Brazeau, Manager, CHEO RI
 Dr. David Moher, Chalmers Research Group

This is an official document. Please retain the original for your file *version 11/2003*

CHEO RESEARCH ETHICS BOARD APPROVAL – EXPEDITED REVIEW

Principal Investigator: Isabelle Gaboury

Proposal Number: #07/71X

Protocol Title: Interprofessional collaboration within Integrative Health Care Programs: A Qualitative and Quantitative Assessment (Phase III)

Department or PSU: Clinical Research Unit

Approval date: August 31, 2007

Valid Until: August 30, 2008

Documents reviewed and approved: Research protocol submitted August 21, 2007

This is to notify you that the Children's Hospital of Eastern Ontario Research Ethics Board has granted approval to the above named research study on the date noted above. Your project was reviewed under the expedited stream, which is reserved for projects that involve no more than minimal risk to human subjects.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Further, investigators are asked to report the following to the REB:

- Proposed changes to the study procedures (including the recruitment strategy, inclusion criteria, etc.);
- Concerns or issues that arise in conducting the research;
- Changes to the consent documents and advertisement notices;
- Changes to the investigators who assume responsibility for the study; &
- An annual report.

Wishing you success in your project.

Regards,

Dr. Carole Gentile, C.Psych.
Chair, Research Ethics Board

C.G:smeh 31/08/07
c.c. Pat Brazeau, Manager, CHEO RI

This is an official document. Please retain the original for your file

version 11/2003

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Appendix 2

Consent form for the qualitative phase

Interview informed consent letter

Title of the study: Interprofessional collaboration within integrative healthcare programs: a qualitative and quantitative assessment

Student researcher: Isabelle Gaboury
University of Ottawa, Population Health PhD Program

Thesis supervisor: Dr. David Moher
University of Ottawa, Departments of Pediatrics and Epidemiology
and Community Medicine

Sponsor: Canadian Interdisciplinary Network for Complementary & Alternative Medicine Research (IN-CAM)

The purpose of this study is to better understand how collaboration is experienced within an integrative clinic and to explore the factors that promote or limit collaboration within an interdisciplinary work set-up. The results will be used to complete the student researcher's doctoral dissertation at the University of Ottawa and will be published in a peer-reviewed journal. The study design consists of individual interviews with various practitioners working in integrative clinics in Canada. The interview should last between 30 and 60 minutes and will be audiotaped and transcribed to facilitate the analysis. At the end of the interview, I will receive a 50\$ stipend to compensate for my time. Finally, I might be asked within 1 to 2 months to clarify some of the information I shared. In this case, the student researcher will get in touch with me via email or by phone.

I should be aware that all markers that could identify me or the clinic will be removed from the transcript and not used in the publication of the results of the study.

(Please initial one of the following options)

I agree to be quoted but all personally identifying information shall be removed or altered and contents of the quote shall not be revelatory of my identity. _____

I do not wish to be quoted at all. _____

My identity as a participant will be known only by the primary investigator for this project. The student researcher, her thesis committee's members as well as a transcriber will be the only people who will have access to my recorded interview. My recorded interview as well as the transcript of it will be stored on a CD that will be kept in a locked filing cabinet at the Chalmers Research Group (Ottawa) in Dr. Moher's office for the next 10 years after which they will be destroyed.

I could ask any questions about the study and/or the interview either before participating or during the time I am participating. The results of the study with will send to me after the

research is completed. Upon request, an electronic copy of the recorded interview could also be sent to me four weeks after the interview.

There are no known risks and/or discomforts associated with this study. The expected benefits associated with my participation are the opportunity to participate in a qualitative research study and the information about the experience of collaboration within Canadian integrative clinics.

I have received assurance from the researcher that the information I will share will remain strictly confidential. I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without affecting my relationship with the clinic. There are two copies of the consent form, one of which is mine to keep.

If I have any questions about the study, I may contact the researcher or her supervisor.

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research, University of Ottawa, Tabaret Hall, 550 Cumberland Street, Room 159, Ottawa, ON K1N 6N5, Tel.: (613) 562-5841, Email: ethics@uottawa.ca.

I sign this consent form with full knowledge of the nature and purpose of the procedures.

