

**THE DYNAMICS OF ROLE CONSTRUCTION IN INTERPROFESSIONAL PRIMARY  
HEALTH CARE TEAMS.**

**By  
KATE MACNAUGHTON**

**A thesis submitted to the Telfer School of Management  
in conformity with the requirements for the degree of**

**MASTER OF SCIENCE  
In  
HEALTH SYSTEMS**

**UNIVERSITY OF OTTAWA**

**© Kate MacNaughton, Ottawa, Canada, 2012**

THESIS COMMITTEE

Dr. Samia Chreim, Telfer School of Management, University of Ottawa

Dr. Ivy Bourgeault, Faculty of Health Sciences, University of Ottawa

## ABSTRACT

This qualitative study explores how roles are constructed within interprofessional health care teams. It focuses on elucidating the different types of role boundaries, the influences on role construction and the implications for professionals and patients. A comparative case study was conducted with two interprofessional primary health care teams. The data collection included a total of 26 interviews (13 with each team) and non-participant observations of team meetings (2-3 meetings at each site). Thematic analysis was used to analyze the data and a model was developed to represent the emergent findings. The role boundaries are organized around interprofessional interactions (*autonomous-collaborative boundaries*) and the distribution of tasks (*interchangeable-differentiated boundaries*). Salient influences are categorized as structural, interpersonal and individual dynamics. The implications of role construction include professional satisfaction and more favourable wait times for patients. The elements in this conceptual model may be transferable to other interprofessional primary health care teams. It may benefit these teams by raising awareness of the potential impact of various within-team influences on role construction.

## TABLE OF CONTENTS

<b>THESIS COMMITTEE .....</b>	<b>II</b>
<b>ABSTRACT.....</b>	<b>III</b>
<b>LIST OF TABLES .....</b>	<b>VII</b>
<b>LIST OF FIGURES .....</b>	<b>VII</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>VIII</b>
<b>CHAPTER 1: INTRODUCTION.....</b>	<b>1</b>
1.1 Rationale for this study .....	1
1.2 Research questions.....	2
1.3 Main contribution.....	2
1.4 Thesis organization .....	3
<b>CHAPTER 2: LITERATURE REVIEW .....</b>	<b>4</b>
2.1 Interprofessionalism and primary health care teams .....	4
2.2 Role construction and role boundaries.....	6
2.2.1 Roles .....	6
2.2.2 Role construction .....	8
2.2.3 Role boundaries .....	9
2.2.3.1 Autonomous-collaborative role boundaries .....	10
2.2.3.2 Interchangeable-differentiated role boundaries .....	12
2.3 Influences on role boundaries .....	13
2.3.1 Structural influences .....	13
2.3.1.1 Physical space .....	13
2.3.1.2 Workload.....	14
2.3.1.3 Hierarchy.....	14
2.3.1.4 Turnover, team composition and team size .....	16
2.3.1.5 Professional culture, values and language .....	16
2.3.2 Interpersonal influences .....	17
2.3.2.1 Leadership.....	17
2.3.2.2 Trust .....	17
2.3.2.3 Education .....	18
2.3.3 Individual influences.....	19
2.4 Implications of role construction and role boundaries.....	19
2.4.1 Health professionals.....	20
2.4.2 Patients .....	21
<b>CHAPTER 3: METHODOLOGY .....</b>	<b>23</b>
3.1 Methodological approach.....	23
3.2 Data Collection .....	25
3.2.1 Case studies.....	25
3.2.2 Data sources.....	25

3.3 Data Analysis .....	27
3.4 Trustworthiness .....	28
<b>CHAPTER 4: RESULTS .....</b>	<b>31</b>
4.1 Overview of model .....	31
4.2 Case 1 .....	33
4.2.1 Situating the case analysis .....	33
Team Context and Objectives .....	34
Team Functioning .....	34
4.2.2 Introduction to the analysis of Case 1 .....	35
4.2.3 Structural Influences .....	37
Physical Space .....	37
Workload .....	38
Staff Turnover .....	40
Hierarchy .....	41
Team Composition .....	42
4.2.4 Interpersonal Influences .....	44
Education around roles and responsibilities .....	44
Trust .....	45
Leadership .....	46
Relevance of professional knowledge .....	48
4.2.5 Individual Influences .....	49
Individual attributes .....	49
4.2.6 Summary of influences and role boundaries .....	50
4.2.7 Implications of role construction .....	52
Autonomous and collaborative role boundaries .....	53
Interchangeable and differentiated roles .....	55
4.3 Case 2 .....	58
4.3.1 Situating the case analysis .....	58
Team Context and Objectives .....	58
Team Functioning .....	59
4.3.2 Introduction to analysis of Case 2 .....	60
4.3.3 Structural Influences .....	61
Workload .....	61
Hierarchy .....	62
Team composition .....	63
4.3.4 Interpersonal Influences .....	64
Education around roles and responsibilities .....	64
Trust .....	65
Leadership .....	66
Relevance of professional knowledge .....	68
4.3.5 Individual Influences .....	69
Individual attributes .....	69
4.3.6 Summary of influences and role boundaries .....	71
4.3.7 Implications of role construction .....	73
Autonomous and collaborative role boundaries .....	73

