The conceptual basis for interprofessional collaboration: Core concepts and theoretical frameworks

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Abstract
Interprofessional collaboration is a key factor in initiatives designed to increase the effectiveness of health services currently offered to the public. It is important that the concept of collaboration be well understood, because although the increasingly complex health problems faced by health professionals are creating more interdependencies among them, we still have limited knowledge of the complexity of interprofessional relationships. The goal of this literature review was to identify conceptual frameworks that could improve our understanding of this important aspect of health organizations. To this end, we have identified and taken into consideration: (A) the various definitions proposed in the literature and the various concepts associated with collaboration, and (B) the various theoretical frameworks of collaboration. Our results demonstrate that: (1) the concept of collaboration is commonly defined through five underlying concepts: sharing, partnership, power, interdependency and process; (2) the most complete models of collaboration seem to be those based on a strong theoretical background, either in organizational theory or in organizational sociology and on empirical data; (3) there is a significant amount of diversity in the way the various authors conceptualized collaboration and in the factors influencing collaboration; (4) these frameworks do not establish clear links between the elements in the models and the outputs; and (5) the literature does not provide a serious attempt to determine how patients could be integrated into the health care team, despite the fact that patients are recognized as the ultimate justification for providing collaborative care.

Keywords: Collaboration, interprofessional, interdisciplinary, team, models, literature review.

Introduction
Our working lives are always set in collective environments with constant interactions with others. These interactions take different forms, one of which is collaboration. The term collaboration conveys the idea of sharing and implies collective action oriented toward a common goal, in a spirit of harmony and trust, particularly in the context of health professionals. Because the growing complexity of health problems necessarily makes professionals interdependent, it is important to get a better understanding of interprofessional collaboration.
The literature provides some indications of what interprofessional collaboration entails, and demonstrates that we have limited knowledge of this complex phenomenon (Schofield & Amodeo, 1999; Drinka & Clark, 2000; Zwarenstein, Reeves & Perrier, 2004). More specifically, we have limited understanding of the complexity of relationships between professionals (in this case health professionals) who, throughout their education, are socialized to adopt a discipline-based vision of their clientele and the services they offer. Each discipline develops strong theoretical and discipline-based frameworks that give access to professional jurisdictions that are often rigidly circumscribed. This constitutes the essence of the professional system. Collaboration requires making changes to this paradigm and implementing a logic of collaboration rather than a logic of competition (D’Amour, 1999).

Another element to be factored into this complex situation is that these professionals interact in environments that present not only opportunities but a range of organizational constraints. These constraints add another level of complexity to relationships between professionals. Thus, collaborative care experiments have been situated in a wide spectrum of structural and physical settings, yet one element clearly stands out: every institution, manager and health professional faces major challenges in finding better ways to work together.

The goal in conducting a review of the literature was to identify theoretical frameworks that could be used to develop our understanding of this complex phenomenon. Which theoretical frameworks can be used to guide managers and practitioners in their implementation of collaborative practice initiatives? Which theoretical frameworks can investigators draw on when evaluating interprofessional collaboration? Which frameworks will prove useful in studies of the components of collaboration? Our review was intended to provide an overview of the current state of knowledge concerning these models and their strengths. In contrast, Leathard (2003) reviewed the literature on different types of interprofessional collaborations based on team membership, extent of collaboration within the team and settings of collaboration. Here we focus on theoretical frameworks of collaboration and the scientific strength of the models.

Two elements receive particular attention in this paper: (1) first we begin by identifying the various definitions and concepts associated with collaboration, and (2) we present the different theoretical frameworks of collaboration.

Methods

Literature review strategy

The following databases were searched for the period 1990–2003: Medline, CINAHL, Sociological Abstracts, PsycINFO and ABI/INFORM Global (ProQuest). The searches were conducted under a systematic research strategy (Alderson, Green, & Higgins, 2004) based on keywords such as inter, multi, professional, disciplinary, team, occupation, agency and models in health field. Abstracts of 588 papers pre-selected on this initial screening were then analyzed by three independent readers. For a paper to be selected for review, collaboration in the health field had to be its main topic. This resulted in 80 papers being retained for further screening. Next, two independent reviewers applied a screening grid to each of the 80 papers. The grid helped identify the overall setting in which collaborative care took place (type of team, number of professionals involved, types of professions represented, and field of practice), the methodology, the conceptual framework and its scientific strength, and explanatory variables.
After the grid was applied, it resulted in the selection of 27 papers, based on the quality of the methodology employed. Of this group, 17 dealt with definitions or concepts associated with collaboration and 10 with collaborative care frameworks.