Signature of participant

Date

Isabelle Gaboury, PhD(C)
University of Ottawa

Formulaire de consentement éclairé pour l'entrevue

Titre de l'étude: Interprofessional collaboration within integrative healthcare programs: a qualitative and quantitative assessment

Étudiante chercheuse: Isabelle Gaboury
Université d'Ottawa, Programme de doctorat en Santé des Populations

Directeur de thèse: Dr. David Moher
Université d'Ottawa, Départements de Pédiatrie et Épidémiologie et Médecine communautaire

Agence de subvention: Réseau interdisciplinaire canadien de recherche sur les médecines alternatives et complémentaires (IN-CAM)

L'étude à laquelle je m'appête à participer servira à mieux comprendre comment la collaboration est vécue ainsi qu'à explorer les facteurs qui peuvent promouvoir ou limiter cette dernière au sein d'une clinique de médecine intégrée. Les résultats de cette étude seront utilisés dans le but de compléter la thèse de doctorat de Madame Gaboury en cours à l'Université d'Ottawa et seront publiés dans une revue révisée par les pairs. L'étude consiste en une entrevue de 30 à 60 minutes où nous discuterons de la collaboration entre cliniciens travaillant dans un environnement de travail interdisciplinaire. À la fin de l'entrevue, je recevrai une compensation financière de 50\$ pour me remercier de ma participation à l'étude. L'entrevue sera enregistrée et transcrite afin de faciliter son analyse. Finalement, il se peut que j'aie à clarifier certains de mes propos d'ici les deux prochains mois. Le cas échéant, Madame Gaboury entrera en contact avec moi à via courrier électronique ou par téléphone.

Je comprends qu'aucun marqueur servant à m'identifier, moi ou la clinique, ne sera utilisé dans l'analyse des données, le rapport des résultats ou la publication de ceux-ci.

(Veuillez SVP initialisez une des deux options suivantes)

Je consens à être cité(e) en autant que l'information personnelle pouvant m'identifier soit retirée ou modifiée et que le contenu de la citation ne révèle en aucun cas mon identité.

Je préfère que mes propos ne soient pas cités. _____

Mon identité en tant que participant à cette étude ne sera connue que par Madame Gaboury, en tant que chercheuse principale de cette étude. Seuls la candidate au doctorat, son comité ainsi qu'une personne responsable de la transcription auront accès aux données anonymes. L'enregistrement ainsi que la transcription de mon échange verbal seront gardés

sur disque compact dans une filière verrouillée prévue à cet effet dans le bureau de Dr. Moher au Groupe de Recherche Chalmers (Ottawa), pour les dix prochaines années et seront détruits par la suite.

Je comprends que je peux poser toutes les questions que je désire au sujet de l'étude avant de prendre ma décision et même durant ma participation à l'entrevue. Je pourrai avoir accès aux résultats de l'étude une fois ceux-ci prêts pour la publication finale. Si je le désire, une copie électronique de la transcription de l'entrevue peut aussi m'être envoyée suivant un délai de quatre semaines après l'entrevue. Il n'y a pas de risque connu relié à la participation à cette étude. Cependant, j'aurai non seulement l'opportunité de participer à une étude de recherche qualitative, mais aussi d'améliorer les connaissances quant à la collaboration au sein de cliniques canadiennes de médecine intégrée.

Ma participation à cette étude est entièrement volontaire et je comprends que je suis libre de me retirer à tout moment durant l'entrevue sans que cette décision nuise à ma relation avec la clinique.

Je signe ce formulaire de consentement éclairé en toutes connaissances de la nature et des procédures reliées à cette étude. Il existe deux copies de ce consentement dont une m'est remise pour mes dossiers.

Si j'ai des questions à propos de cette étude, je peux contacter la chercheuse ou son directeur.

Pour tout renseignement sur les aspects éthiques de cette recherche, je peux m'adresser au Responsable de l'éthique en recherche, Université d'Ottawa, Pavillon Tabaret, 550, rue Cumberland, salle 159, Ottawa, ON K1N 6N5, tél.: (613) 562-5841 ; Courriel : ethics@uottawa.ca

Signature du participant

Date

Isabelle Gaboury, PhD(C)
Université d'Ottawa

Appendix 3
Individual Semi-Structured Interview Guide

Interview guide

Time of interview: _____

Date: _____

Place: _____

Interviewee: _____

Male Female

Type of clinic: Academic Private

Clinic size: _____ practitioners (_____ conventional, _____ CAM, _____ administrative)

Interviewee's expertise: _____

Interviewee has been working at the clinic for _____ years

Worked in a solo practice before: yes no for _____ years

Worked in another type of practice before: yes no for _____ years

(Briefly describe the project. Obtain informed consent.)