Interchangeable and differentiated role boundaries .....	76
4.4 Inter-case analysis .....	79
4.4.1 Influences .....	79
Physical space .....	80
Workload.....	81
Turnover.....	81
Trust .....	82
4.4.2 Contextual contrasts generated by local conditions .....	82
Team size .....	83
Age of team.....	83
Model of care .....	83
4.4.3 Role boundaries .....	86
4.4.4 Implications.....	87
<b>CHAPTER 5: DISCUSSION .....</b>	<b>91</b>
5.2 Influences on role construction .....	92
5.2.1 Hierarchy.....	93
5.2.2 Leadership.....	93
5.2.3 Relevance of professional knowledge .....	94
5.2.4 Individual attributes .....	95
5.3 Role boundaries .....	96
5.4 Implications.....	97
<b>CHAPTER 6: CONCLUSION.....</b>	<b>99</b>
6.1 Contributions.....	99
6.2 Implications for practice .....	100
6.3 Limitations .....	101
6.4 Future Research .....	102
<b>REFERENCES.....</b>	<b>104</b>
<b>APPENDIX A: Observation protocol.....</b>	<b>111</b>
<b>APPENDIX B: Interview protocol .....</b>	<b>112</b>
<b>APPENDIX C: Interview consent form .....</b>	<b>114</b>

## LIST OF TABLES

Table 1. Contextual characteristics of Case 1, p.33

Table 2. Contextual characteristics of Case 2, p.58

Table 3. Summary table comparing the influences and their relevance to different types of role boundaries for Cases 1 and 2, p.79

Table 4. Implications of autonomous-collaborative role boundaries, p.88

Table 5. Implications of interchangeable-differentiated role boundaries, p.88

## LIST OF FIGURES

Figure 1. Model of role construction, p.31

Figure 2. Simplified model of role content on Team 1, p.35

Figure 3. Simplified model of role content on Team 2, p.59

## ACKNOWLEDGEMENTS

This journey has been challenging and enriching both academically and personally. I wish to acknowledge and thank the professors, health care professionals, mentors and friends who helped me to grow as a researcher and as a person throughout this process.

A very special thank you to my thesis supervisors, Dr. Samia Chreim and Dr. Ivy Bourgeault, who have provided me with invaluable insight and guidance throughout and who have enabled me to be more thorough and scholarly in my research.

I also wish to express my sincere appreciation to the two health care teams who welcomed me and gave me the opportunity to learn about their organizations, team functioning and role dynamics.

Finally, to my parents and sister, thank you for your ongoing support, encouragement and love throughout my education.

## CHAPTER 1: INTRODUCTION

### **1.1 Rationale for this study**

There are many challenges faced by the current health care system in Canada including rising costs, changing demographics, health human resource pressures, the introduction of new professions and the need to modernize the system (Health Professions Regulatory Advisory Council [HPRAC], 2008). Current transformation strategies in Canada are focused on reducing wait times, improving efforts for the prevention of illness, improving patient care and creating a sustainable structure for health care delivery (HPRAC, 2008).

Interprofessional collaboration is increasingly being promoted as a mechanism that can respond to the pressures and demands of the health care system (Byrnes et al., 2012; Enhancing Interdisciplinary Collaboration in Primary Health Care [EICPHC], 2005-A). It is thought that interprofessional collaboration has the capacity to reduce costs, improve quality of care and patient outcomes, increase job satisfaction and improve staff retention (Byrnes et al., 2012). Achieving improvements in the quality of health care delivery requires the effective use of health system resources including, health professionals across the continuum of care (HPRAC, 2008). D'Amour, Ferrada-Videla, San Martin Rodriguez, and Beaulieu (2005) state that "one of the major challenges facing interprofessional practice is how professional territories are carved out and distributed within a complex system." (p.120). While there is a general sense that teamwork produces better outcomes (Canadian Health Services Research Foundation [CHSRF], 2006), the growing interest in interprofessional collaboration is raising issues with respect to the management of professional boundaries and the relationship of health care providers to one another (EICPHC, 2005-A). Byrnes et al. (2012) observe that placing health care providers of different professions or backgrounds on a team does not mean that they will have the knowledge and skills necessary to work together and collaborate to enhance patient care. Some research has suggested that health professionals do not have a good understanding of one another's scopes of practice and competencies (EICPHC, 2005-B). The current emphasis on interprofessional collaboration as a solution to health system challenges, and the necessity of synergizing professional roles to

succeed in this endeavour, suggest the need to better understand how roles are constructed in interprofessional health care settings.

## **1.2 Research questions**

In my research, I have been guided by the following question:

How are roles constructed within interprofessional health care teams?

What types of role boundaries are present within an interprofessional team?

What are the influences on the construction of roles and role boundaries?

To explore these questions, I conducted a comparative qualitative case study of two interprofessional primary health care teams. I began by reviewing the literature related to role construction and interprofessional collaboration on health care teams. This body of knowledge informed both the data collection (e.g. interview protocol design) and analysis (initial conceptual model and codes). Data collection included interviews, observations and documentation. Analysis of interviews and observations took the form of two intra case analyses and an inter-case analysis to compare the findings across the two sites. Following this analysis I compared my findings to conceptualizations of interprofessional collaboration and to other extant literature. Through these methods, my aim was to develop a more profound understanding of the elements of role construction on interprofessional primary health care teams and to represent these findings in a conceptual model.

## **1.3 Main contribution**

Many studies have looked at health care teams yet the wide variety and numerous dynamics at play in these groups means that they cannot be accounted for by a ‘one-size-fits-all’ framework. Mathieu, Maynard, Rapp, and Gilson’s (2008) review of team research calls for researchers to “ensure that we are capturing and embracing the complexities of current team arrangements and seeking to better understand them rather than to fit them into our current frameworks.” (p.463). Through the thematic analysis of the interview and observation data, I have generated a model to reflect the elements of role construction. These elements include: role boundaries around interprofessional interactions (autonomous-collaborative) and around

the distribution of tasks (interchangeable-differentiated); a set of influences on role boundaries for each research site; and the implications of role construction for professionals and patients. In addition, the inter-case analysis provides evidence that this model may be transferable to the study of role construction on other interprofessional health care teams.