**Theoretical frameworks evaluation criteria**

This review defines a theoretical framework as a set of relationships that are understood to exist between various concepts. A theoretical framework must rely on a proven body of knowledge. Three criteria were used to assess the strength of the frameworks of collaboration: (1) reliance on empirical data collected by the investigators, (2) an explicit strategy for reviewing the literature, and (3) reliance on an explicit theory. The number of criteria met determines the strength of the framework. In addition to the theoretical frameworks, some theoretical propositions have also been analyzed for their ability to inform our understanding of how collaboration is perceived. More specifically, we asked whether such propositions could create additional value, influencing the direction or scope of this reflection on collaboration and collaborative practices.

We excluded all papers dealing with disease management, such as the systematic follow-up of clients and eliminated all papers that only provided an identification of the collaborating partners, as they provided no theoretical concept of collaboration.

**Results**

From the 17 papers that dealt with definitions and concepts related to collaboration, we identified two main dimensions: concepts related to collaboration and concepts related to team. The former concerns the type of relations and interactions taking place between co-workers, while the latter describes the human context in which collaboration takes place. These two concepts are explored below.

*(1) Review of the concepts*

**Concepts related to collaboration.** We found that certain concepts were mentioned repeatedly in the definitions of collaboration proposed in the literature. Among the most common were sharing, partnership, interdependency and power. Collaboration has also been defined as a dynamic process. We therefore regrouped definitions of collaboration under these keywords.

Most authors made use of the concept of sharing. Some wrote of shared responsibilities (Arcangelo, 1994; Arslanian-Engoren, 1995; Baggs & Schmitt, 1988; Cowan & Tviet, 1994; Henneman, Lee & Cohen, 1995; Henneman, 1995; Liedtka & Whitten, 1998; Lindeke & Block, 1998; Pike, McHugh, Canney, Miller, Reiley & Seibert, 1993), others of shared decision-making (Baggs & Schmitt, 1988; D’Amour, 1997; Liedtka & Whitten, 1998), and still others of a shared health care philosophy (King, 1990), shared values (Clark, 1997; Henneman, 1995), shared data (D’Amour, 1997; Ivey, Brown, Teske, & Silverman, 1987), and shared planning and intervention (Baggs & Schmitt, 1988; Lindeke & Block, 1998). Finally, some authors focused on how different professional perspectives are shared (Walsh, Bradeck & Howard, 1999). All these different facets of sharing can be observed in a collaborative undertaking.

Second to sharing, the notion of partnership implies that two or more actors join in a collaborative undertaking (Wylie, 1994; Sullivan, 1998) that is characterized by a collegial-like relationship (Arslanian-Engoren, 1995; Henneman, 1995; King, 1990; Pike et al., 1993) that is authentic and constructive (Hanson, Carr & Spross, 2000). Such a relationship...
demands open and honest communication (Stichler, 1995) and mutual trust and respect (Alpert, Goldman, Kilroy & Pike, 1992; Pike et al., 1993; Siegler & Whitney, 1994). Each partner must also be aware of and value the contributions and perspectives of the other professionals (Coluccio & Maguire, 1983; Stichler, 1995; Walsh, et al., 1999). Finally, working in partnership implies that the partners pursue a set of common goals (Baggs & Schmitt, 1988; Cowan & Tvet, 1994; Henneman, 1995; Lindeke & Block, 1998; Pike et al., 1993; Stichler, 1995) or specific outcomes (Hanson, et al., 2000).

**Interdependency**, our third concept, implies mutual dependence. In this context, professionals are like actors who depend on one another (D’Amour, 1997; Fagin, 1992; Liedtka & Whitten; 1998). Thus, collaboration requires that professionals be interdependent rather than autonomous (Evans, 1994; Pike et al., 1993) and their interdependency arises from a common desire to address the patient’s needs (Golin & Ducanis, 1981; Henry, Schmitz, Reif & Rudie, 1992; Evans, 1994; Liedtka, 1998). The increasing complexity of health problems demands the expertise of, contributions from, and participation by, each of the professionals on the team (Stichler, 1995). When team members become aware of such interdependencies, synergy emerges (Morin, 1996) and individual contributions are maximized; the output of the whole becomes much larger than the sum of inputs from each part (Alpert et al., 1992; Evans, 1994; Henry, Schmitz, Reif & Rudie, 1992; Pike et al., 1993). Such interdependency should eventually lead to collective action (D’Amour, 1997).

The fourth concept is that of **power**, which is conceived as shared among team members. Several authors see collaboration as a true partnership, characterized by the simultaneous empowerment of each participant whose respective power is recognized by all (Cowan & Tvet, 1994; Stichler, 1995; Sullivan, 1998). Furthermore, such power is based on knowledge and experience rather than on functions or titles (Henneman, 1995; Henneman et al., 1995; Mundinger, 1994; Stichler, 1995). It is, by its very nature, a product of the relationship and interactions between team members (Friedberg, 1993). In order to maintain actual and perceived symmetry in power relationships, collaborative interaction is required (Corser, 1998). Consequently, power cannot be separated from the relationship through which it is exercised (Friedberg, 1993).

