

**TEAMWORK IN HEALTHCARE:**  
PROMOTING EFFECTIVE TEAMWORK IN HEALTHCARE IN CANADA

*Policy Synthesis and Recommendations*

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1565 Carling Avenue, suite 700  
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K1Z 8R1

Courriel : [communications@fcrrs.ca](mailto:communications@fcrrs.ca)

Téléphone : 613-728-2238

Télécopieur : 613-728-3527



## TEAMWORK IN HEALTHCARE: PROMOTING EFFECTIVE TEAMWORK IN HEALTHCARE IN CANADA

### *Policy Synthesis and Recommendations*

Ivy Oandasan, MD, MHSc, CCFP, FCFP<sup>1</sup>  
G. Ross Baker, PhD<sup>2</sup>  
Keegan Barker, BA, M.Ed.<sup>3</sup>  
Carmela Bosco<sup>4</sup>  
Danielle D'Amour, RN PhD<sup>5</sup>  
Linda Jones, BSN RN(EC), CFNP<sup>6</sup>  
Shandra Kimpton, M.H.Sc<sup>7</sup>  
Louise Lemieux-Charles, PhD<sup>8</sup>  
Louise Nasmith, MDCM, M.Ed., CCFP, FCFP<sup>9</sup>  
Leticia San Martin Rodriguez, PhD (candidate)<sup>10</sup>  
Joshua Tepper, MD, CCFP<sup>11</sup>  
Daniel Way, BA, MD CCFP FCFP<sup>12</sup>

<sup>1</sup> Associate Professor and Research Scholar, Department of Family and Community Medicine, University of Toronto and Toronto Western Hospital, University Health Network

<sup>2</sup> Professor, Department of Health Policy, Management and Evaluation, Faculty of Medicine, University of Toronto

<sup>3</sup> Research Associate, Department of Family and Community Medicine, Toronto Western Hospital, University Health Network, Assistant Professor, University of Toronto

<sup>4</sup> Health Policy Consultant and Managing Director, CBR Consulting

<sup>5</sup> Associate Professor, Faculty of Nursing, Université de Montréal, Director, FERASI Centre, Researcher, Groupe interdisciplinaire de recherche en santé (GRIS)

<sup>6</sup> Clinical Instructor, School of Nursing, University of Ottawa

<sup>7</sup> Research Associate, Interprofessional Education Innovations, Department of Family and Community Medicine, Toronto Western Hospital, University Health Network

<sup>8</sup> Chair and Associate Professor, Department of Health Policy, Management and Evaluation, Faculty of Medicine, University of Toronto

<sup>9</sup> Professor and Chair, Department of Family and Community Medicine, University of Toronto

<sup>10</sup> Faculty of Nursing, Université de Montréal, FERASI Centre, Researcher, Groupe interdisciplinaire de recherche en santé (GRIS)

<sup>11</sup> Assistant Professor, Department of Family and Community Medicine, University of Toronto, Former Associate Scientist, Institute for Clinical and Evaluative Sciences

<sup>12</sup> Associate Professor, Department of Family Medicine, University of Ottawa

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## MAIN MESSAGES

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- A healthcare system that supports effective teamwork can improve the quality of patient care, enhance patient safety, and reduce workload issues that cause burnout among healthcare professionals.
- Teams work most effectively when they have a clear purpose; good communication; co-ordination; protocols and procedures; and effective mechanisms to resolve conflict when it arises. The active participation of all members is another key feature. Successful teams recognize the professional and personal contributions of all members; promote individual development and team interdependence; recognize the benefits of working together; and see accountability as a collective responsibility.
- The make-up and functioning of teams varies depending on the needs of the patient. The complexity of the health issue defines the task. The more interdependency needed to serve the patient, the greater the need for collaboration among team members.
- Patients and their families are important team members with an important role in decision-making. To enable patients to participate effectively, they need to learn about how to participate in the team; how to obtain information about their condition; and how each healthcare professional will contribute to their care.
- Teams function differently depending on where they operate. Teams in hospitals have clearly defined protocols and procedures, professional hierarchies, and shared institutional goals, while teams in community-based primary care practices face challenges related to the role-blurring in community settings. This wide variety of settings and tasks means that transferability of processes is not always straightforward. It also highlights the need for a common definition of “team.”
- Teamwork is influenced by organizational culture. A clear organizational philosophy on the importance of teamwork can promote collaboration by encouraging new ways of working together; the development of common goals; and mechanisms to overcome resistance to change and turf wars about scopes of practice. Teams need training to learn how to work together and understand the professional role/responsibility of each member. They also require an effective administrative structure and leadership.
- The larger policy context can promote teamwork by providing consistent government policies and approaches; health human resource planning; legislative frameworks to break down silos; and models of funding/remuneration that encourage collaboration. Successful team interventions are often embedded in initiatives working to improve quality of care through better co-ordination of healthcare services and the effective utilization of health resources with a focus on the determinants of health.



## EXECUTIVE SUMMARY

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Teamwork and collaboration in healthcare are “top of mind” issues for Canadians and their decision makers, with many reports calling for improved collaboration as a key strategy in healthcare renewal.

A healthcare system that supports effective teamwork can improve the quality of patient care, enhance patient safety, and reduce workload issues that cause burnout among healthcare professionals.

Yet, while many patients, caregivers, health professionals, and decision makers may be ready to embrace collaborative healthcare, current policies and systems issues are acting as barriers hampering the transformation to team-based healthcare. To support the movement to make teamwork a reality, this report was commissioned to answer three questions:

- *What are the characteristics of an effective team and how do we measure the effectiveness of a team (such as increased job satisfaction, shared workload, reduction of stress, etc.)?*
- *What interventions have been successful in implementing and sustaining teamwork in healthcare? What can we learn from other settings and countries?*
- *To what extent has teamwork been implemented in healthcare settings in Canada? What are the barriers to implementation?*

To prepare this report, an interprofessional research team conducted in-depth interviews with key informants and undertook a wide-ranging survey of peer-reviewed and grey literature on the components of teamwork; effectiveness of teams; types of interventions; healthcare team dynamics; and the impact of government infrastructure, legislation, and policy on teamwork in the Canadian healthcare system. The development of the report was also guided by “Interprofessional Education for Collaborative Patient-Centred Practice: An Evolving Framework,” developed for a 2004 Health Canada initiative on Interprofessional Education for Collaborative Patient-Centred Practice (IECPCP).

From these sources the team identified the challenges of building and maintaining effective teamwork. These include the lack of a common definition of teams and teamwork; the relationship between teamwork and collaboration; the spectrum of collaboration in healthcare; organizational factors affecting teamwork; and the implications of current policy, regulation, and legislation on teams.

What can be done? The fundamental change in the healthcare system required to support teamwork requires a collaborative effort. Leadership and commitment are needed at all levels of the healthcare system to implement and maintain teamwork over the long term.

A number of projects involving different health providers and patients are going on across the country and around the world that we can learn from. For instance, teams work most effectively when they have a clear purpose; good communication; co-ordination; protocols and procedures; and effective mechanisms to resolve conflict when it arises. Teams function better when they are working in an organizational culture that supports teamwork and they have strong leadership and effective administrative support.