#### **1.4 Thesis organization**

In Chapter 2, I provide a literature review that summarizes and integrates seminal papers and recent articles relevant to role construction on interprofessional primary health care teams. This literature review was not intended to be an exhaustive review but instead focused on identifying key findings as they related to my research area. In Chapter 3, I explain the methodology that was used to conduct this study and discuss the steps taken to ensure trustworthiness. In Chapter 4, I present the conceptual model that emerged from the data, the findings of the two intra case analyses and the inter-case analysis. In Chapter 5, I compare my results to the extant literature: some elements in my model overlap with findings presented by other models and I will examine these similarities and differences in the discussion. In Chapter 6, I conclude by providing a summary of the contributions of this research, the practical implications of the findings, the limitations of the study and potential for future research.

## CHAPTER 2: LITERATURE REVIEW

This chapter will provide a review of terminology and concepts useful to the study of role construction within interprofessional primary health care teams. First, I will present an overview of interprofessional teams and more specifically, teams in primary health care. Next, I will summarize the literature on roles (including professional roles) and lay out the definition of role construction used in this thesis research. I will also review concepts related to role boundaries on health care teams. Following this synopsis, I will explore some of the influences that have been studied in relation to interprofessional collaboration in health care. Finally, I will consider what the literature offers with regards to the implications of role construction for health professionals and patients.

### **2.1 Interprofessionalism and primary health care teams**

Interprofessionality is a means by which professions can practice together in a more collaborative and integrated fashion (D'Amour and Oandasan, 2005). Interprofessional practice is promoted in different areas including health care contexts. D'Amour and Oandasan (2005) define interprofessionality in health care as the 'development of a cohesive and integrated health care practice among professionals' and suggest that the growing focus on this mode of collaboration is a response to the realities of fragmented health care practices. Seneviratne, Stone, and King (2009) have designated interprofessionalism as the integration of autonomous health care practices through effective coordination and communication and state that it involves the joint assessment and treatment of patients as well as the pooling of knowledge. Interprofessionality is concerned with optimizing patient participation in addition to enhancing collaboration between different health professions (D'Amour and Oandasan, 2005). In addition to 'inter'-professionalism, much of the literature in health care conceptualizes two other modes of teamwork: multi- and trans-teamwork. 'Multi' refers to different disciplines working on a problem in parallel or sequentially while remaining within their disciplinary boundaries; and 'trans-' denotes a holistic collaboration between different disciplines that transcends disciplinary boundaries through role release – accepting that what the specialist was trained to do can be done by others – and role expansion – accepting that one's job can include more than what one was trained to do (Choi

and Pak, 2006; D'Amour et al., 2005; MacIntosh and McCormack, 2001; McCallin, 2001; Zeiss and Thompson, 2003). The term 'inter'-professional is often situated in the middle of 'multi' and 'trans' teamwork. Note that researchers vary in their use of the word 'discipline' or 'profession' (e.g. inter-disciplinary team or inter-professional team). For clarity's sake, I will be employing the term '-professional' (for example, interprofessional) to designate a team with members from different domains working collaboratively together towards a common purpose (MacIntosh and McCormack, 2001). One area where interprofessionalism finds a strong expression is in primary health care teams.

Primary health care has a mandate to provide services delivered by a collaborative team of providers while emphasizing the quality of care and health status of patients (Dufour and Lucy, 2010). These 'first point of contact' services are intended to address promotive, preventative, curative, supportive and rehabilitative aspects of care (MacIntosh and McCormack, 2001). The provision of primary health care is made challenging by the complexity and diversity of clinical problems (Brown et al., 2011; Grumbach and Bodenheimer, 2004;). Baldwin Jr. (2007) suggest that the current primary health care needs are driving the emergence of a 'health' rather than a 'medical' model emphasizing a system designed around prevention with a family focus. In other words, physicians are increasingly positioned in collaboration with other health care providers who must build a network of relationships between each other (Saba, Vilella, Chen, Hammer, and Bodenheimer, 2012).

According to Saba et al. (2012), newer models of primary care necessitate a major paradigm shift in the practice of primary care, from the historical representation of a lone physician to that of a high functioning primary health care team. While this more recent conceptualization of primary care is a widely supported principle for achieving health care goals, it is much harder to achieve in practice (Grumbach and Bodenheimer, 2004). The reality of current primary care models is often "fragmented, impersonal care for patients and isolation and burnout for many family physicians" (Saba et al., 2012, p.169). There is a need to develop the efficiency and effectiveness of all health professionals on a team through cooperation and collaboration (Baldwin Jr., 2007). Each member may have the ability to assume leadership on different issues at different times based on their areas of expertise and interest and,

preventative, chronic and acute care can often be conducted on a day-to-day basis with limited physician input (Saba et al., 2012).

In Canada, different primary care models offer an aggregation of health services within one organization (e.g. Community Health Centre (CHC), Family Health Team (FHT)). The different health professions found on these teams depend on the local needs of the community as well as the amount of funding approved by the provincial government and can include: family physicians, nurse practitioners, nurses, pharmacists, dieticians, social workers, community workers, mental health counsellors, psychologists, and psychiatrists (Health Force Ontario, 2006). Many challenges are encountered when trying to coordinate care across a diverse set of professionals. For instance, it can be difficult to synergize the roles of the different professionals to create a cohesive and complementary set of services for the benefit of the patients and the team members (Nancarrow, 2004; Pfeifer, 2012). Nevertheless, the reviewed literature, while mentioning phenomena such as role overlap (Nancarrow, 2004), role clarification (Dufour and Lucy, 2010), and role boundaries (Pfeifer, 2012), does not specifically consider the elements of role construction as a main focus. Therefore it is pertinent to consider roles and how they are constructed on an interprofessional primary care team.

## **2.2 Role construction and role boundaries**

In this section, I will consider salient literature on roles, outline how I have defined role construction for the purposes of this research and also explore the concept of role boundaries in relation to interprofessional health care teams.