Questions:

1. Tell me about your clinic, your colleagues?

2. Could you give me examples that exemplify how you collaborate with your colleagues at the clinic?

Probe: verify whether this collaboration process happens only with one individual (or type of practitioners) or in general.

3. Could you give me examples that exemplify how your colleagues collaborate with you at the clinic?

Probe: verify whether this collaboration process happens only with one individual (or type of practitioners) or in general.

4. What do you think fosters collaboration within the clinic?

5. What do you think challenges collaboration within the clinic?

6. As a practitioner working in a collaborative setting, what do you think the benefits of collaboration are?

7. As a practitioner working in a collaborative setting, what do you think the drawbacks of collaboration are?

8. Are there any last minute thoughts we haven't explored you would like me to know about your experience of collaboration within the clinic?

(Thank the practitioner for participating in this interview. Assure him or her of confidentiality of responses. Inform him or her of the potential clarification procedures.)

Guide d'entrevue

Heure d'entrevue: _____

Date: _____

Place: _____

Répondant: _____

Homme Femme

Type de clinique: Académique Privée

Grosseur: _____ cliniciens (_____ conventionnelle, _____ MAC, _____ administratif)

Rôle du répondant: _____

Répondant travaille à la clinique depuis _____ années

A travaillé en pratique solo auparavant: oui non pendant _____ années

A travaillé dans une autre sorte de pratique: oui non pendant _____ années

(Décrire le projet. Obtenir le consentement éclairé)

Questions:

1. Parlez-moi de votre clinique? De vos collègues?

2. Pourriez-vous me donner des exemples qui illustrent comment vous collaborez au quotidien avec vos collègues de la clinique?

Vérifier que les exemples donnés s'appliquent seulement à un individu (ou à un type de clinicien) en particulier ou en général

3. Pourriez-vous me donner des exemples qui illustrent comment vos collègues collaborent avec vous au quotidien?

Vérifier que les exemples donnés s'appliquent seulement à un individu (ou à un type de clinicien) en particulier ou en général

4. Qu'est-ce que favorise la collaboration au sein de la clinique?

5. Qu'est-ce qui complique la collaboration au sein de la clinique?

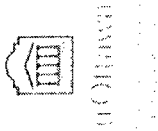
6. En tant que clinicien travaillant dans une clinique de médecine intégrée, quels sont, selon vous, les bénéfices de la collaboration?

7. En tant que clinicien travaillant dans une clinique de médecine intégrée, quels sont, selon vous, les inconvénients de la collaboration?

8. Y a-t-il des points au sujet de votre expérience de collaboration que nous n'avons pas couverts durant l'entrevue mais que vous aimeriez discutés?

(Remercier le clinicien pour sa participation à l'entrevue. Assurer la confidentialité de ses réponses. Informer du processus de clarification de certains propos.)

Appendix 4
Survey Questionnaire



Survey on interprofessional collaboration within Canadian integrative health care clinics

PURPOSE OF STUDY: This research is being conducted by Isabelle Gaboury, a graduate student in Population Health from the University of Ottawa, as part of her PhD dissertation. The aim of the study is to increase our understanding of the interprofessional collaboration among members working in Canadian health care clinics where conventional, complementary and alternative medicine (CAM) practitioners work together. The study is funded in part by the Canadian Interdisciplinary Network for Complementary and Alternative Medicine Research (IN-CAM, www.incamresearch.ca).

The survey has been pilot tested; it should take you approximately 10 to 15 minutes to complete.

IMPORTANT: This survey is confidential and anonymous. Your answers will be reported as a group, not individually. Your participation is VOLUNTARY. By completing this survey and sending it back, you give your consent to participate in this study.

Thank you for taking the time to participate in this important initiative.

We ask that you complete this questionnaire within the next 2 weeks.

We look forward to your responses!

For the purpose of this survey, we define integrative health care as the combination of conventional medical disciplines with complementary and alternative medicine (CAM) therapies. We also define CAM as health care practices and approaches that are not presently considered to be part of traditional or conventional medicine; i.e. medical practices that are not commonly prescribed by licensed doctors and other conventional health care providers.