Other studies underscore that the task defines the team, with the make-up and functioning of teams varying with the patient and the complexity of his or her needs. With this fluidity, health professionals need training to learn new ways of working together and to become aware of the roles and responsibilities of all members.

However, despite this developing body of knowledge, transformation to teamwork is slow as professionals continue to protect their “turf” or limit scopes of practice to respond to their own needs. Further constraints come from the self-regulation of professionals; current malpractice laws; and funding and remuneration models that do not support teams. The education system has also been slow to adopt new approaches for professional training.

Some government policies support the development of collaborative and interprofessional models, but that alone cannot transform the system. Effective teamwork can only be achieved when all levels of the healthcare system work together. All sectors (including the courts, the professional regulatory bodies, education institutions, accreditation organizations, patients/clients, and providers themselves) must be ready to review current practices and embark on new initiatives that will improve support for collaboration and ultimately improve the health of the Canadian population.

This summary provides some background information and underscores that the practice, organizational, and policy levels must work together to move forward on the process of change required to support effective teamwork in healthcare based on what has been learned from the research and the experiences of other countries. Priorities and implications addressed in this report provide the premise to formally begin the process of establishing effective teamwork in Canada.

## WHY IS TEAMWORK IMPORTANT?

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Teamwork and collaboration in healthcare delivery are “top of mind” issues for many Canadians and their decision makers.<sup>3,4</sup> Numerous forums and government reports have called for improved collaboration among healthcare professionals as a key strategy in healthcare renewal.<sup>5,6,7,8,9,10,11</sup> In 2005, the Health Council of Canada released two reports identifying the need to enhance teamwork throughout healthcare settings in Canada.<sup>18,123</sup> Recent initiatives by Health Canada have also called for improved interprofessional collaboration in healthcare.<sup>4,5,19</sup>

Improved teamwork and collaborative care have been shown to improve performance in many aspects of the healthcare system, including primary healthcare and public health.<sup>18</sup> Recent reports on health human resources have suggested that teamwork might be an effective way of improving the quality of care and patient safety as well as reducing staff shortages and stress and burnout among healthcare professionals.<sup>2,3,12,13,14,18</sup> Other research has shown that teamwork can significantly reduce workloads; increase job satisfaction and retention; improve patient satisfaction; and reduce patient morbidity.<sup>15,16,17</sup>

Yet, while many caregivers, health professionals, and decision makers are calling for improved teamwork, current policies and systems issues often act as barriers hampering the transformation to team-based healthcare.

## SCOPE AND APPROACH OF THE REPORT

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### SCOPE

This report, a synthesis of research documents and findings from key informant interviews with researchers, experts, and decision makers, addresses the following three questions:

- *What are the characteristics of an effective team and how do we measure the effectiveness of a team (such as increased job satisfaction, shared workload, reduction of stress, etc.)?*
- *What interventions have been successful in implementing and sustaining teamwork in healthcare? What can we learn from other settings and countries?*
- *To what extent has teamwork been implemented in healthcare settings in Canada? What are the barriers to implementation?*

### APPROACH TO COLLECTING DATA

The interprofessional research team for this project combined its expertise in health policy, health management, interprofessional education, collaborative practice, and evaluation in designing the data collection approach. (Appendix A contains information on the research approach/methodology.)

The development of the data collection approach was also influenced by two other items:

- “Interprofessional Education for Collaborative Patient-Centred Practice: An Evolving Framework,” developed by the team members who worked together on the 2004 Health Canada initiative on Interprofessional Education for Collaborative Patient-Centred Practice (IECPCP)<sup>1</sup> (see Appendix B); and
- the foundation’s research guidelines, which underscore the importance of collecting data from key informants about their experiential knowledge as well as “scientific” data to ensure that the reality at the practice level is taken into account.<sup>2</sup>

The project team worked in six sub-teams to explore specific components of teamwork including:

- effectiveness of teams;
- types of interventions;
- healthcare team dynamics; and
- the impact of government infrastructure, patient safety, legislation, and policy on teamwork in the Canadian healthcare system.

Each team prepared a working paper synthesizing data from three sources:

- a review of the published and grey literature (such as reports and working papers);
- in-depth telephone interviews with key informants; and
- feedback from experts at an invitational conference in July 2005 to discuss preliminary findings of the research evidence.

The teams then worked collaboratively to write the final synthesis report.

## **RESEARCH EVIDENCE**

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While various studies have attempted to study the effectiveness of healthcare teams, their research is often hampered by two factors which cause a significant weakness in the literature on team effectiveness and make comparability among studies difficult. They are:

- an inadequate conceptualization of “team” and “team outcomes;”<sup>150,151,152,168,169</sup> and
- the complexity and variety of theories and methods used in the research.

While the organizational literature provides a more comprehensive definition of “team” than the literature on healthcare,<sup>22,23,25,27,153</sup> there is a pressing need to clearly and consistently define “team,” “team outcomes,” and “team effectiveness” in the healthcare context.

To contribute to this important discussion on definitions and implications of teamwork, the research team obtained a better understanding about the current practices of effective teamwork within the healthcare system by studying the following themes:

- defining teams;
- teamwork and its relationship with collaboration;
- spectrum of collaboration in healthcare;
- learning about teamwork;
- how to improve teamwork;
- organizational factors affecting teamwork; and
- information gaps on teamwork outcomes.

## DEFINING TEAMS

The literature on teams underscores that a team's structure differs depending upon its purpose, its task, its setting, the mix of professions on the team, and the formal relationships between health professionals on the team.<sup>20,21,22,23,24,25,26A</sup> The literature also notes that because health professionals, researchers, and decision makers all have their own understanding and perspective about what "teamwork" is, no one definition exists. Yet, if team-based practice is to develop and be supported by an appropriate policy framework it is crucial that the distinction between "team," "teamwork," "collaboration," and "collaborative practice" is understood.

The organizational literature defines a team as:

A collection of individuals who are interdependent in their tasks, who share responsibility for outcomes, *who see themselves and who are seen by others* as an intact social entity embedded in one or more larger social systems and who manage their relationships across organizational borders.<sup>27</sup>

Using this definition as a starting point, the researchers compared and contrasted the different ways in which teams are defined in the healthcare field. While not all health professionals work in teams, health professionals' perception as to whether or not they belong to a team varies despite the perceptions of others.<sup>166</sup> For example, in some cases healthcare professionals see themselves as working in uni-professional teams (for example, a nursing team), while others see themselves working in institutionally based teams (such as a stroke team comprised of a range of professions). In addition, individuals receiving care may have their own perception of their healthcare team based on the health professionals they receive care from.

In healthcare, the most common types of teams are:

- project teams (for example, quality improvement teams); and
- care delivery teams and management teams, which are the focus of this report. These teams can be subdivided according to:
  - patient population (such as geriatric teams);
  - disease type (such as stroke teams); or
  - care delivery settings (such as primary care, hospital, and long-term care).<sup>26B</sup>

**Consensus is needed on a common definition of the term "team" if teamwork in the healthcare system is to develop.**

## TEAMWORK AND ITS RELATIONSHIP WITH COLLABORATION

Teamwork is the interaction or relationship of two or more health professionals who work interdependently to provide care for patients. Teamwork means members of the team:

- are mutually dependent;
- see themselves as working collaboratively for patient-centred care;
- benefit from working collaboratively to provide patient care;
- share information which may lead to shared decision-making; and
- know when teamwork should be used to optimize patient-centred care.<sup>129</sup>

Teams are one way of collaborating in which members share goals and are mutually accountable to provide patient care. (However, it is important to note that professionals can collaborate with others without being part of a defined team.)