### *2.2.1 Roles*

Two distinct perspectives exist on the influence between interaction and structure in the definition and formation of roles: structural functionalism and symbolic interactionism. The structural functionalist approach views roles as sets of behavioural expectations associated with given positions in the social structure: they are functional for the system within which they are embedded (Ashforth, 2001). This is similar to Van Maanen and Schein's (1979) statement that a role is "the set of often diverse behaviours that are more or less expected of

persons who occupy a certain defined position within a particular social system” (p.28). The symbolic interactionist approach tends to see roles as emergent and negotiated understandings between individuals. Through subjective perceptions and preferences, individuals attempt to coordinate their behaviours and come to jointly define what constitutes a given role (Ashforth, 2001). While structuralists tend to focus on what makes roles fixed and taken-for-granted positions, symbolic interactionists tend to look at the dynamics that make roles fluid and negotiable based on shared understandings (Ashforth, 2001).

To some extent, professional roles are externally defined by the professions and by regulatory bodies (Chreim, Williams, and Hinings, 2007; Mulvale and Bourgeault, 2007). Chreim and colleagues (2007) state that the influence of structure and agency on the (re)construction of professional roles varies depending on the context where it takes place. Professional roles are also partly constructed and negotiated locally and are instantiated in micro-sites. Like Ashforth (2001), I will adopt a middle ground between the perspectives of structural functionalism and symbolic interactionism. Ashforth argues that positions tend to become institutionalized (structuralism) but the meaning of the positions and the way that the individual enacts that position are negotiated within these structural constraints (symbolic interactionism). Creating a position in an organization is a starting point for negotiation not an ending point (Ashforth, 2001). Stryker and Serpe (1982) note that the degree to which roles are made rather than simply played depends on the social structure in which the interactions are embedded. Structures that are more open have higher novelty and allow for more variability in role enactments however, all structures impose some limits on the interactions that can take place within them (Stryker and Serpe, 1982). In my research, I will focus on the interactions and micro dynamics related to role construction, while remaining attentive to the influence of structural elements and the potential influence they may hold over role boundaries.

In *Group Dynamics*, Forsyth (2009) highlights two different types of roles that arise in a group, or team, setting: task and relationship roles. Groups tend to develop both task and relationship roles because they must accomplish their tasks, and relationships among members must be maintained in order to ensure team survival (Forsyth, 2009). Task roles are

defined as “any position in a group occupied by a member who performs behaviours that promote the completion of tasks and activities, such as initiating structure, providing task-related feedback and setting goals” (Forsyth, 2009, p.150). In this context, a member’s focus is on the group’s goals and on attempts to support other members as they work. Mathieu and colleagues (2008) suggest that taskwork involves focusing on task accomplishments, monitoring progress, coordinating team members, monitoring and supporting team members.

A group also has interpersonal and emotional needs that are fulfilled by relationship, or socioemotional, roles. These roles encompass “any position in a group occupied by a member who performs behaviours that improve the nature of interpersonal relations among members, such as showing concern for the feelings of others, reducing conflict and enhancing feelings of satisfaction and trust in the group” (Forsyth, 2009, p.150). Teamwork involves attention to interpersonal development such as conflict management, motivation and confidence building (Mathieu et al., 2008). In this paper I will focus mainly on task roles. This approach allows me to limit the scope of my research while providing a more in-depth exploration of the dynamics around task roles.

### *2.2.2 Role construction*

Role construction can be defined as the creation and negotiation of taskwork and teamwork, where taskwork refers to the functions that individuals must perform to accomplish the team’s task and teamwork describes the interaction between team members (Mathieu et al., 2008). The concepts are similar to Forsyth’s (2009) outline of task and relationship roles within a group, where task roles are aimed at the completion of a group’s goals and at supporting team members’ efforts to do the same, whereas relationship roles ensure that the interpersonal and emotional needs of the group are being met. Lemieux-Charles and McGuire (2006), in their review of health care team effectiveness, also state that there is a need for technical (task) and interpersonal (relationship) skills for a team to function well together. I will focus on the ‘taskwork’ component of role construction in the remainder of this thesis. Following from my definition of role construction on a health care team, role boundaries can be conceptualized both in terms of the distribution of tasks and the interprofessional interactions between team members. Thus I will consider literature around

the distribution of responsibilities (*interchangeable or differentiated roles*) and also related to interactions between team members (*autonomous or collaborative relationships*).

While some of the literature on interprofessional collaboration in health care touches on the roles of team members and the corresponding challenges to teamwork (Hall and Weaver, 2001), as D'Amour et al. (2005) point out, there are no models that completely explain collaborative processes. Therefore, more research is needed to strengthen the link between these dynamics and interprofessional health care teams. In the following sections of the literature review, I will begin with a discussion of role boundaries (and the ensuing notions of autonomy, collaboration, interchangeability and differentiation), explore the suggested influences on interprofessional collaboration and role boundaries, and end with a discussion of the potential implications of interprofessional teamwork, role construction and role boundaries found in the literature.

### *2.2.3 Role boundaries*

Professional boundaries have been described as contested spheres of practice produced by a 'labour of division' (Fournier, 2000, p72). This conceptualization suggests that professional boundaries are not natural or 'organic' delimitations around responsibilities and taskwork. Abbott (1988) portrays professional boundaries in terms of 'jurisdictions' that are created and maintained through 'cultural work'. Jurisdiction refers to the authority that one profession has over a specific set of tasks (Abbott, 1988). Professions cultivate unique knowledge systems in order to maintain their 'exclusive property' and sphere of influence (Abbott, 1988). Interestingly, research in health care has pointed towards the flexibility of professional boundaries in collaborative care (Lane, 2006; Pfeifer, 2012). Bourgeault and Mulvale (2006) have highlighted the efforts of regulatory agencies to break down professional boundaries on health teams. This trend is motivated by the notion that overlapping scopes of practice allow interprofessional health care teams to be more responsive to changing conditions (Bourgeault and Mulvale, 2006). Nancarrow and Borthwick (2005) also suggest that health professional boundaries are influenced by factors such as the dominance of other professions and regulatory funders. Nancarrow (2004) affirms that the interprofessional practice has increased the extent of role overlap. Although

professional boundaries are flexible, egalitarianism in interprofessional care will be achieved ‘partially and gradually’ (Lane, 2006, p. 349). The above contributions to the body of knowledge on professional boundaries indicate that the latter have a supraorganizational component however, my focus will be on the micro-site.