For the following questions, please check the answer that best represents your experience at this clinic (e.g. , , or .

Section 1. Collaboration factors

Awareness

	Strongly disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Strongly agree
	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
1. I know when to use only conventional medicine or only complementary/alternative medicine (CAM) and when to combine them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I have a good understanding about clinical disciplines outside of my own.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I understand the strengths and weaknesses of conventional medicine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I understand the strengths and weaknesses of complementary and alternative medicine.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Sometimes treatment protocols outside of my clinical practice are a better solution for my patients' health problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. In general, I am familiar with my colleagues' treatment protocols.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Conventional medicine has its limitations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Complementary and alternative medicine has its limitations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I'm well aware of my colleagues' contribution in this clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I know the limits of my clinical practice.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Interprofessional collaboration

At this clinic, interprofessional collaboration:

11. Is a better answer than non-collaborative care to the patients' bio-psychosocial needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Increases the quality of care offered to the patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Leads to greater patient satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Enriches the intervention plans offered to the clinic's patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Brings a better support to clinicians in their clinical interventions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 1. Collaboration factors (con't)

Knowledge exchange

	Strongly disagree <input type="checkbox"/> 1	Somewhat disagree <input type="checkbox"/> 2	Neither agree or disagree <input type="checkbox"/> 3	Somewhat agree <input type="checkbox"/> 4	Strongly Agree <input type="checkbox"/> 5
16. When I have learned something new, I tell my colleagues about it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I share information I have with my colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I think it is important that my colleagues know what I am doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. I regularly tell my colleagues what I am doing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. When I need specific clinical information, I ask my colleagues about it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I like to be informed of what my colleagues know.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I ask my colleagues about their abilities when I need to learn something.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. When a colleague is good at something, I ask them to teach me how to do it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Working Relationships

In this clinic,	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. The physician(s) do not always have the final word in decisions made by the health care team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. The physician(s) have the ultimate legal responsibility for decisions made by the health care team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. The team's primary purpose is to assist the physician(s) in achieving treatment goals for patients.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. The physician(s) often alter patient care plans developed by the team without group consensus.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Physicians are team <i>players</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Physicians are team <i>leaders</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 1. Collaboration factors (con't)

Trust in colleagues

	Strongly disagree <input type="checkbox"/> 1	Somewhat disagree <input type="checkbox"/> 2	Neither agree or disagree <input type="checkbox"/> 3	Somewhat agree <input type="checkbox"/> 4	Strongly agree <input type="checkbox"/> 5
30. If I got into difficulties at the clinic, I know the other clinicians would try to help me out.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
31. I can trust the clinicians I work with to lend me a hand if I need it.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
32. Most of my colleagues can be relied upon to do as they say they will do.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
33. I have full confidence in the skills of my colleagues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
34. I can rely on other clinicians not to make my job more difficult by careless work.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Cooperation

35. I try to maintain harmony within the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
36. I involve other practitioners of the clinic to carry out patient care activities.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
37. I sacrifice my self-interest for the benefit of the clinic.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
38. I coordinate my efforts with the other clinicians.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
39. I work at establishing and keeping a good rapport with the other clinicians.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
40. I support and give credit to my colleagues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Communication

41. The clinic organizes meetings where patient cases are discussed.	<input type="checkbox"/> Every week	<input type="checkbox"/> Every 2 weeks	<input type="checkbox"/> Every month	<input type="checkbox"/> Less than once a month	<input type="checkbox"/> We do not organize such meetings
42. I experience terminological misunderstandings when sharing information with my conventional medicine colleagues	<input type="checkbox"/> Never	<input type="checkbox"/> Not very often	<input type="checkbox"/> Often	<input type="checkbox"/> Very often	<input type="checkbox"/> Very often
43. I experience terminological misunderstandings when sharing information with my CAM colleagues	<input type="checkbox"/> Never	<input type="checkbox"/> Not very often	<input type="checkbox"/> Often	<input type="checkbox"/> Very often	<input type="checkbox"/> Very often

Section 1. Collaboration factors (con't)