Because collaboration is defined by the relationships and interactions that occur between co-workers (implying collective action toward a common goal),<sup>17</sup> it is ultimately the health professionals themselves who determine whether or not collaboration occurs.<sup>29</sup>

This line of reasoning suggests that teamwork may be one form of collaboration, but not all collaboration is done in teams.<sup>30</sup> For example, in primary care a family physician, physiotherapist, and dentist may provide care to an individual yet they may not see themselves as a “team” working collaboratively with the patient.

In other words, teamwork is a product of collaboration and collaboration is the process of interactions and relationships between health professionals working in a team environment. It is this process of collaboration that is most often discussed when talking about teamwork in healthcare.<sup>28</sup>

**COLLABORATION enhances teamwork.**  
**Collaboration is a PROCESS that requires relationships and interactions between health professionals regardless of whether or not they perceive themselves as part of a team.**

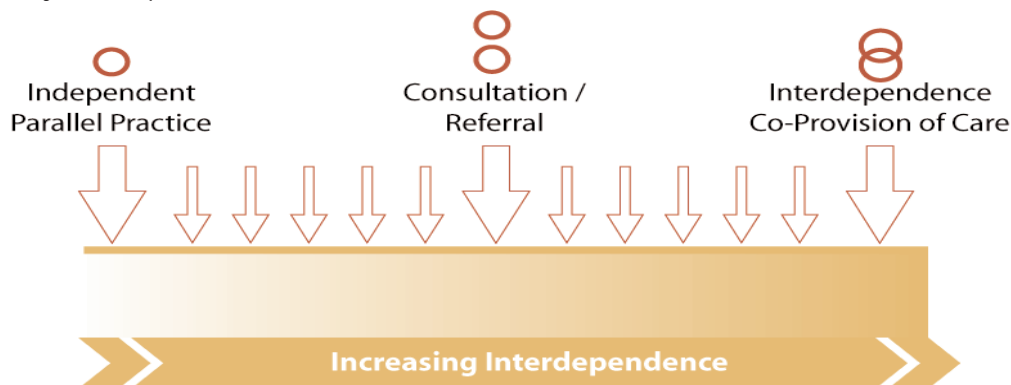
#### SPECTRUM OF COLLABORATION

A wide range of collaboration can occur depending on the type of care required. While the concerns of many individuals, families, and communities can be met within the scope of practice of one profession, when healthcare includes consultation or referral to another professional the practice shifts to interdependent and interprofessional practices. Generally, higher levels of collaboration are needed when health needs are complex and individuals receiving care require the skills of several health professionals.

As shown in the diagram below, collaboration among health professionals is dynamic and occurs within a spectrum from:

- independent parallel practice with autonomous health professionals working side by side; to
- consultation and referral where health professionals exchange information; to
- interdependent co-provision of care with interdependent decision-making.<sup>43</sup>

*Diagram 1: The Spectrum of Collaboration*





Health professionals who practice using a process of interprofessional communication and decision-making that promotes collaboration based on shared knowledge and a range of professional skills to influence patient care are engaged in **collaborative practice**.<sup>48</sup>

**Interprofessional collaboration varies depending on the complexity of healthcare needs and the number and type of healthcare professionals working to address those needs.**

## LEARNING ABOUT TEAMWORK

### *Factors Influencing Team Effectiveness*

Organizational research has developed models to describe the complex interactions related to the context in which teams are situated (such as who is on the team; how team members interact; and what the team is meant to do).<sup>26B</sup> While the classification of teams into “team types” or taxonomies based upon team effectiveness models by Hackman,<sup>24</sup> Cohen and Bailey,<sup>27</sup> and Sundstrom, De Meuse, and Futrell<sup>28</sup> is widely known in the organizational literature, caution must be used in applying findings from the “intellectual teams” in organizations to the “work teams” in healthcare.

What has been found among the organizational models that is applicable to healthcare team literature is the impact of multi-factorial influences on teamwork, including the interactional processes among team members; the structural aspects of teams; and the context of teams.<sup>133</sup>

Building on previous work in the field,<sup>27,164,165</sup> Lemieux-Charles and McGuire<sup>26B</sup> developed an Integrated Team Effectiveness Model (ITEM) specific to healthcare to help researchers and practitioners analyse the factors that influence team function and its capacity for effectiveness. In this model, effectiveness is articulated through clearly defined objective and subjective measures which can be identified by considering responses to the following questions:

1. What is the task of the team?
2. What are the specific features that distinguish the task carried out by the team (for example, the spectrum of collaboration required)?
3. What is the composition of the team (for example, the size of the team; the age and gender of members)?
4. What processes exist to enhance teamwork (such as communication, co-ordination)?
5. What are the psychosocial traits of the team (that is, team norms, cohesion)?
6. What is the organizational context in which the team exists (for example, setting, resources, leadership)?
7. What is the social and policy context related to teams (that is, systemic factors)?

Lemieux-Charles and McGuire believe that responses to these questions can be used to help define healthcare teams and teamwork effectiveness.

- Questions 1 to 5 relate to the practice level and what occurs among members of teams at the practice level that influences teamwork.
- Question 6 relates to organizational factors that facilitate effective teamwork.
- Question 7 relates to the social and policy contexts that can affect the organizational and practice levels.

## **PRACTICE-, ORGANIZATION-, and SYSTEM-level FACTORS influence TEAM EFFECTIVENESS.**

### ***Defining Team Effectiveness: A prerequisite to enhancing effectiveness***

In an earlier section, the need for a clear definition of “team” was discussed. This section considers the need for a definition of “team effectiveness” as a prerequisite to understanding what can be done to enhance the effectiveness of teams.

In organizational research, Hackman’s model of team effectiveness is widely used. It includes three dimensions to team effectiveness:

- the production of a high-quality “product;”
- the ability of team members to continue to work together in the future (viability); and
- a team’s contribution to member well-being and professional growth.

Hackman’s model identifies the following factors that influence effectiveness:

- work design (such as interdependence, clarity of purpose);
- group composition (such as size, skill mix);
- group norms (such as co-ordination); and
- organizational support (such as rewards, training, information).<sup>24</sup>

In healthcare, clinical effectiveness and cost-effectiveness are often studied without well-developed measures of team effectiveness or team outcomes. Therefore, it is difficult to determine what types of teams are most effective.<sup>26B</sup> Researchers need to ask questions such as “what they are effective at?” and “what are the conditions that have influenced the team to be effective?”

Effective collaboration can lead to effective teamwork. Some studies have focused on collaboration as an outcome (that is, as an end point). In models of team effectiveness where outcomes are defined as enhanced patient care and provider satisfaction, collaboration is defined as a process. Further, measuring team effectiveness could be considered one way to assess the level at which team members collaborate. If members of a team are able to collaborate effectively, it is hoped that through their collaboration a specific outcome could be positively affected.