In addition to these concepts, collaboration is also recognized as an evolving **process**. Various authors see collaboration as a dynamic and interactive process (Hanson, et al., 2000; Stichler, 1995; Sullivan, 1998), a transforming process (Sullivan, 1998), an interpersonal process (Hanson, et al., 2000; Henneman, 1995), or the structuring of collective action (D’Amour, Sicotte & Lévy, 1999). The collaborative process may follow very concrete steps, such as negotiation and compromise in decision-making (Liedtka et Whitten, 1998) or shared planning and intervention (Lindeke & Block, 1998). For this reason, the collaborative process requires that professional boundaries be transcended if each participant is to contribute to improvements in client care while duly considering the qualities and skills of the other professionals (Henry et al., 1992; Liedtka & Whitten, 1998).

**Concepts related to team.** Teamwork has become a sine qua non condition for effective practice in health-related institutions. Indeed, collaboration is essential in order to ensure quality health care and teamwork is the main context in which collaborative patient-centered care is provided (King, 1990; Warner, Ford-Gilboe, Laforet-Fliesser, Olson & Ward-Griffin, 1994).

One of the first observations made was that the various definitions found in the papers contain a variety of terms to qualify teams and the interactions that take place in team environments. The most frequent qualifiers were: multidisciplinary, interdisciplinary and transdisciplinary (Ducanis & Golin, 1979; Ivey et al., 1987; Klein, 1990; Satin, 1994, Paul.
& Peterson, 2001; Stephan, Thompson & Buchanan, 2002). It became clear that such terms are rarely clearly defined and they are often used interchangeably (Schofield & Amodeo, 1999; Ivey et al., 1987; Satin, 1994).

On the other hand, these various terms usually convey varying degrees of collaboration within a team. According to Brill (1976), Ivey et al. (1987) and Satin (1994), collaboration within a team can be described on a continuum of professional autonomy. At one end of the spectrum, professionals intervene on an autonomous or parallel basis, thus creating a de facto parallel practice (Satin, 1994). At the other end of the spectrum, professionals have a narrower margin of autonomy but the team as a whole is more autonomous and its members are better integrated (Ivey et al., 1987; Satin, 1994).

**Multidisciplinary team** refers to situations where several different professionals (Siegler & Whitney, 1994) work on the same project but independently or in parallel (Schofield & Amodeo, 1999; Paul & Peterson, 2001; Satin, 1994). In essence, multidisciplinary team evokes a juxtaposition of various professionals and competencies (Klein, 1990; Satin, 1994) interacting on a limited and transient basis (Klein, 1990). Although they do not necessarily meet, the members of a multidisciplinary team manage to work in a coordinated fashion (Ivey et al., 1987; Satin, 1994). The development of structures is nevertheless indispensable to provide support to the team and foster synergy in joint work (Mariano, 1989).

**Interdisciplinary team** implies a greater degree of collaboration between team members (Baggs & Schmitt, 1988; Ducanis & Golin, 1979; Golin & Ducanis, 1981; Klein, 1990; Lindeke & Block, 1998; Satin, 1994; Siegler & Whitney, 1994). According to Berthelot (1999) and Satin (1994), interdisciplinary team involves an effort to integrate and translate, at least to some degree, themes and schemes shared by several professions. To that extent, the prefix “inter” not only refers to a plurality or juxtaposition, but to a common space, an element of cohesion, a shared ownership (Gusdorf, 1990). The interdisciplinary team is a structured entity with a common goal and a common decision-making process (Mariano, 1989; Wells et al., 1998). Thus, the interdisciplinary team is based on an integration of the knowledge and expertise of each professional, so that solutions to complex problems can be proposed (Ducanis & Golin, 1979; Ivey et al., 1987; Klein, 1990; Paul & Peterson, 2001) in a flexible and open-minded way (Satin, 1994). One of the major challenges facing interprofessional practice is how professional territories are carved out and distributed within a complex system. Brought into interdependent relationships in order to address their clients’ needs, members of interdisciplinary teams open up their territorial boundaries in order to ensure more flexibility in the sharing of professional responsibilities (D’Amour et al., 1999; Paicheler, 1995).

Lastly, **transdisciplinary team** refers to a type of professional practice in which consensus-seeking and the opening up of professional territories play a major role. As a result, boundaries become blurred or vanish (Paul & Peterson, 2001; Stepans et al., 2002). A transdisciplinary team is characterized by a deliberate exchange of knowledge, skills and expertise that transcend traditional discipline boundaries (Stepans et al., 2002).