The micro-perspective explores how role boundaries can be negotiated in micro-sites (but within macro-constraints). It is important to consider micro factors in the construction of role boundaries since the latter can be shaped by local forces (Mizrachi and Shuval, 2005). Mizrachi and Shuval (2005) indicate that the contours of boundaries are transformed at a formal level and also at the level of interactions between actors in the field. Similarly, Chreim et al. (2007) state that institutional theory contributes to an understanding of institution mechanisms and templates defining professional roles and boundaries but does not explain how professional roles and identities are re-constructed in micro-contexts. To explore this aspect, attention must be paid to the meanings, actions and interactions of agents in organizational settings (Chreim et al., 2007). Furthermore, complex contexts – and an interprofessional health care team may arguably be considered as such – are conducive to the exercise of agency (Chreim et al., 2007). In my research, I focus on the construction of role boundaries in micro-sites but acknowledge that this phenomenon takes place within institutional constraints.

#### 2.2.3.1 Autonomous-collaborative role boundaries

In this section I will provide an overview of autonomy and collaboration in relation to interprofessional health care teams.

Collaboration is a complex phenomenon that is often ambiguously defined. Henneman et al. (1995) characterize it as a process which stresses joint involvement in intellectual activities – a bond, union or partnership with mutual goals and commitments – requiring that individuals view themselves as a team and contribute to a common product or goal. Collaboration is often defined by five underlying concepts: sharing, partnership, power, interdependency and process (D’Amour et al. 2005). Collaboration can be seen as one extreme of conflict resolution where individual participants are both assertive and cooperative (Henneman, Lee,

and Cohen, 1995). Henneman et al. (1995) predict that there are both personal and environmental antecedents to collaboration. The former include the readiness of individuals to engage in the interpersonal process and the individual's (clear) understanding of their own role and level of expertise (Henneman et al., 1995). The latter include flat, rather than hierarchical organizational structures (so that participants can act autonomously) and the sharing of power based on knowledge and expertise rather than role or title (Henneman et al., 1995). D'Amour et al. (2005) note that collaborative processes are developed to serve client and professional needs and that collaboration should be understood not only as a professional endeavour 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 the client. In addition to serving client needs, collaborative processes are aimed towards building a 'team life' that takes into account the different professional perspectives (D'Amour et al., 2005).

There are some limitations to the literature on collaboration. Henneman et al. (1995) state that the consequences of collaboration have not been well-studied and suggest that more research is needed into the methods of promoting collaboration in the workplace and evaluating the effects of collaboration on patient outcomes. I will attempt to help close this gap by exploring the nuances in autonomous-collaborative relationships on two interprofessional health care teams.

Professional work involves not only interdependent, but also independent elements (Irvine, Sidnia, and McGillis Hall, 1998). Some of the health care literature discusses interprofessional collaboration without exploring its relationship to autonomy however, a study by Rafferty, Ball, and Aiken (2001) suggests that autonomy and teamwork are not mutually exclusive. In fact, this paper proposes that the interaction between teamwork and autonomy "suggests synergy rather than conflict" and that autonomy can contribute to more effective team work (Rafferty et al., 2001, p.ii32). Rafferty and colleagues (2001) state that more research is needed to better understand the relationship between teamwork and autonomy. I intend to contribute to this area by exploring the autonomous-collaborative boundaries around roles on interprofessional primary health care teams.

The concept of *silos* suggests a more profound form of detachment and autonomy between the professions that goes beyond the boundaries around tasks. The existence of uniprofessional silos on interprofessional teams indicates the presence of social and cognitive boundaries between professions that can be detrimental to the negotiation of roles (Ferlie, Fitzgerald, Wood, and Hawkins, 2005). The notion of silos refers to instances where members of a team operate in separate and unconnected roles. The presence of silos can reveal the lack of an ultimate, collective goal that can cross sociocultural boundaries and the separation of tasks. Ferlie et al. (2005) suggest three factors that hinder the relations between professionals working together on a team: the unidisciplinary nature of professional communities; the compulsion to defend their separate jurisdiction and to preserve a group identity; and the institutionalization of the professions whereby these institutions (macro-level) reinforce the micro-level group identity. All of these elements combine in such a way that professional roles are determined ‘sectorally’ and different professions generate different research cultures, agendas and questions (Ferlie et al., 2005). Thus, in some cases, professional autonomy is suggested as an aspect that can enhance teamwork while in more extreme forms, it can inhibit team functioning.

To summarize, collaboration is seen as important for the success of health care teams. It is often considered separately from notions of autonomy but some research suggests that autonomy and collaboration are related to each other. Extreme forms of professional autonomy can be detrimental to team success.

#### 2.2.3.2 Interchangeable-differentiated role boundaries

In the following paragraph, I explore research related to the distribution of responsibilities on health care teams.