Another commonly used way to measure outcomes of effective healthcare teams is through:

- objective outcomes which include:
  - clinical behaviour (such as functional status, patient satisfaction);
  - organizational behaviour (such as efficiency, costs); and
  - patient behaviour (such as adherence to regimens); and
- subjective outcome measurements for team effectiveness, which often relate to attitudinal aspects measured by team members (such as perceptions of their own team functioning).

**Effective collaboration may be viewed as either a process which affects the results of teamwork (that is, enhanced patient care and provider satisfaction) or an outcome in and of itself.**

**HOW TO IMPROVE TEAMWORK**

A number of studies described in the healthcare literature have been undertaken to facilitate teamwork. But comparability of the findings from the studies is difficult as there is a great variation in how researchers and decision makers define an “intervention” or an “outcome.”<sup>154</sup>

Many of the studies that were systematically reviewed for this project focused on team-building interventions at both the practice and organizational levels (see Appendix C). These studies examined the effectiveness of care delivery teams in single-site acute or homecare health settings using the objective measures of patient and/or organizational outcomes. But because the studies did not articulate what factors had the greatest impact on team outcomes, it is unknown whether these interventions were successful at evaluating and measuring the effect of teamwork on specific outcomes.<sup>268,147</sup>

However, the studies discussed in the healthcare organizational literature on teams did provide insight into the mechanisms used to facilitate the collaborative processes required for teamwork. These include:

- intervention studies that make comparisons between teams; and
- field studies that examine linkages between team characteristics (factors), processes, and outcomes.

***Intervention Studies***

An “intervention” to facilitate teamwork can be a service, activity, method, process, tool, approach, or strategy which is applied within a healthcare setting to foster teamwork. Interventions can occur at both the practice level (with health professionals within teams) and/or at the organizational level (with leaders and administrators providing support to teams).

The studies reviewed for this report demonstrate the range of intervention studies that have been conducted and the range of methodologies used in systematic literature reviews. Because the studies looked at different interventions, were not always well-defined, and did not have clear outcomes, the studies are not easily comparable.

The following table demonstrates the range of interventions to enhance team effectiveness that were reviewed for this project. The table is not meant to be exhaustive but highlights the range of interventions that have been studied.

*Table 1: Interventions Related to Teamwork*

Practice-Level Interventions	Organizational-Level Interventions
<ul style="list-style-type: none"> <li>• Develop survey on standards and performance measures on team effectiveness<sup>157</sup></li> <li>• Practice sessions for team-building and problem-solving<sup>158,159</sup></li> <li>• Self-management<sup>159</sup></li> <li>• Team-training<sup>159</sup></li> <li>• Interdisciplinary rounds<sup>170</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Strategic planning<sup>171</sup></li> <li>• Leadership workshops<sup>158</sup></li> <li>• Provide support to teams by identifying goals and implementing resources<sup>142</sup></li> <li>• Establish protocols and guidelines on roles and responsibilities<sup>172</sup></li> </ul>

Most studies reviewed for this study fall under one of four categories:<sup>58,128</sup>

- **Standardized versus individualized interventions:** Standardized interventions based upon existing approaches to developing teamwork versus innovative, individualized/tailored approaches to address specific needs that are identified by a team of healthcare professionals to enhance their teamwork
- **Frequency of the intervention:** One-time interventions versus long-term multiple interventions
- **Implementation strategies:** Theoretical versus practical training on how to enhance teamwork in the practice setting
- **Level of intervention:** The level of intervention was useful in classifying types of interventions implemented for teamwork that occurred at the organizational and practice levels. Examples of these types of interventions include changing the *structure* of teams and organizations; considering the context; intervening at the level of team processes; and assessing the impact on productivity related to the intervention.<sup>128</sup>

Findings from the systematic literature review also underscored that interventions related to the development of team-based structures (including mechanisms to improve communication through the introduction of communication protocols and interdisciplinary rounds) produced significant results in the short term among patients and health professionals.<sup>59,60</sup> However, these studies often assessed localized health teams and did not have a theoretical base.<sup>16,17</sup> (Appendix C provides the description of selected examples of the interventions related to teamwork.)

Other intervention studies focused on the impact of the size of healthcare teams and patient outcomes. Findings from these studies were inconsistent as teams achieved better patient outcomes in some studies,<sup>56,61</sup> while studies of larger teams found them to be less effective.<sup>42,44</sup>

### ***Practice-Level Factors Influencing Teamwork***

Research suggests that at the practice level, the following factors should be addressed when working to enhance teamwork:

- the process of collaboration<sup>31,32,33</sup> (or essential elements of collaboration);
- values and norms embedded among individuals on teams;
- core competencies to engage in collaboration;
- the articulation of the task; and
- structures to support teamwork (such as membership and composition).<sup>133</sup>

### ***The Process of Collaboration (Essential Elements)***

Heinemann and Zeiss<sup>128</sup> identified two types of processes within teams:

- processes that develop interdependence among team members; and
- processes related to the personal growth and development of individual team members.

Research has shown that there are essential interdependent elements that contribute to the process of collaboration.<sup>74</sup> For example, co-operation and assertiveness relate to conflict resolution which is important in effective collaboration.<sup>31,39,73</sup> Communication,<sup>30,40,41,42,43</sup> trust,<sup>30,44,45,46,47,48</sup> confidence in one's self, confidence in other healthcare partners,<sup>30,45,49,51</sup> autonomy, mutual respect,<sup>35,41,48,52,53</sup> and the feeling of shared responsibility<sup>54</sup> are other essential elements in collaboration.<sup>43,132</sup>

These essential elements, as applied by Jones and Way to primary healthcare, were used in studies of physicians and nurse practitioners in Ontario<sup>38,43,51,130,132</sup> and Nova Scotia.<sup>131</sup> Other field studies have demonstrated that high-functioning teams have been characterized as having good communication patterns, low levels of conflict, and high levels of collaboration, co-ordination, co-operation, and participation.<sup>73,74,75,76,77</sup>

These and other studies identified common themes among health professional teams that demonstrate collaboration:

- increased respect among members of the team,<sup>50,133</sup>
- role clarity within the team,<sup>57,130</sup>
- effective conflict resolution;<sup>130</sup>
- greater responsiveness to patient needs;<sup>131</sup>
- team members' feeling collectively accountable; and
- team members' belief that integrating their work is a responsibility to be upheld.<sup>59</sup>

Lessons learned in other industries can also be helpful in learning about team effectiveness. For instance, the aviation industry<sup>143</sup> conducted *Crew Resource Management* team training to enhance crew functioning and found that it improved communication and co-ordination among aircraft crews.<sup>137</sup> Research also found that those who received the this training were more likely to indicate a greater understanding of team awareness and communication.<sup>138</sup> Because of the success of team training within aviation, the program is being customized for training within healthcare environments. To date, programs have been developed for teams in operating rooms, obstetrics, intensive care, and emergency care.<sup>65,139,140,141,142,167</sup>