**Focus on the client.** Independent of how teams function, the majority of the authors address the issue of client participation in a team’s collaborative dynamic. The form taken by this participation tends to vary and is not often explicitly stated. Golin and Ducanis (1981) stress that the client acts as one of the main actors of a professional team. Several authors are of the opinion that clients who participate in the decision-making process have more positive health outcomes (Hinojosa, Bedell, Buchholz, Charles, Shigaki & Bicchieri, 2001; Morrison, 1996; McLeod & Nelson, 2000; Walker & Dewar, 2001). Also, professional paternalism is minimized when the client is associated with the interprofessional health care
team (Clark, 1995; 1997; Lindeke & Block, 1997), and traditional methods of intervention tend to be replaced (Walsh et al., 1999). D’Amour (1997) observes that clients can act as external entities or as third-party guarantors to whom the responsibility of coordinating interprofessional work is delegated. Drinka & Clark (2000) have stated that it is unrealistic to expect clients to fully participate in the various aspects of health care on the same footing as the other members of the team.

The question of finding an optimal way to involve the patient in collaborative patient-centered practice is not theoretical. In fact, although all teams and collaborative undertakings have, in principle, the patient at the centre of their concerns, some data suggest that patients may remain unaware of the collaborative practice and see the team as a source of division and a barrier between them and a specific professional. Safran (2003) found that for the majority of patients, the team is invisible and that one of the main challenges in the primary care sector will be to switch to “visible team care.”

(2) Review of theoretical frameworks of collaboration

As mentioned above, we reviewed the 10 papers offering theoretical frameworks for collaboration and sorted these frameworks according to their strength. The strength is based on the criteria as presented in Table I.

Seven frameworks were selected using the criteria presented in Table I. The analyses revealed that three frameworks were based on empirical data and on an explicit theory (+ +), two of them on an explicit theory (+) and two on empirical data (+). The frameworks are listed in Table II, along with our assessment of their strength and whether they take into account the structures and processes of collaboration.

The frameworks are presented according to their theoretical basis. Two of them, by West, Borrill and Unsworth (1998) and Sicotte, D’Amour and Moreault (2003), are derived from

Table I. Criteria for determining frameworks strength.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Empirical data or explicit strategy of literature review and explicit theory</td>
<td>+ +</td>
</tr>
<tr>
<td>Empirical data or explicit strategy of literature review or explicit theory</td>
<td>+</td>
</tr>
<tr>
<td>No empirical data, no explicit strategy of literature review, no explicit theory</td>
<td>0</td>
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Table II. Selected frameworks.

<table>
<thead>
<tr>
<th>Authors</th>
<th>Empirical data</th>
<th>Explicit theory</th>
<th>Explicit litt. review</th>
<th>Strength</th>
<th>Model type</th>
</tr>
</thead>
<tbody>
<tr>
<td>West, Borrill, &amp; Unsworth, 1998</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>+ +</td>
<td>Structure &amp; process</td>
</tr>
<tr>
<td>Sicotte, D’Amour, &amp; Moreault, 2003</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>+ +</td>
<td>Structure &amp; process</td>
</tr>
<tr>
<td>D’Amour et al., 1999 &amp; D’Amour et al., 2004</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>+ +</td>
<td>Structure &amp; process</td>
</tr>
<tr>
<td>Gitlin, Lyons, &amp; Kolodner 1994</td>
<td>✓</td>
<td></td>
<td></td>
<td>+</td>
<td>Process</td>
</tr>
<tr>
<td>Hayward, DeMarco, &amp; Lynch, 2000</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>+</td>
<td>Structure &amp; process</td>
</tr>
<tr>
<td>Corser, 1998</td>
<td>✓</td>
<td></td>
<td></td>
<td>+</td>
<td>Structure &amp; process</td>
</tr>
<tr>
<td>Miller, 1997</td>
<td>✓</td>
<td></td>
<td></td>
<td>+</td>
<td>Structure &amp; process</td>
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</table>
organizational theory. One model is based on organizational sociology (D'Amour et al., 1999; 2004) and another on social exchange theory (Gitlin, Lyons & Kolodner, 1994). To the latter, some authors have added the concept of alliance to generate a new model (Hayward, DeMarco & Lynch, 2000). Two models based solely on empirical data are also presented: Corser (1998) and Miller (1997).

Collaboration frameworks and organizational theory. Several studies in organizational theory have developed working group and team efficiency frameworks. Two research teams, West et al. (1998) and Sicotte et al. (2003), have used such frameworks to develop models of interprofessional collaboration in health care.