Job satisfaction

	Strongly disagree <input type="checkbox"/> 1	Somewhat disagree <input type="checkbox"/> 2	Neither agree or disagree <input type="checkbox"/> 3	Somewhat agree <input type="checkbox"/> 4	Strongly agree <input type="checkbox"/> 5
44. In general, I don't like my job at this clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. All in all, I am satisfied with my job at this clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. In general, I like working at this clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. It is likely that I will actively look for a new job in the next year.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. I often think about quitting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. If I could, I would get another job with another clinic.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>In this clinic,</i>					
50. There is a high level of competition among the clinicians.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Interprofessional collaboration is often perceived as a situation where they are winners and losers (if a clinician wins, another loses).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. Conflicts concerning the sharing of responsibilities between practitioners of different disciplines are frequent.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. There is incompatibility of objectives between practitioners from different disciplines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. The personal objectives of some practitioners are in conflict with the clinic's objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. In general, conflicts between practitioners from different disciplines about the sharing of responsibilities are resolved with difficulty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. There are always practitioners dissatisfied with regards to group decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. The fact that each practitioner belongs to a different professional group is harming interdisciplinary collaboration.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 1. Collaboration factors (con't)

Job satisfaction

	Strongly dissatisfied	Dissatisfied	Neither satisfied or dissatisfied	Satisfied	Strongly satisfied
Please, indicate how satisfied you are with each aspect of your job listed below:	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
58. The amount of personal growth and development I get in doing my job.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
59. The feeling of worthwhile accomplishment I get from doing my job.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
60. The amount of independent thought and action I can exercise in my job.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
61. The amount of challenge in my job.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Section 2. Collaborative model

62. From the list provided below, please circle the letter corresponding to the collaborative model that **best** describes your clinic:

Model

Principal characteristics

- A**
- Independent health care practitioners working in a common setting
 - Each individual performs his/her job within his/her formally defined scope of practice
- B**
- Expert advice is shared between practitioners via personal contact, letter or referral note
- C**
- Patient is seen independently by one or more practitioner(s)
 - On an *ad hoc* basis, practitioners share information concerning the treatment of a particular patient treated by both of them
- D**
- Patients' files are shared between practitioners
 - Liaison and information sharing between practitioners is ensured by a case manager/coordinator
- E**
- The team is managed by a leader
 - Each practitioner independently ensures patient's treatment according to his expertise
 - Practitioners' decisions and recommendations may be integrated by the team leader
- F**
- Planning of patient care is decided by a group of practitioners, via face-to-face meetings
 - Decision on patient care are made through a consensus model
- G**
- Non-hierarchical interdisciplinary collaboration of practitioners
 - Based on a specific set of core values that include the goal of treating the whole person
 - Promotes health and wellness as well as the prevention of disease
 - Practitioners and patient contribute to patient care

Section 3. Demographic information

63. I am a:

- Male
- Female

64. My main occupation at this clinic is:

(e.g. medical doctor, acupuncturist, naturopath, etc.)

65. Please, list the diploma(s), certificate(s), or degree(s) obtained that contribute(s) to your health care practice:

(e.g. medicine, fellowship, naturopathic medicine, Traditional Chinese Medicine, etc.)

_____ in _____ Year completed

_____ in _____ Year completed

_____ in _____ Year completed

_____ in _____ Year completed

66. I have been working at this clinic for:

_____ years _____ months

67. On average, in a typical week I work at this clinic:

_____ hours

68. At this clinic, patients' charts are shared:

- Between all clinicians, without exception
- Between the physicians only, other clinicians have their own charts

Section 3. Demographic information (con't)

69. In the past, I practiced (check all that):

- Solo
- In a hospital
- In a group practice
- Does not apply, this job at this clinic is my first one as a health care practitioner

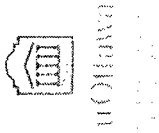
70. In addition to my job at this clinic, I also practice (check all that apply):

- Solo
- In a hospital
- In a group practice
- Does not apply, I only work at this clinic

Comments:

Thank you very much for your time!

Please return the questionnaire to the person who has given it to you in the envelope provided.



Enquête sur la collaboration interprofessionnelle au sein des cliniques intégratives canadiennes de soins de santé

BUT DE L'ÉTUDE: Cette recherche est menée par Isabelle Gaboury, une étudiante aux études supérieures de l'Université d'Ottawa, dans le cadre de sa thèse de doctorat en santé des populations. Cette enquête vise à accroître nos connaissances concernant la collaboration interprofessionnelle au sein des cliniques de soins de santé canadiennes où des cliniciens de la médecine conventionnelle et complémentaire et alternative (MAC) se côtoient. Une partie de cette étude est soutenue financièrement par le Réseau interdisciplinaire canadien de recherche sur les médecines alternatives et complémentaires (IN-CAM, www.incamresearch.com).