Boundaries can be established around the responsibilities of different professions on an interprofessional health care team. The terminology that I am employing to describe this concept in my study is ‘differentiation’: where the responsibilities of different team members tend to be delineated from each other and ‘interchangeability’, where one profession performs some of the same tasks as another. One way to think of interchangeable roles is to

look at tasks as being common to more than one profession. Some of the literature suggests that while there is a potential for a separation of responsibilities to be observed in interprofessional settings, there is also the possibility that role blurring will occur. Blurred roles can arise between different kinds of caregivers and involve a decrease in formal role demarcations (Brown, Crawford, and Darongkamas, 2000). It occurs when boundaries, with regards to professional identities and responsibilities, are eroded by influences such as work pressures, differences between clinical areas and changing knowledge contexts (Brown et al., 2000). Overlapping competencies necessitate shared responsibilities to varying degrees (Hall, 2005). Role blurring is considered beneficial by some while others oppose it and link it to role strain and confusion (Brown et al., 2000). Some professionals on the team might feel that their role is being encroached upon while others may feel overwhelmed because they are trying to do everything (Hall, 2005). The latter situation was given the label ‘role expansion’ by Falk (1977). Thus the literature suggests that there may be positive and negative aspects associated with both role blurring (interchangeability) and its opposite (the differentiation of tasks).

### **2.3 Influences on role boundaries**

Now that we have considered some of what the current literature has to offer with regards to role boundaries on interprofessional teams, let us explore the dynamics that have the potential to influence and shape role boundaries. I will also include a more general exploration of influences on the success and effectiveness of interprofessional health care teams as some of these might also be applicable to the specific case of interprofessional role boundaries. I will consider structural, interpersonal and individual types of influences in turn.

#### *2.3.1 Structural influences*

##### 2.3.1.1 Physical space

Arrangements of space affect interprofessional teamwork (Choi and Pak, 2007; Oandasan, 2009). Space can constrain or enhance opportunities for communication between professions: physically separate workspaces such as partitioned offices, professions located on different floors and off-site work locations decrease the opportunities that interprofessional team members have for informal opportunistic communication (Chreim,

Williams, and Dastmalchian, 2010; Oandasan, 2009). This spatial distance decreases their chances to familiarize themselves with different professions and gain knowledge of the different professional roles (Oandasan, 2009). On the other hand, communication is facilitated when interprofessional staff shares the same space: informal conversations occur more frequently due to the heightened access and visibility of team members to one another. For example, the close proximity of a collaborating physician in some practice settings may stimulate more informal consultation with nurse practitioners (Mian, Koren, and Rukholm, 2012). Nevertheless, Brown et al. (2011) have found that working in close proximity and seeing team members for hours every day may create friction and conflict on the team. Thus, the physical proximity of team members can vary among settings and may influence interactions and teamwork.

#### 2.3.1.2 Workload

Busy routines can decrease the occurrence of non-work related conversations that might otherwise enhance interpersonal relationships between team members (Oandasan, 2009). Brown and colleagues (2011) also state that heavy workloads leave minimal time for communication and conflict resolution. For instance, work schedules that do not allow staff to eat lunch together inhibit informal conversations but staff meetings and informal gatherings (eg., in the hallway, during coffee breaks) can provide instances for unplanned communication exchanges (Oandasan, 2009). Grumbach and Bodenheimer (2004) suggest that ‘hamster health care’ (a rapid treadmill of seeing patient after patient) creates a state of mental exhaustion that frustrates attempts at planning and cooperation. Finding the time to participate in team development is difficult for physicians but, making time to step off the ‘treadmill’ and invest in team planning may yield long term benefits in the form of an improved work environment (Grumbach and Bodenheimer, 2004). Thus, the organization of clinical time and workload can shape patterns of interprofessional communication.

#### 2.3.1.3 Hierarchy

As mentioned earlier, collaboration ideally has a flat hierarchical structure (Henneman et al., 1995). Traditional hierarchy across professions is counter to team-based approaches where

professions are equally valued for their different contributions (Mulvale and Bourgeault, 2007). Thus, the health care team practicing interprofessional collaboration would optimally have fewer hierarchical boundaries but still demonstrate many functional and inclusionary ones (Van Maanen and Schein, 1979). However, cooperation and collaboration in health care is not easy to achieve, partly due to the ‘disciplinary territoriality’ exhibited by different professions (Baldwin Jr., 2007). Abbott (1988) expands on the notion of competition between professions stating that the degree of abstraction and the knowledge system are the ‘ultimate currency of competition’ between professions. Abbott (1988) argues that the ‘central organizing reality’ of professional life is the control of tasks. These characteristics of professions, as cultivators of unique knowledge systems that enable competition and the control of tasks between professions, are somewhat problematic to the notion of an interprofessional team working collaboratively and may inhibit a team’s progression towards a flat hierarchical structure. Dufour and Lucy (2010) found that power imbalances between health professionals due to professional socialization can lead to a lack of sharing in the decision-making process and therefore less collaboration and interaction between team members.

Chreim et al. (2007) propose that physicians’ transition to working in a primary care multidisciplinary team was facilitated in part by the fact that their position at the top of the power hierarchy was not threatened. This notion is in keeping with the idea that successful change needs to be framed as providing more scope (or jurisdiction) to the different parties rather than as taking scope away from a given party (Chreim et al., 2007). Studies of physician referrals show that they serve a gatekeeping role that controls access to specialized services and this reality may have implications for how team members interact with each other and how responsibilities are distributed. Furthermore, on interprofessional primary care teams, there is resistance to nurse practitioners as autonomous health care providers among physicians who feel threatened that the former could usurp their role (Bourgeois-Law, 2008). Some physicians feel that the overlap in responsibilities will result in the loss of professional territory, the substitution of a nurse practitioner for a physician and advocate for the optimization of each professional’s role rather than overlapping responsibilities (Lague, 2008). These fears could influence physicians to exert their hierarchical power to preserve

their professional dominance. Conversely, it is possible that physicians and other gatekeepers on the interprofessional team might use their influence to support and expand the role of other team members.