Studies of teams in industrial and business organizations (using comprehensive models of team effectiveness) found that improving team processes can dramatically affect team productivity and effectiveness.<sup>27</sup> In healthcare, studies on improving patient safety have found that team training and decision aides (such as checklists and communications protocols) can improve team processes and reduce adverse events.<sup>63,64,149</sup>

### ***Values and Norms of Teamwork Principles***

There is a considerable body of literature that identifies the principles that promote effective teamwork in healthcare settings.<sup>94,128,148</sup> But while these studies clarify the advantages of collaborative approaches within teams, they do not always focus on practical details.<sup>94</sup> The studies did, however, underscore the importance of integrating the expertise of each health professional in an effective way. Through this integration, sharing of knowledge and development of potential solutions to complex problems can be done<sup>39,40,41,42</sup> in a flexible and open-minded way.<sup>43</sup>

The norms relating to the value of teamwork held by team members also influence team functioning. For example, one study found that the social characteristics that confer status on team members (such as gender, race, sex, age) can act as an obstacle to effective team functioning because team members with higher status often have more (perceived) influence on team members. In addition, higher-status members were also seen to be more satisfied in their work environment.<sup>62</sup> These findings indicate the importance of being cognizant of the perceptions of team members and their values, norms, and principles about teamwork which may be a factor that influences the process of collaboration and ultimately the outcomes.

### ***Core Competencies for Practice Collaboration***

Research is identifying specific **competencies** that support the concept that being an effective collaborator can be learned. These competencies include:

- knowledge of healthcare professional roles;
- ability to communicate effectively with other health professionals;<sup>133</sup>
- ability to reflect the effect of health professionals' roles/attitudes related to mutual trust; and
- willingness to collaborate.<sup>1,17,55</sup>

Many of these competencies relate to the concept of the essential elements described above.<sup>38,43</sup> For example, an observational study of communication in operating rooms found that communication failures occurred in one-third of the exchanges between staff and that one-third of these communication failures potentially jeopardized patient safety.<sup>63</sup> The Interprofessional Education for Collaborative Patient-Centred Care initiative by Health Canada highlighted the importance of developing these competencies in their work with academic institutions and educators across the country.<sup>109</sup>

### ***Task of the Team***

The **complexity of the health issue** defines the **task** in which a group of health professionals engages. A task may be an action, decision, or health service performed by a health professional or team in relation to a patient's health issue. The greater the interdependency of professionals, the higher the level of collaboration required. Thus there is a great need for effective teamwork among health professionals within defined teams both in hospitals (such as ICU teams) and in the community.

Health professionals competent in collaboration recognize when there is a need for a team approach to address (complex) health issues, and they are aware of being seen as a member by the person receiving care. Literature also reveals that team boundaries are often fluid, with core and peripheral members of teams.<sup>56</sup> In fact, health professionals often belong to different teams depending on the tasks required to address the common goal of addressing a person's overall health.<sup>26A</sup>

On a practical level, defining new roles for teams has been used to address patient care delivery problems. For instance, new medical emergency teams have been assessed in their task to find new ways to improve patient outcomes and safety and reduce medical errors.<sup>65</sup>

### ***Structures/Composition to Support Teamwork***

To be effective, teams require clear **structures** that outline:

- team objectives;
- roles and responsibilities of team members;
- mechanisms for exchanging information; and
- co-ordination mechanisms for team activities and staffing.<sup>133</sup>

Studies examining structures are often focused on localized healthcare teams using interventions that have not been theoretically grounded.<sup>16,17</sup> Findings from these studies indicate that interventions related to the development of team-based structures (such as mechanisms to improve communication through the introduction of communications protocols and interdisciplinary rounds) produce significant short-term results for patients and health professionals.<sup>59,60</sup>

The **composition** of the team (incorporating new roles for health professionals) can positively affect patient safety. For example, patient safety can be used as a lever to ensure improved quality assurance measures that reduce adverse events. Some of these improvements have been seen through innovations in the composition of medical emergency teams (such as rapid response teams).<sup>135,136</sup> Other studies have shown that the size and composition of teams have a varying impact on team effectiveness related to improved patient outcomes.<sup>268,56,75</sup>

## ORGANIZATIONAL FACTORS AFFECTING TEAMWORK

There is increasing evidence that organizational factors have a strong influence on the development of collaborative practices in healthcare teams and on the performance of teams.<sup>71,24,144,161</sup> Field studies have demonstrated that organizational culture and structures directly and indirectly influence team outcomes.<sup>268,42,43,44,56,60,72,146</sup> Research has also found that teams flourish when they work in an environment that supports and promotes teamwork and are compromised if their organization is geared to managing individuals rather than groups.

An intervention in the organizational context can make organizations more capable of providing support to the team. However, it is important to recognize that creating team-based organizations requires major changes in an organization to create an environment and to develop team-based culture,<sup>161</sup> as organizations that value teamwork optimize team function and work to enhance effectiveness while teams manage the performance of individual team members.

Different healthcare settings have different degrees of organizational complexity around management, types of administrative bodies, governance, and infrastructure support. In addition, healthcare settings have varying levels of resources (financial, technological, human, and educational) to support teamwork.

The literature underscores that strategies to improve team effectiveness need to consider the nature of the organization in which the team works and address the following three components:

- management/strategies to support teamwork;
- resources/tools; and
- setting (acute care, primary care, and rehabilitation care).

### ***Management/Strategies***

Teams require strong organizational support to function effectively. A clear organizational philosophy that values teamwork can motivate health professionals to practice collaboratively by creating a supportive environment<sup>17</sup> with:

- management structures;<sup>133</sup>
- resources;
- information;
- education;
- feedback; and
- technical/process assistance in team functioning.<sup>24,161</sup>

Examining the extent to which organizations provide team support in these areas helps identify underlying influences on team performance. For instance, leadership is a key factor in fostering collaborative practice.<sup>79,80</sup> Providing an organizational structure and resources for teamwork are necessary to enhance team functioning. Investment in team leadership through training on the instrumental aspects of leadership (such as establishing common goals) rather than the psychosocial/relational aspects of leadership (such as establishing a climate of safety and participation) has shown positive results. In addition, the leader has the responsibility to develop team processes (for example, clarity of roles and support for the team) and create favourable performance conditions for the team.<sup>144</sup> In addition, the leader must recognize the importance of setting clear tasks and ensuring the right skill mix and diversity in the group when building a team.<sup>144,145</sup> For instance, members of a primary healthcare team in England rated their effectiveness more highly when they had strong leadership and high involvement of all team members.<sup>155</sup>

Based on findings of organizational studies, organizations that have complex administrative structures or that generate more revenue and employ more personnel are more likely to use team-based structures. One study explored the use of incentives and evaluation to support teamwork and found that half of the organizations surveyed used teams, one-quarter provided incentives for achieving team goals, and one-third formally appraised team performance.<sup>21</sup> The study also underscored the importance of not only supporting teams as they are developing but of actively maintaining them when they are up and running.