Model of Team Effectiveness (West, Borrill & Unsworth, 1998). West et al. (1998) reviewed the literature on group effectiveness and proposed a model that takes into account inputs related to task, group composition, cultural context and organizational context. The model also includes process variables for effectiveness: for example, leadership, communication, and decision-making. Outputs were defined as performance, innovation, well-being and viability. This model has been used by the Aston Centre for Health Organization Research (2002) to study many NHS (National Health System) organizations in the United Kingdom. They studied 100 primary health care teams, 113 community health care teams and 193 secondary health care teams in order to identify conditions conducive to efficient teamwork and to assess the impact on the quality of health care and welfare. This model has also been used to evaluate the effectiveness of cancer teams (Haward, Amir, Borrill et al., 2003). Their work showed that teams that work well together are more effective and more innovative. The authors also studied the link between team working and the well-being of team members, demonstrating that individuals working in teams have lower levels of stress.

Analytical framework of interdisciplinary collaboration (Sicotte, D'Amour & Moreault, 2002). A second research team, Sicotte et al. (2002), has also used group effectiveness frameworks, more precisely the one proposed by Gladstein (1984). They conducted a survey of 146 community health centers (CLSCs) across Quebec. Under their framework, the inputs were contextual variables: more specifically, the characteristics of the managers and the structural characteristics of the program. Intragroup processes, such as belief in collaboration, social integration, degree of conflict and conflicting processes were given particular consideration. The nature of the task acted as a significant mediating variable. The data are analyzed in terms of the intensity of collaboration, given as the degree of interprofessional coordination and the degree that activities were shared. The key results of the study were that interprofessional collaboration depends on conflicting factors, thus underscoring the complexity of professional allegiances. Conflicting beliefs and values foster collaboration while placing constraints on it. The authors also demonstrated the importance of formalization in order for collaboration to occur, the benefits being the capacity of formalization to offer an articulated frame for interprofessional work.

Collaboration and organizational sociology.

Structuration model of interprofessional collaboration (D'Amour, Sicotte & Lévy, 1999; D'Amour, Goulet, Pineault, Labadie, 2004). Research conducted by D'Amour et al. (1999) and D'Amour et al. (2004) was based on strategic analysis by Crozier & Friedberg (1977) and organizational approach by Friedberg (1993). Friedberg considered the organization as a local system of action resulting from the inter-structuring of a set of rules (formalization).
and of human relationships (actors’ strategies). The model developed by D’Amour (1997) has been tested with data from several case studies in order to understand interprofessional and interorganizational collaboration (Daigle, 2000; D’Amour et al., 2001; Echaquan, 2003; Ferrada, 2002). D’Amour’s model conceptualizes the process of collaboration according to four dimensions: (1) finalization (shared goals/vision) refers to the existence of common goals and their appropriation by the team, the recognition of divergent motives and multiple allegiances, and the diversity of definitions and expectations regarding collaboration; (2) interiorization (sense of belonging) refers to the awareness by professionals of their interdependency and of the importance of managing interdependency, and it translates into a sense of belonging, mutual knowledge of values and of disciplinary frameworks and trusting relationships; (3) formalization (structuring clinical care) which is analyzed in terms of rules meant to regulate action by strengthening structures; and 4) governance, which deals with central leadership, local leadership, expertise and connectivity.

Structuration Model of Interorganizational Collaboration (D’Amour et al., 2004). This model was incorporated into a larger one to analyze collaboration between professionals working in different types of organizations such as networks. The inputs are related to the network characteristics and to the organization’s characteristics. The processes are the four dimensions mentioned above. The outputs are defined in terms of quality of care, innovation in professional practices and satisfaction. Drawing from the model and from numerous case studies, ten variables were identified to evaluate collaboration. Based on these variables, three types of collaboration were recognized: collaboration in action, collaboration in construction and collaboration in inertia. This work can be applied to reveal the type of collaboration within a given group and to investigate departures from expectations. The results demonstrated that collaboration in action is associated with strong leadership and with more accessible and continuous services.

Collaboration and social exchange theory.

Five-stage model of collaboration (Gitlin, Lyons & Kolodner, 1994). Gitlin et al. (1994) used social exchange theory in their analysis of collaboration. The basic assumption of social exchange theory is that social structures can be understood through an analysis of interpersonal transactions; understanding interactions is the key to understanding complex social behaviours between groups. The theory’s two fundamental concepts are exchange and negotiation. The underlying principle is that an individual will join a group that provides a specific benefit and that, in return, he or she must help the group attain its objectives: this is the exchange. The negotiation process begins when an individual offers to contribute specific expertise to the group and, in return, expects to receive specific benefits. Individuals and groups are thus constantly engaged in negotiations to try to optimize benefits, reduce costs and move forward under conditions that will be fair to all.