Ce questionnaire a été testé et prend approximativement 10 à 15 minutes à compléter.

IMPORTANT: Cette enquête est confidentielle et anonyme. Les résultats seront agrégés de façon à ce qu'aucun individu, ni clinique ne puissent être identifiés. Votre participation est VOLONTAIRE. En complétant ce questionnaire, vous donnez votre consentement à participer à cette étude.

Merci de prendre le temps de participer à cette importante initiative.

Nous vous demandons de compléter ce questionnaire dans les 2 prochaines semaines.

Nous attendons vos réponses avec impatience!

Pour les fins de cette enquête, nous définissons les soins de santé intégratifs comme étant la combinaison des disciplines reliées à la médecine conventionnelle ainsi que celles de la médecine alternative et complémentaire (MAC). Nous définissons également les MAC comme étant des pratiques et approches de soins de santé qui ne sont pas couramment associées à la médecine conventionnelle, c'est-à-dire des pratiques médicales qui ne sont pas prescrites par des médecins ou autre intervenants conventionnels en santé.

Pour les questions suivantes, veuillez cocher la réponse qui représente le mieux votre expérience dans cette clinique (par exemple : , , ou).

Section 1. Facteurs de la collaboration

Sensibilisation

	Tout à fait en désaccord <input type="checkbox"/> 1	Quelque peu en désaccord <input type="checkbox"/> 2	Ni en accord, ni en désaccord <input type="checkbox"/> 3	Quelque peu en accord <input type="checkbox"/> 4	Tout à fait en accord <input type="checkbox"/> 5
1. Je peux discerner les situations où il faut utiliser seulement la médecine conventionnelle ou seulement la médecine complémentaire et alternative et les situations où il faut combiner les deux.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. J'ai une bonne connaissance des disciplines cliniques autres que la mienne.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. Je comprends les forces et les faiblesses de la médecine conventionnelle.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. Je comprends les forces et les faiblesses de la médecine alternative et complémentaire.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5. Les protocoles de traitement autres que les miens sont parfois une meilleure solution pour les problèmes de santé de mes patients.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
6. En général, je suis familier(ère) avec les protocoles de traitements de mes collègues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
7. La médecine conventionnelle a ses limites.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
8. La médecine complémentaire et alternative a ses limites.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
9. Je suis conscient de la contribution de mes collègues dans cette clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
10. Je connais les limites de ma pratique clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Collaboration interprofessionnelle

Dans votre clinique, la collaboration interprofessionnelle :

11. Permet de mieux répondre aux besoins biopsychosociaux des patients que les cliniques où il n'y a pas de collaboration interprofessionnelle.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
12. Améliore la qualité des soins et des services offerts aux patients.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
13. Entraîne une meilleure satisfaction chez les patients	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
14. Enrichit les plans d'intervention offerts aux patients de la clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
15. Apporte un soutien aux intervenants dans leurs interventions auprès des patients.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Section 1. Facteurs de la collaboration (suite)

Échange de connaissances

	Tout à fait en désaccord <input type="checkbox"/> 1	Quelque peu en désaccord <input type="checkbox"/> 2	Ni en accord, ni en désaccord <input type="checkbox"/> 3	Quelque peu en accord <input type="checkbox"/> 4	Tout à fait en accord <input type="checkbox"/> 5
16. Lorsque j'apprends de nouvelles notions, je les partage avec mes collègues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
17. Je partage l'information que je possède avec mes collègues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
18. Je considère important que mes collègues savent ce que je fais.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
19. J'informe régulièrement mes collègues de ce que je fais.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
20. Lorsque j'ai besoin d'une information d'ordre clinique, je demande à mes collègues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
21. J'aime être au courant de ce que mes collègues savent au point de vue clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
22. Lorsque j'ai besoin d'apprendre quelque chose, j'interroge mes collègues au sujet de leurs habiletés.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
23. Lorsqu'un collègue sait bien faire quelque chose, je lui demande de m'enseigner comment le faire.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Relations de travail