The culture regarding teams in organizations and institutions can influence the amount of change that can occur. For instance, airline industry studies found that the standardization of models for airline cockpit crews (such as cockpit design, management, cockpit technology, regulatory procedures and standards) were “so deeply rooted institutionally that team performance was nearly immune to leadership and regulatory initiatives.”<sup>143</sup> This example underscores the difficulty in achieving change even with leadership and regulatory initiatives.

### ***Resources/Tools***

Organizations need to provide resources and tools to support the implementation and maintenance of teamwork to enable teams to achieve targets or objectives.<sup>161</sup> As discussed above, resources to support the development of structured protocols, policies, and communication standards support collaborative work.<sup>29,81,82,83,84</sup>

The literature describes these resources as “the formalization of rules and procedures for collaboration by health professionals.”<sup>45,85,86</sup> Controlled studies conducted within the Veterans Health Administration (VHA) system in the United States showed that standardized team-based processes can result in positive outcomes that affect team composition, team tasks, and processes. The VHA system provides a rich description of the conditions required to support successful team functioning (such as adequate resources, support systems, and the use of standardized care guidelines).<sup>66,67,68,69,70,74</sup>

### ***Setting***

Systematic comparisons of healthcare teams across settings have yet to be undertaken in the healthcare organizational literature.<sup>26B</sup> However, findings from the qualitative interviews conducted for this report revealed that the context and setting of a team have important implications for the practice of collaboration. They suggest that distinctions exist between settings (community, rehabilitation, and tertiary care hospitals) because of differences in the “boundedness” of teams.

In a “bounded” (that is, institutional) team, providers are often co-located in the same building and organizationally structured with resources and management/administrative hierarchies to support their teamwork. Bounded teams often have a clear understanding of team membership and see themselves as a social entity, and they are perceived to be a social entity by others.



However, in a community or primary care setting teams may not exist in the typical institutionally based “bounded” manner found in the hospital or rehabilitation care sectors. Community teams can be virtual and are often fluid to respond to healthcare issues and the availability of health professionals in primary healthcare.

The qualitative interviews also underscored the importance of establishing relationships with other health professionals in the community/primary care setting before beginning to work collaboratively.<sup>31,162</sup> This challenge for teams in primary healthcare is particularly evident in urban areas, where practice settings do not support the development of interprofessional relationships among health professionals in the community. (Additional information from the qualitative interviews can be found in Appendix E.)

Several other factors that have an impact on teams are team membership and the duration of team existence. But comparability across settings is difficult because teams in hospital/rehabilitation/community settings were quite different in their longevity and functioning. For example, ICU teams have shorter work cycles, and team membership varies depending on the complexity of patient care and shift work in hospitals. Teams who work in the hospital environment have different characteristics, tasks, and processes than teams in rehabilitation/continuing care. Teams in these longer-term rehabilitation/continuing care settings seem to be highly stable with members working together over longer periods of time in the same setting with the same types/groups of patients.

Because studies comparing healthcare teams across settings have not yet been done it is not known to which degree structures and processes of teams in an ICU could be compared to teams in long-term care settings or primary care settings. It is also unclear whether instruments used to measure team structures and processes in one setting would be valid and reliable in another.

## INFORMATION GAPS ON TEAMWORK OUTCOMES

Implementing a collaborative team-based approach in healthcare could be enhanced with additional research and analysis. As discussed above, few studies have distinguished between:

- the setting where teams practice;
- the task or nature of work carried out by teams; and
- the organizational context of teams (such as leadership, rewards).

These gaps in knowledge mean that at this time few conclusions can be drawn about team effectiveness in healthcare or how team functioning can affect specific outcomes in healthcare related to the patient, the provider, the organization, or the system.

The table below highlights the instruments used to enhance teamwork and the variables applied to measure outcomes in studies reviewed for this project.<sup>58</sup> While the table is not meant to be exhaustive, it provides an overview of the spectrum of variables that have been measured.

*Table 2: Outcomes Related to Teamwork Interventions*

Instruments	Outcome Variables
Team effectiveness questionnaire <sup>157</sup>	Use of resources, team skills, performance objectives
Scale profiling and financial records <sup>59</sup>	Functional status, perceived health, length of rehabilitation, and discharge destination
Qualitative semi-structured interviews <sup>158</sup>	Communication, trust, skills, and problem-solving within teams
Observation and focus groups <sup>159</sup>	Team functioning
Self-report <sup>160</sup>	Transfer learning from classroom to workplace (behavioural change)
Analysis of administration and billing records <sup>60</sup>	Length of stay, cost analysis
Provider surveys <sup>161</sup>	Workplace provider satisfaction
Written documentation <sup>156</sup>	Problem-solving effectiveness

While measuring team effectiveness by the collaborative process used (such as team functioning) is one way of measuring team effectiveness, many of the studies reviewed used interventions to enhance effective teamwork as a vector from which achievement of a specific goal (for example, improved patient care, patient satisfaction, provider satisfaction, or organizational efficiency) could be tracked.<sup>173</sup>

In summary, key factors that influence the process of collaboration and encourage teams to work effectively are found at practice, organization, and system levels in the healthcare system. The literature also underscored that the results of intervention studies are often attributed to one level of the system rather than addressing the complex interplay of all levels. While much work has been done to define the processes of teamwork, there is a dearth of information about how teamwork influences other outcomes. There remains a pressing need for research that links the issues of team task, practice-level processes, and the organizational context with team outcomes if we are to move teamwork in the healthcare system ahead.

## **SYSTEM FACTORS INFLUENCING TEAMWORK**

The goal of moving effective teamwork forward in Canada is based on a collective desire for better health outcomes for Canadians through a well-integrated healthcare system. Teamwork has become a foundation upon which decision makers believe health system reform will succeed. However, engaging in teamwork requires a clear understanding of its complex nature and a clear articulation of the factors that act as facilitators and barriers to effective teamwork.

## POLICY CONTEXT PROCESS

As discussed above, teamwork is influenced by factors at the practice and organization levels of the healthcare system. It involves individual health professionals, team-based processes, and organizational- and system-level contexts. To this point in the paper, attention has been focused on factors at the practice and organizational levels. This section will examine the factors that influence policy directives created at the system level of the healthcare system.

Policy and system barriers currently hampering the transformation to team-based healthcare must be addressed if effective teamwork is to become a reality. These barriers include:

- inconsistent government policies and approaches;
- limited health human resource planning;
- regulatory/legislative frameworks that create silos; and
- models of funding and remuneration that discourage collaboration.

The impact of these barriers is aggravated by a shortage of healthcare providers and an absence of ongoing, adequate funding to support collaborative activities. There is also a critical need for decision makers to act as “leaders” in breaking down these barriers and developing the infrastructure required to support teamwork at the practice, organizational, and system levels.

### *Legislation, Regulation, and Scope of Practice*

The existing legislative and regulatory frameworks in Canada are inconsistent in the way they define scope of practice among the health professions. Barriers that prevent practitioners from functioning to their full scope of practice mean that health human resources are not being fully utilized.<sup>87,88</sup> Furthermore, in addition to legislative and regulatory factors, professional scopes of practice have evolved over time.<sup>89,90</sup> One key concern is the current narrowing of scopes of practice/specialization that is occurring with some health professions (such as family physicians).<sup>89,91,92,93</sup>

Professional self-regulation has created additional boundaries among professions that have been reinforced by collective agreements negotiated between governments and individual professional bodies.<sup>86</sup> To remove these boundaries, individual and team competencies and the skill sets that health professionals require to work effectively as a team must be considered.