Gitlin et al. (1994) expanded social exchange theory into a four-parameter model: exchange, negotiation, building an environment of trust and role differentiation. Their model involves a series of activities occurring in five overlapping stages: (1) assessment and goal setting, where participants examine their individual and institutional goals and assess the need for developing a collaborative relationship and its cost-benefit ratio; (2) determination of a collaborative fit, in which participants meet to exchange and negotiate potential project ideas and roles and begin to establish an environment of trust; 3) identification of resources and reflection, where individuals return to their group to reassess the resources needed for a collaborative effort and the benefits of participating; 4) refinement and implementation, in
which suggestions and ideas are refined and put forward and the individual contributions differentiated and 5) evaluation and feedback, where team practices and roles are analyzed and future goals are established. This model explains the how and the why behind any step toward a culture that supports collaboration.

Interdisciplinary Alliance Model (Hayward, DeMarco & Lynch, 2000). Hayward et al. (2000) used the work of Gitlin et al. (1994) and of DeMarco, Horowitz & McLeod (2000) as a point of departure, proposing a framework entitled the Interdisciplinary Alliance Model. Their model achieves a theoretical merger of two models, that of Gitlin et al. (1994) and another by DeMarco et al. (2000) concerning the concept of alliance. The former deals with iterative processes in a collaborative setting and the latter with interpersonal factors at play during an interaction. Gitlin’s model has been expanded into seven stages. The alliance model is grounded in the following requisite conditions: (1) caring as a reciprocal ethic between professionals, (2) personal knowing as a mutual reflection, and (3) social support as a form of interprofessional relationship. This model has not been field tested.

Two other bi-disciplinary models. Two bi-disciplinary models have been developed to examine collaboration between professionals; one is based on a review of the literature and the other on empirical data. Neither is based on an explicit theory.

Conceptual Model of Collaborative Nurse-Physician Interactions (Corser, 1998). Corser proposes a framework for collaboration between physicians and nurses based on a review of the literature. The framework takes into consideration personal/interpersonal influences and organizational/professional influences on collaboration. According to Corser, such collaboration requires mutual respect for each others’ professional roles; it also requires that both the nurse and the physician maintain actual and perceived power symmetry with respect to each other. The most significant outcome of collaborative interactions is a more consistent attainment of clinical patient goals. This conceptual framework has not been validated.

Certified Nurse-Midwife, Physician and Client Collaborative Cycle (Miller, 1997). Miller (1997) conducted grounded theory research from interviews with 17 midwives and 5 physicians. The author describes five categories of successful collaborative practices that include descriptions of external conditions, individual attributes, organizational dynamics, trusting attitudes and philosophy of practice. She draws an image of a cycle of collaboration involving the attributes of individuals, patient outcomes and the trusting relationship. She stresses the importance of developing trust-based relationships and of conducting trust-incentive activities in professional education programs. “Developing mission statements for philosophical congruence, educating each profession on the capabilities and roles of the other, and fostering an understanding of their own and each other’s expectations can become as necessary as a part of practice formation as obtaining a license” (p. 307). The author mentions that the findings are limited by the method and, in particular, the small sample size.

Other theoretical assumptions. In addition to the above frameworks, a few theoretical assumptions have been selected because of their potential contribution to the study of collaboration and teamwork.

The work of Koff, DeFriese & Witzke (1994) and the Loosely Coupled Systems Theory of Weick (1976). Koff et al. (1994) applied loosely coupled systems theory to interprofessional...
education. They stated that loosely coupled systems theory is suitable because each discipline has its own philosophy, methodology, rules and values, and that it is difficult to blend various professional perspectives. This observation led to the assumption that the various professional groups within a given institution are loosely coupled. In 1976, Weick proposed the theory of loosely coupled systems, defined as structures in which the links between various components are relatively "soft." On this basis, one can assess the strength of the bonds between the various components of an organization as well as analyze and understand each organization on the basis of the cohesion among its components.

According to Koff et al. (1994), loosely coupled system theory explains how systems that seem to be in opposition and in conflict can survive – and even thrive. They believe that loosely coupled systems theory is useful for understanding interprofessional collaboration as well as the contributions of educational programs, and that it provides reassurance on the viability of such systems, not only in spite of the loose linkage between professionals, but because of it. According to the authors, planners and managers should understand that interprofessional collaboration is not the outcome of easily integrated activities.