	Tout à fait en désaccord <input type="checkbox"/> 1	Quelque peu en désaccord <input type="checkbox"/> 2	Ni en accord, ni en désaccord <input type="checkbox"/> 3	Quelque peu en accord <input type="checkbox"/> 4	Tout à fait en accord <input type="checkbox"/> 5
Dans cette clinique :					
24. Le(s) médecin(s) n'ont pas toujours le dernier mot quant aux décisions prises par l'équipe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
25. Le(s) médecin(s) ont l'ultime responsabilité légale quant aux décisions prises par l'équipe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
26. Le but premier de notre équipe est d'assister le(s) médecin(s) à atteindre les objectifs fixés pour le traitement des patients.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
27. Le(s) médecin(s) modifient régulièrement le plan de traitement d'un patient développé par l'équipe sans d'abord obtenir le consensus.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
28. Le(s) médecin(s) ont un esprit d'équipe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
29. Le(s) médecin(s) sont des leaders d'équipe naturels.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Section 1. Facteurs de la collaboration (suite)

Confiance envers les collègues

	Tout à fait en désaccord	Quelque peu en désaccord	Ni en accord, ni en désaccord	Quelque peu en accord	Tout à fait en accord
30. Si je rencontrais des difficultés dans mon travail, je sais que les autres intervenants tenteraient de m'aider.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
31. Je peux faire confiance aux intervenants avec lesquels je travaille pour me prêter main forte si j'en ai besoin.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
32. Je peux me fier à la plupart de mes collègues lorsqu'ils disent qu'ils vont faire quelque chose.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
33. Je fais entièrement confiance aux habilités de mes collègues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
34. Je peux me fier au fait qu'aucun de mes collègues ne rendra ma tâche plus difficile en faisant un travail de moindre qualité.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Coopération

35. J'entende de maintenir l'harmonie au sein de cette clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
36. J'implique d'autres intervenants de la clinique lorsque je donne des soins aux patients.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
37. Je sacrifie mes propres intérêts pour le bénéfice de cette clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
38. Je coordonne mes efforts avec les autres intervenants.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
39. Je travaille à établir et maintenir des liens avec les autres intervenants.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
40. Je supporte et donne du crédit à mes collègues.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Communication

41. La clinique organise des rencontres multidisciplinaires où le cas de certains patients est discuté.	<input type="checkbox"/> Chaque semaine	<input type="checkbox"/> Chaque 2 semaines	<input type="checkbox"/> Chaque mois	<input type="checkbox"/> Moins d'une fois par mois	<input type="checkbox"/> Nous n'organisons pas ce type de rencontres
42. Je rencontre des difficultés à communiquer dues au langage utilisé lorsque je partage de l'information avec les intervenants de cette clinique pratiquant la médecine conventionnelle.	<input type="checkbox"/> Jamais	<input type="checkbox"/> Rarement	<input type="checkbox"/> Souvent	<input type="checkbox"/> Souvent	<input type="checkbox"/> Très souvent
43. Je rencontre des difficultés à communiquer dues au langage utilisé lorsque je partage de l'information avec les intervenants de cette clinique pratiquant la médecine alternative et complémentaire.	<input type="checkbox"/> Jamais	<input type="checkbox"/> Rarement	<input type="checkbox"/> Souvent	<input type="checkbox"/> Souvent	<input type="checkbox"/> Très souvent

Section 1. Facteurs de la collaboration (suite)

Satisfaction

	Tout à fait en désaccord <input type="checkbox"/> 1	Quelque peu en désaccord <input type="checkbox"/> 2	Ni en accord, ni en désaccord <input type="checkbox"/> 3	Quelque peu en accord <input type="checkbox"/> 4	Tout à fait en accord <input type="checkbox"/> 5
44. En général, je n'aime pas mon travail dans cette clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
45. Tout compte fait, je suis satisfait de mon emploi dans cette clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
46. En général, j'aime travailler dans cette clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
47. Il est probable que je cherche activement un nouvel emploi dans la prochaine année.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
48. Je songe souvent à quitter mon emploi actuel.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
49. Si je le pouvais, je me trouverais un autre emploi dans une autre clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Dans cette clinique :					
50. Il y a un haut niveau de compétition entre les intervenants.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
51. Les relations interprofessionnelles sont souvent perçues comme des situations impliquant nécessairement des gagnants et des perdants (si un intervenant gagne, un autre perd).	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
52. Les conflits concernant le partage des responsabilités entre les intervenants de disciplines différentes sont fréquents.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
53. Les objectifs poursuivis par les intervenants de certaines disciplines sont incompatibles avec les objectifs d'intervenants d'autres disciplines.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
54. Les objectifs personnels de certains intervenants entrent en conflit avec les objectifs de la clinique.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
55. De façon générale, les conflits entre les intervenants de différentes disciplines concernant le partage des responsabilités se règlent difficilement.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
56. Il y a toujours des intervenants qui restent insatisfaits des décisions prises par le groupe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
57. L'appartenance des intervenants à leur groupe professionnel respectif nuit au travail interprofessionnel.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Section 1. Facteurs de la collaboration (suite)