At the system level, legislative and regulatory reforms need to keep up with changes and trends in the practice environment. Policy makers must give the organizational level the autonomy to resolve barriers impeding the systemization of collaborative practices. This autonomy could be in the form of increased budget allocations, decentralization of services, increased human resource management, incentives, or competency development, among others. Simultaneously, the system level should ensure that best practices (examples of positive change and increased scopes of practice) are communicated nationally.

The practice level also needs to change its prevailing mindset about how healthcare professionals can work together given the entrenched attitudes about scopes of practice and the resistance to change.<sup>5</sup> Providers need to address “turf” issues and adopt common goals; break down traditional hierarchical power structures;<sup>86,94</sup> and educate patients about how each team member will contribute to their care.

### ***Malpractice and Liability***

Another key system barrier to collaborative teams is the existing malpractice law that individualizes accountability and responsibility.<sup>87</sup> Currently, malpractice litigation and allegations of negligence are evaluated by the court on a case-by-case and individual-by-individual basis, with ultimate findings linked to individuals rather than the team.

The interrelated trends of narrowing physician practices while the responsibilities of other healthcare providers are being expanded could create new tensions over roles that could negatively influence teamwork. Regulators, government, insurers, the judiciary, and professional groups should address these inconsistencies to support collaborative practice in legislation and malpractice law.

In an environment that supports teamwork, the current culture of blame would be refocused in legislation and regulations to support a culture that focuses on patient safety and risk management.<sup>121</sup> The literature underscores the need for an expanded role of collaborative decision-making and identifies a number of key liability issues<sup>95,96</sup> that must be addressed related to:

- role clarity and accountability for non-physician members of the team in performing shared tasks;<sup>119</sup>
- increased exposure to and risk of liability should all members of the team not have adequate malpractice insurance coverage;<sup>120</sup> and
- lack of clear documentation on the standards of care that may be “transferred.”<sup>121</sup>

### ***Leadership and Funding***

Although the federal government and certain provinces and territories have funded initiatives related to interdisciplinary care,<sup>97,98,99,100,101</sup> there is no consistent level of engagement across jurisdictions. Many of these recent initiatives have had positive results but lack the sustainable support required for long-term success.

For example, mechanisms of remuneration affect behaviour, attitudes,<sup>102</sup> and a willingness to work in new models.<sup>43</sup> Traditional fee-for-service systems, which primarily exist for physicians, pose barriers to collaborative care.<sup>103</sup> No mechanism exists to tie incentive funding to collaboration and team functioning efforts (such as performance indicators for all healthcare providers).

Yet international experience has shown success when new reimbursement models are introduced, including:

- the Australian experience in promoting integrated health teams;<sup>104</sup> and
- the U.K. system that remunerates all professionals<sup>104</sup> by paying the practice, not the individual practitioners.<sup>174</sup>

### ***Health Human Resources***

Systematic, comprehensive, long-term planning in the face of healthcare shortages and challenges requires both improved data and new forecasting methods that assume and reflect a teamwork model.<sup>105,106,107</sup>

Government, academia, regulators, and professional groups should implement strategies for health human resource planning encouraging collaborative practice to replace existing models that rarely consider collaborative practice or “interprofessional care.”<sup>108</sup>

### ***Education and Accreditation***

To renew and revitalize our healthcare system, the education of healthcare professionals needs to change.<sup>109</sup> Universities and professional colleges must be urged to change their curricula to incorporate the philosophy of interprofessional collaboration in the pre-clinical and clinical years, including the application process.

Accreditation bodies have been urged to include standards for interprofessional practice as a requirement for approval of programs.<sup>86,110</sup> This approach means the established providers who are teaching must have the skills and desire to teach, model, and mentor interprofessional care. As well, practitioners in the field will require ongoing professional development programs to learn about collaboration.

Internationally, the United Kingdom is working on a model in which competencies have been elaborated that cross professional boundaries and allow the development of supportive educational models.<sup>111</sup>

### **LESSONS LEARNED: IMPLEMENTING EFFECTIVE TEAMWORK**

Canada has made progress in transforming its primary healthcare delivery system to ensure sustainability and accessibility for Canadians. Although information is limited as to the success of implementing collaborative practice, what we know about collaborative teams and teamwork in primary healthcare delivery is based on a synthesis of the results of pilot projects associated with the Health Transition Fund and the anticipated results of the Primary Health Care Transition Fund projects.

To date, Canadian initiatives that have implemented teamwork provide guidance on approaches to teamwork in the healthcare system. Approaches to teamwork are most often seen in:

- the integration of interprofessional teams in demonstration projects exploring new primary healthcare practice models;
- academic institutions and teaching hospitals working at the organizational and practice levels;
- aboriginal communities;
- remote primary care centres serving specific populations; and
- disease-based groups such as seniors, aboriginals, and individuals requiring mental health services and diabetic care.

Several approaches are being used in collaborative work, including the establishment of multidisciplinary committees; online information tools; direct dialogue through meetings; and accreditation. Findings from selected initiatives identify the following best practices to facilitate teamwork:

- improved communication and partnerships among all health providers and patients;<sup>124,125</sup>
- clarity on the role of all health providers working within team environments;<sup>124</sup>
- better response processes in addressing determinants of health;<sup>124</sup>
- improved co-ordination in the provision of healthcare services;<sup>125</sup>
- high levels of satisfaction on delivery of services;<sup>99,125</sup> and
- effective utilization of health resources.<sup>126</sup>

At the systems level, the province of Saskatchewan is leading the country in introducing team development and implementation in the primary healthcare sector through the use of facilitator training to build collaborative practice and team development.<sup>127</sup> (Appendix F provides additional information on selected Canadian examples of projects and initiatives that facilitate teamwork.)

Integration of interprofessional teams into new practice models requires an orientation on the knowledge, skills, and attitudes needed for teamwork; interactional factors; and change management. A team development strategy that focuses on building capacity at the organizational and work-setting level is critical<sup>132</sup> (such as the Saskatchewan approach).

Experiences internationally can also guide the transition to collaborative practice in Canada. For example, studies in the United States are focusing on the use of teams to improve the delivery of chronic disease care through the application of clinical guidelines on core competencies for practice in primary care settings.<sup>112,113,114</sup> In the United Kingdom, reforms in the National Health Service resulted in most primary care groups adopting interprofessional team practice.<sup>97</sup> In Australia, a number of health centres and other provider practice arrangements have been established as multidisciplinary teams responding to rural and other particular populations.<sup>98</sup> Finally, in New Zealand, the government launched the Primary Health Care Strategy that focuses on universal access to primary healthcare services similar to the U.K.'s National Health Service.<sup>115</sup>

In summary, the international literature offers important information to help Canadian decision makers develop policy recommendations to support the implementation of teamwork.<sup>33,44,46,97,113,114,116,117,118</sup> As most countries are in the early stages of implementing healthcare teams, opportunities exist to share information, experience, and research.