The work of Clark based on Schön’s reflective practitioner (1983). According to Clark (1994), the capacity of professionals to practice in a multiprofessional environment depends primarily upon their ability to understand and respect cognitive patterns; in other words, to understand the way in which others conceptualize problems and interventions, as well as the values of every profession. Building upon research in the sociology of professions and especially on studies of the socialization process during professional education, Clark demonstrates that professionals develop different cognitive patterns and values that can hinder their capacity to collaborate. He stresses the importance of explicit training that would enable professionals to understand what he calls the “cognitive maps” and “value maps” of others. To succeed, practitioners must master the skills that allow them to become “reflective practitioners,” according to the concept developed by Schön (1983). The reflective practitioner is not only able to build professional knowledge by integrating personal experience and theoretical knowledge, but can relate to another professional and contribute to a continuum of clinical investigation in full recognition of the specific expertise of his or her partners. The reflective practitioner is also able to integrate the knowledge of other professionals into clinical decision making.

Adopting such a framework requires important changes in professional values, attitudes and practice. The author also raises the issue of the timing of the introduction of interprofessional practice into training programs: first, students must have developed a professional identity strong enough to represent their discipline but flexible enough that they will not resist collaborative practice. What about those professionals who are already established, one might ask? Clark also addresses the issue of resocialization at the workplace and stresses the importance of providing a work environment that fosters collaborative practice.

Drinka’s research on group developmental stages. Work by Drinka (1994) extends findings on team developmental stages, where groups are understood as transitory entities, and applies them to the developmental stages of health care teams. Drinka’s research is based on conflict and problem resolution models and explores five stages: (1) team development (forming); (2) norms and pattern development (norming); (3) confrontation of team members (confronting); (4) team performance (performing); and (5) team dissolution (leaving). Confrontation and conflict are two important components of this model of team evolution through conflict resolution.
Discussion

This review of the literature had two objectives: to identify the concepts commonly associated with collaboration and to assess the strength of proposed conceptual frameworks for collaborative practice.

Concepts related to collaboration

Our findings from the review of concepts related to collaboration reveal collaboration as a complex, voluntary and dynamic process involving several skills. The complexity of the task translates into the presence of varying degrees of collaboration, and the collaborative process is subject to constant change. The term “collaboration” is used in many ways and has a variety of meanings. One way to understand collaboration is to analyze its related concepts. To this end, the main concepts discussed by the authors with respect to collaborative processes are sharing, partnership, interdependency and power. One of the key results of this review has been the observation that definitions of collaboration do not differentiate between its determinants, its processes and its results. In order to arrive at a better understanding of the dynamics of collaborative teams, future research should try to draw finer distinctions between these underlying concepts and, in particular, deepen our knowledge of the nature of collaborative processes. Given these results, we can confirm that it is unrealistic to think that simply bringing professionals together in teams will lead to collaboration. Since professionals have to trust each other before collaborative processes can be established, there is a wide range of human dynamics that need to be developed within a team.

This review identified an important drawback of all the proposed definitions of collaboration: the absence of the patient’s perspective, reflecting a poor conceptualization of the role of the patient/client/family in the collaborative process. Indeed, not one of the papers provided a detailed discussion of how to integrate clients into the care team, despite the fact that clients are recognized as the ultimate justification for collaborative care. Furthermore, there was significant disagreement among the authors with respect to the role that the client should play on a health care team. In fact, the client’s role is effectively determined by the logic of professionalization or collaboration to which professionals in their practice adhere. Hence it is legitimate to ask if – according to a perspective under which the client is encouraged to take responsibility for his or her health, and where professional practice is based on a collaborative process – professionals are ready to question their professional “power” and start treating the client as a true partner.

Analysis of the frameworks

Our findings from this review of the literature demonstrate that several frameworks of collaboration have been proposed. However, many of these frameworks address issues related to the structure of the team, such as team composition and the settings of collaborative activities, rather than addressing collaborative processes. They do not help us understand what transpires in the working lives of a group of collaborating professionals or the nature of their interactional dynamics. We were nevertheless able to identify seven theoretical frameworks that can help us understand the process of collaboration in a way that could inform future research and practice. These seven frameworks have much to offer in this regard.
Two key elements of collaboration

Our analysis reveals that collaborative processes are developed with two purposes in mind, to serve client needs and to serve professional needs. Thus, the two constant and key elements of collaboration are: (1) the construction of a collective action that addresses the complexity of client needs, and (2) the construction of a team life that integrates the perspectives of each professional and in which team members respect and trust each other. The two purposes appear to be inseparable, inasmuch as one cannot collaborate without having taken the time to develop a collective life, and there is no use in developing a collective life without having first established the need to collaborate in responding to identifiable patient needs.