#### 2.3.1.4 Turnover, team composition and team size

Some studies have shown that the stability of team members has an impact on team effectiveness: a team with high staff retention is usually more effective than one with high turnover (Xyrichis and Lowton, 2008). Hall and Weaver (2001) also affirm that changing team membership can challenge team dynamics. Furthermore, a factor such as the selection of team members can be a promoter of team success (Choi and Pak, 2007).

A review by Xyrichis and Lowton (2008) outlines some of the conflicting evidence about team size: while some studies found larger teams to be less effective, others have reported them to be more effective. Grumbach and Bodenheimer (2004) propose that as team size increases, the transaction costs of interpersonal communication increase exponentially and too few or too many team members reduce team effectiveness.

#### 2.3.1.5 Professional culture, values and language

In interprofessional collaboration in health care, elements such as professional cultures can affect the quality of collaboration within teams (Hall, 2005; Mulvale and Bourgeault, 2007). For example, health professions cultivate different value systems: nurses and social workers tend to attribute value to the patient's story whereas physicians rely on hard data to solve medical problems (Hall, 2005). Due to the strong presence of role socialization in the health professions, McCallin (2001) states that a change in the attitudes of health care providers is necessary to improve team collaboration. Language can be used to reflect a preferred social identity (Petronio, Ellemers, Giles, and Gallois, 1998) for instance, a social work versus medical identity. Health professionals are often trained to communicate with patients and families from the perspective of their professions and not how to communicate across professions (Hall, 2005). Unfamiliar or incompatible vocabularies can be a barrier to interprofessional communication (Hall, 2005). An individual might be more inclined to listen to and trust a team member who is communicating to them in a familiar professional

language. Petronio et al. (1998) argue that miscommunication is an indicator of tension in negotiating boundaries.

### *2.3.2 Interpersonal influences*

#### 2.3.2.1 Leadership

Leadership is an important dynamic for interprofessional health care teams (Brown et al., 2011; D'Amour et al., 2008; Nancarrow, 2004) yet, Reeves, MacMillan, and Van Soeren (2010) note that little training or support for leadership development has traditionally been offered. Leadership has been defined as a process of influencing others and facilitating goal-related efforts (Engel Small and Rentsch, 2010). In other words, leaders must enable all professions on the team to work with a shared purpose and communication (Reeves et al., 2010). Reeves et al. (2010) suggest that leadership on interprofessional health care teams can change depending on differing patient needs: if a patient's medical needs are straightforward but their social care is complex, leadership for the patient's care may shift to the social worker. Similarly, Chreim and colleagues (2010) propose that the different bases of knowledge, authority and power in the health care context create an environment conducive to the exercise of distributed leadership involving a sharing of leadership tasks (Chreim et al., 2010).

According to Brown et al. (2011), some characteristics of leaders helpful to enhancing interactions between team members include: being accessible, non-judgemental and employing good listening skills. Emergent and distributed leadership is an important area of consideration for influences on role boundaries (such as interprofessional interactions) given that the role of leadership is not well-understood or well-represented by the models of interprofessional collaboration (D'Amour et al., 2005).

#### 2.3.2.2 Trust

Trust is an important element in collaborative processes (D'Amour et al., 2005; Henneman et al., 1995). Dufour and Lucy (2010) suggest that trust in other team members is a process that takes time and requires professionals to be open to a collaborative mode of service delivery. In part, the intensity of collaboration relies on interpersonal characteristics of health care

professionals such as respect and trust for each other's work (Ivey, Brown, Teske, and Silverman, 1988). For instance, Mian et al. (2012) provide evidence to suggest that nurse practitioners may make more or less referrals to other professions depending on the level of trust between them. Also, the establishment of trust and respect may lead team members to have more frequent informal consultations. D'Amour, Goulet, Labadie, San Martin-Rodriguez, and Pineault's (2008) model of collaboration between professionals in health care organizations proposes that trust is part of a team's internalization process that also develops notions of belonging and a knowledge of each other's values, all of which contribute to enhancing relationships and teamwork between team members.

### 2.3.2.3 Education

A number of research studies support the need for education, specifically in relation to roles and responsibilities, on interprofessional health care teams (D'Amour et al., 2008; Dufour and Lucy, 2010). Nancarrow (2004) suggests that access to interprofessional education is likely to influence the roles of team members and that an understanding of the roles of other workers was necessary to avoid feeling threatened. For a collaborative practice, appropriate referrals to other professions on the team require knowledge of the professional roles of other health care providers (Mian et al., 2012). Specifically in the primary care context, Pottie et al. (2008) state that learning to work with a (new) discipline in family practice settings requires physicians to take the time to understand the other profession's ( e.g. pharmacists) role and expertise. It is interesting to note the emphasis on physicians' understanding of other roles and responsibilities, which may be linked to the notion of team hierarchy whereby the physician is often a 'gatekeeper of referrals' and needs to be informed in order to make appropriate referrals (mentioned in the section on hierarchy). The development of partnerships between professions on a team can be facilitated by role definition sessions in which each professional group presents its role as a practitioner and team member (MacIntosh and McCormack, 2001). At the extreme, a lack of understanding of the scope of practice of other professionals can lead to conflict (Brown et al., 2011).

### *2.3.3 Individual influences*

Individual attributes (perceptions, approach to care) are an influence in the context of interprofessional health care teams. Individual conceptions of identity can influence teamwork. Stets and Burke (2003) see identity as related to the unique interpretations individuals bring to their role. Individual understandings of identity may be shaped by the team context and they can, in turn, inform the manifestation of a professional's role (Stets and Burke, 2003).