## MOVING FORWARD TO EFFECTIVE TEAMWORK — THE GLOBAL PICTURE

Developing a healthcare system that values teamwork and supports patient-centred care requires a clear understanding of the complex nature of teamwork; the effect of different organizational contexts; and the impact of different policies, legislation, and regulations. For effective teamwork to take place in Canada, a co-ordinated effort among key stakeholders across the healthcare system (such as healthcare providers, organizational leaders, decision makers) is required to integrate the components that need to occur at all levels of the healthcare system.

Diagram 2 presents a visual image of how the factors that affect effective teamwork in healthcare influence each other. Moving from inside out, the rings of the large circle represent the practice, organization, and system levels within the healthcare system. Within each ring, the different factors that must be considered are identified. Readers are cautioned not to overly interpret the diagram, as it is just a tool to promote better understanding of all the factors affecting effective teamwork.

*Diagram 2: A Conceptualization of Factors Required for Effective Teamwork to Improve the Health of Canadians*



In summary, effective teamwork to enhance healthcare for Canadians can only be achieved when all the levels within the healthcare system work in sync. At the practice level, health professionals know how to practice collaboratively, but for health professionals to practice collaboratively in teams they need to understand the processes required for collaboration and share a common understanding of the notions of “team” and “teamwork.” Further, organization and management structures must be in place to support teamwork, and policy directives must provide the infrastructure and framework so that organizations can put a priority on making teamwork a reality.

**Collaborative practices, organizational contexts, and policy directives affect team effectiveness. A healthcare system that supports effective healthcare teams can optimize the health of Canadians.**

## **PRIORITIES AND IMPLICATIONS**

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The following priorities and implications reflect the key issues and concepts identified through the synthesis of research undertaken for this project. These are the pressing issues facing our healthcare system that need to be addressed in policy directives, organizational leadership, and research priorities.

### **GOVERNMENT AND DECISION MAKERS — POLICY DIRECTIVES**

Support and commit to:

- taking leadership to facilitate making teamwork a priority in renewal of the healthcare system;
- implementing comprehensive data collection for health human resources planning to reflect interdisciplinary models of care, scope of practice, clinical outcomes, patient safety, and population need;
- reviewing legislative frameworks, regulatory models, and processes across all provinces and territories to optimize the scopes of practice (with implications for the boundaries for teamwork and accountability) of regulated professions;
- developing optional funding, remuneration, and incentive-based models for existing practices that include team-based care;
- facilitating communication, co-operation, and teamwork across and within all levels of government, organizations, and healthcare providers at the practice level;
- identifying situations where collaborative practice can be used as a lever to address priority health needs such as waiting times, patient safety, and primary care reform;
- supporting research with appropriate levels of funding, acknowledging the complexity of the type of studies required to conduct the appropriate assessments; and
- relying on credible research on the best policies to support a healthcare system that values teamwork and collaborative person-centred care.

Advocate and facilitate the need to:

- adopt a common definition for healthcare teams, teamwork, and team effectiveness;
- define a range of specific system-level outcomes to test teamwork's influence;
- identify current collaborative practice models with strategies and initiatives to practice effective teamwork;
- develop national standards, accreditation, protocols, and core competencies for collaborative practice that can be applied to all healthcare settings and health professionals as part of licensure requirements; and
- develop policies on the appropriate resources and tools required to facilitate teamwork, including regulations, competencies, and incentives to influence health human resources and facilitate changes in work practices, and create incentives that improve performance and reward innovation for effective teamwork.

## **DECISION MAKERS — ORGANIZATIONAL LEADERSHIP**

Support the need to:

- develop interventions, resources, and tools to promote best practices on delivery models that facilitate collaborative practices;
- develop new models of care that involve patient advocacy groups to address the role of patients, families, and caregivers;
- create leaders to foster collaborative practice in all healthcare settings;
- consider the influence of financial incentives/rewards for teamwork; and
- strengthen communications protocols to improve team processes.

## **EDUCATORS**

Work innovatively to:

- develop educational curricula and training models for teamwork and collaborative practice across the continuum of professional education;
- implement educational initiatives about the new model of interprofessional healthcare delivery and teamwork with a plan to measure its impact rigorously; and
- develop leadership training opportunities to help organizational leaders create a culture that supports teamwork and builds the capacity for team members to practice collaboratively.

## **RESEARCH PRIORITIES**

Conduct studies to:

- evaluate causality between outcomes and factors that influence team effectiveness (such as task, process, and context) across the different healthcare system levels;
- compare the validity and reliability of survey instruments across healthcare settings and build evidence about the role of collaborative teams through randomized control trials;



- use comprehensive models of team effectiveness, considering the multiple factors influencing the team, team processes, and team outcomes;
- conduct studies at multiple levels (individual, team, healthcare system, society) using a wide variety of methods and theoretical tools;
- develop models of team effectiveness that are tailored to specific care delivery contexts and types of work processes;
- develop models of interventions based on theory that can be adapted to different situations;
- evaluate interventions with more than one post-intervention measure to determine the effectiveness of an intervention over time to ensure that evaluative studies measure many post-intervention variables; and
- develop intervention studies that acknowledge the involvement of all three levels including the organization, the team, and individuals within teams.

Create and advance new knowledge that will:

- support innovative mechanisms to share information on successful models;
- conduct further analysis and synthesis on current studies and design of future studies using common terminology, classifications, frameworks, indicators, and outcomes;
- explore innovative interventions on team-building and functioning at the practice, organizational, and system levels with rigorous evaluation on a long-term basis;
- explore the structural and organizational factors that support teamwork and further probe the processes needed to promote effective teamwork;
- explore the use of clinical practice guidelines among healthcare team members in measuring team effectiveness and the types of measurement tools/instruments required for quality improvement; and
- explore ways to measure teamwork effectiveness and outcomes including the use of clinical, provider, organizational, and system outcomes as the benchmark.

## CONCLUSION

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Although Canada is ready for collaborative healthcare, current policies and system issues act as barriers that hamper the transformation to team-based healthcare.

Leadership is needed at all levels of the healthcare system to implement teamwork that will contribute to the health of Canadians. Given the complexity of the healthcare system, the creation, implementation, and maintenance of collaborative care teams requires a significant long-term commitment.

A number of projects involving different health providers and patients has been undertaken across the country. However, in spite of these efforts, transformation to teamwork has been slow. Professionals continue to protect their “turf” or limit their scopes of practice to respond to their own needs/interests rather than the interests of the population. The self-regulation of professionals and current malpractice laws place enormous constraints on teamwork. Existing funding and remuneration models do not support teams, and the educational system has been slow to adopt new approaches for professional training.

While some government policies support the development of collaborative and interprofessional models, they cannot transform the system. Effective teamwork is achieved when all the levels within the healthcare system can work together. Other sectors (such as the courts, the professional regulatory bodies, education institutions, accreditation organizations, patients/clients, and providers) must be ready to review current practices and embark on new initiatives to improve the working environment and ultimately the health of the Canadian population.

This policy synthesis paper identifies implications for practice, policy, and research required to move the process of change forward to achieve effective teamwork. This fundamental change in the healthcare system will require a collaborative team effort.

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