Plurality of concepts

The authors have tackled the issue of collaboration from different conceptual points of departure. The most complete frameworks seem to be those that have been based on a strong theoretical foundation in either organizational theory or organizational sociology and are supported by empirical data. Such models take into account both the structural and process dimensions of collaboration and their influence on each other. Another observation concerns the various ways the authors have conceptualized collaboration. Certain authors emphasize collaboration as a systematic attempt to generate more effective results in patient care (Corser, 1998; Miller 1997; Sicotte et al., 2003; West et al., 1998). They present a perspective based on the systems approach, where collaboration consists of inputs, processes and outputs. The outputs are the team’s efficiency, and the inputs are the organizational, professional and structural factors that affect the process. Each of these papers describes its proposed model in different terms, including “collaborative interactions,” “collaborative cycle,” “interdisciplinary collaboration” and “team effectiveness.”

Other authors give greater emphasis to processes such as negotiation or social exchange, in which professionals negotiate their position in the team, using their power as a negotiating tool (D’Amour et al., 2004; Gitlin et al., 1994; Hayward et al., 2000). The resulting frameworks do not, however, forget to place collaboration in a context. The authors also use different terms when naming their models, including “a model for structuring interprofessional collaboration,” “a five-stage model of collaboration” and “an interdisciplinary alliance model”.

These two approaches are complementary, and one does not contradict the other. We can observe that in order to conceptualize collaboration, one needs to take into account the environment of collaboration, the processes in term of human interactions and the outcomes.

Points of commonality and divergence

Indeed, our analysis revealed elements common to all the models, as well as those elements that are unique to specific models. This was true independent of how the collaborative process was conceptualized. The points of commonality are found in the presence of environmental factors that influence the collaborative process. Four of the seven models take environmental factors into account, whether in the form of a network, an organization, a program or a team. The environmental factors are nevertheless very different from one model to another, and not one of them appears in all four models. Two models addressed the issue of formalization, and Sicotte et al. (2002) established a significant link between the
degree of formalization and the intensity of collaboration. All the models considered the issue of interactions; for some of the authors, interactions are an integral part of collaborative processes, for others they are inputs.

All the models propose an approach to conceptualizing collaborative processes, i.e., the way that professionals interact and manage to work together. Our review shows great diversity in how these processes are conceptualized. In some cases, they are seen as group processes influenced by phenomena such as decision-making, leadership, communication, negotiation and task orientation. For others, the processes are regarded as the integration of and agreement with different lines of reasoning, as well as the structuring of collective action through different dimensions of human interaction. Two models differ considerably from the other five by proposing that collaborative processes occur in a series of stages. In three of the frameworks, building trust becomes a key process taking into account that power relationships are asymmetrical. A consideration of the frameworks brings us back to our literature review of concepts, where the main concepts were sharing, partnership, interdependency and power. The selected models of collaboration refer to these same concepts, but express them in different ways.

Our analysis also reveals that the authors have conceptualized different outcomes of collaboration. The outcomes most frequently found concern clinical outcomes expressed in terms of quality of care and effectiveness of treatment. Other outcomes concern satisfaction among the professionals in terms of their well-being and reduced turnover, or are related to professional practices such as increased coordination, shared responsibilities and innovation. One finding is that few models have clearly conceptualized the links between collaboration and its effects.

Conclusion

This review has raised some key points that will be of interest to practitioners, managers and researchers involved in the evolution of collaborative practice. The dynamic established between professionals is as important as the context of collaboration. Collaboration needs to be understood not only as a professional endeavor, but also as a human process. Professionals will not collaborate if the effort is only based on the notion that it will be good for clients. Many other factors must be considered within the context of collaboration. Leadership is a subject that has not been well documented in these frameworks, and we should continue to pursue an understanding of the role that leaders play in collaborative processes.

For investigators, the proposed frameworks offer several lines of research that would further develop our understanding of collaborative processes. However, not all of the above frameworks are based on empirical data, nor have they all been sufficiently tested. Furthermore, they are based on the assumption that collaborative practice has an impact on patient outcomes, but this assumption has not been adequately demonstrated. In addition, the strength of relationships between the various models’ components has not been sufficiently developed. The frameworks enable us to identify several determinants of collaboration operating at a variety of levels; this constitutes another line of research, one that would investigate external factors that have an influence on collaborative processes.

Despite these limitations, the proposed frameworks provide professionals and managers with a deeper understanding of collaborative practice. In certain cases, they can also use the models to diagnose the degree of collaboration achieved and, of course, to identify areas for improvement. These observations represent an important research approach that should be pursued if we are to reach a better understanding of collaboration and develop future lines of research.
Notes

1 Since the authors who wrote on team used the suffix “disciplinary”, we will be using the same vocabulary for this part of the paper. Otherwise we are using the suffix “professional” as in multi or inter professional team, which in our sense better reflects the field of practice. The suffix “disciplinary” evokes the development of knowledge.

2 An article by San Martín Rodríguez et al. in this issue discusses the determinants of collaboration.

References