	Très insatisfait(e)	Insatisfait(e)	Ni satisfait(e), ni insatisfait(e)	Satisfait(e)	Très satisfait(e)
Veuillez indiquer votre degré de satisfaction avec les aspects suivants de votre travail :	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
58. La possibilité que m'offre mon travail à grandir et me développer.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
59. Le sentiment d'accomplissement relié à mon travail.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
60. La possibilité de penser et d'agir de façon autonome dans le cadre de mon travail.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
61. Le défi relié à mon travail.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Section 2. Modèle de collaboration

62. Parmi la liste suivante, encerclez SVP la lettre qui correspond au modèle de collaboration qui décrit le mieux votre clinique :

Modèle

Principales caractéristiques

- A • Des intervenants indépendants du domaine de la santé travaillant ensemble dans un environnement commun
- B • Chaque individu accomplit son travail selon un rôle formellement défini
- C • Des avis d'expertise sont partagés entre les intervenants par le biais de contacts personnels, lettres ou références
- D • Le patient est vu indépendamment par chaque intervenant
- E • Les intervenants partagent de l'information *a posteriori* concernant le traitement d'un patient suivi par au moins d'eux d'entre eux
- F • Les dossiers des patients sont partagés entre les intervenants
- G • La liaison et le partage d'information entre les intervenants sont assurés par un gestionnaire ou coordinateur de cas
- H • L'équipe est oérée par un leader
- I • Chaque intervenant assure de façon indépendante le traitement des patients selon son expertise
- J • Les décisions et recommandations des intervenants peuvent être intégrées par le leader de l'équipe
- K • La planification des soins est assurée par un groupe d'intervenants au travers de rencontres face-à-face
- L • Les décisions au sujet des soins donnés au patient se prennent par consensus
- M • Collaboration interdisciplinaire non-hiérarchique entre intervenants
- N • Basé sur un ensemble spécifique de valeurs incluant le désir de traiter la personne dans son entier
- O • Promeut tant la santé et le bien-être que la prévention de la maladie
- P • Les intervenants et le patient contribuent aux soins offerts au patient

Section 3. Caractéristiques démographiques

63. Je suis:

un homme

une femme

64. Mon occupation principale dans cette clinique:

(par exemple, médecin, naturopathe, acupuncteur, etc.)

65. J'ai obtenu un diplôme ou un certificat contribuant à ma pratique de soins de santé dans les domaines suivants:

(par exemple, médecine, spécialisation médicale, naturopathie, Médecine traditionnelle chinoise, etc.)

_____ en _____ Année complétée

_____ en _____ Année complétée

_____ en _____ Année complétée

66. Je travaille dans cette clinique depuis:

_____ année _____ mois

67. En moyenne, durant une semaine typique, je travaille dans cette clinique pendant:

_____ heures par semaine

68. Dans cette clinique, les dossiers des patients sont partagés:

Entre tous les intervenants, sans exception

Entre les médecins seulement, les autres intervenants ont leurs propres dossiers

Section 3. Caractéristiques démographiques

69. Dans le passé, j'ai pratiqué (cochez toutes les réponses qui s'appliquent):

- Solo
- Dans un hôpital
- Dans une pratique de groupe
- Ne s'applique pas, ceci est mon premier emploi en tant qu'intervenant en santé

70. En plus de mon emploi dans cette clinique, je pratique aussi (cochez toutes les réponses qui s'appliquent):

- Solo
- Dans un hôpital
- Dans une pratique de groupe
- Ne s'applique pas, je ne pratique seulement qu'à cette clinique

Commentaires:

Merci d'avoir pris le temps de répondre à cette enquête!

Veillez SVP retourner le questionnaire à la personne qui vous l'a remis dans l'enveloppe prévue à cet effet.