Individuals' perceptions of their role and responsibilities may influence interactions and the distribution of tasks. The way that a physician perceives patients is important: Saba et al. (2012) recommend that physicians shift from thinking about 'my' patients to 'our' patients to increase the effectiveness of their health care team. If physicians see themselves as ultimately responsible for patients, conflict can ensue when other team members challenge this notion of accountability (Brown et al., 2011). Individual attributes such as maturity and flexibility are characteristics that promote team success (Choi and Pak, 2007). According to Ragaz, Beck, Ford, and Morgan (2010) who conducted a study of Family Health Teams in Ontario, it is especially important for new members to be flexible, comfortable with ambiguity and willing to take on leadership. Similarly, Dent and Whitehead (2002) express that 'new' professionals should be adaptable, multi-skilled, reflexive, life-long learners who can fit into innovative service arrangements and use their skills to respond to unmet needs. D'Amour et al. (2008) suggest that fostering common team goals, rather than individual ones, is important for a collaborative model of care.

## **2.4 Implications of role construction and role boundaries**

Finally, it is important to review what the literature proposes regarding the implications of role construction for health professionals and patients especially around collaborative endeavours and the sharing of responsibilities among team members.

### *2.4.1 Health professionals*

Overall, the presence of nurse practitioners, physician assistants, and physicians in collaborative care models has the potential to contribute to professional satisfaction (Pfeifer, 2012). Better relationships with team members foster great job satisfaction among physicians (Grumbach and Bodenheimer, 2004). Collaboration can contribute to ensuring the delivery of quality health care, creating more effective practice and facilitating solutions to complex patient health problems (D'Amour et al., 2005). For example, physicians may feel more secure about prescribing pharmaceuticals when they have the ability to consult a pharmacist colleague on the same team (Pottie et al., 2008). While siloing (an extreme form of professional autonomy) on a team may isolate physicians and other staff members from each other and prevent an effective sharing of roles and responsibilities interestingly, nurses whose jobs involved more teamwork and also had greater autonomy were more involved in decision making (Pfeifer, 2012). This finding suggests that autonomy and collaboration are not mutually exclusive and can be beneficial when they complement each other.

In terms of being overloaded with a burden of work, physicians who trust their team to share in the work feel less overwhelmed during and between patient visits (Saba et al., 2012). Grumbach and Bodenheimer (2004) support the notion that a well functioning team with a clear division of labour might relieve physicians of some of their workload. Therefore, it seems that sharing responsibilities can contribute to making heavy workloads more manageable.

Another potential implication of role construction relates to maximizing the different skill sets found on an interprofessional team. Team members may contribute unique talents that enhance the skill mix of a team (Grumbach and Bodenheimer, 2012). For example, nurses may have an excellent knowledge of chronic care management protocols and nurse practitioners may be better trained to lead patient education sessions (Grumbach and Bodenheimer, 2012). Where tasks can be delegated to team members with a lower level of skill and training, it frees up the time of more highly trained practitioners to undertake more specialized tasks (Nancarrow, 2004).

It can be noted that collaborative relationships seem to engender professional satisfaction and help to develop a support network (and access to additional expertise) whereas autonomy may create feelings of isolation from the team. Autonomy may also empower some individuals to contribute more to collaborative relationships. The interchangeability of responsibilities may contribute to lessening heavy workloads. However, role blurring may also contribute to confusion about the distribution of tasks (Brown et al., 2000) and give rise to power struggles as professionals protect their ‘turf’ (Abbott 1988; CHSRF 2006). Thus, there are perceived benefits and challenges associated with both categories of role boundaries for professionals.

#### *2.4.2 Patients*

Implications for patients include continuity of care and wait times. Haggerty et al. (2003) indicate that continuity is how individual patients experience the integration and coordination of services and that it is achieved when services are delivered in a complementary and timely fashion. For families and patients, continuity is the perception that providers know what has happened before, that different providers agree on a management plan, and that a provider who knows them will care for them in the future. Grumbach and Bodenheimer (2004) suggest that better teamwork leads to better processes of care for patients with diabetes, better continuity of care and greater ease of access to health services.

There is also the possibility that teamwork contributes to shorter wait times for patients. Pottie et al. (2008) show that once pharmacists were integrated onto an interprofessional primary care team, the pharmacists freed up time for physicians. This time is probably used to see more patients that require the skills and expertise of a family physician. The different implications of role construction for patients include the possibility of shorter wait times, continuity of care and ease of access to health services. MacIntosh and McCormack (2001) state that more studies are needed to examine the outcomes of partnerships in collaborative care and my research study attempts to do so by analyzing the implications of role construction and role boundaries for professionals and patients within a primary health care context.

In this section, I reviewed literature pertaining to interprofessionalism, primary care teams, role construction and role boundaries, the influences on role construction and the implications of role boundaries for professionals and patients. The body of knowledge around roles and role boundaries can help to inform the study of role construction in interprofessional health care settings. Influences on collaboration have been outlined by different researchers and work has been done to conceptualize collaborative processes in health care. In this vein, the importance of roles in relation to interprofessional collaboration on health care teams has been highlighted however, while much of the existing research looks at themes related to interprofessional collaboration, fewer studies have focused specifically on roles on interprofessional health care teams. The literature calls for more research into methods of promoting collaboration in the workplace, a more thorough understanding of the relationship between teamwork and autonomy and a further examination of the implications for professionals and patients associated with interprofessional collaboration. In this thesis, I seek to help respond to these gaps by exploring how roles, particularly task roles, are constructed on interprofessional teams. I have adopted a micro focus on the dynamics within teams while acknowledging the influence of macro elements on role construction and role boundaries. I have developed a model from my data to illustrate role construction on two interprofessional primary health care teams. In Chapter 3, I will discuss the methodological approach for this study, data collection and data analysis procedures and trustworthiness.

## CHAPTER 3: METHODOLOGY

### **3.1 Methodological approach**

I adopted a qualitative approach for this study. My rationale for doing so was threefold. First, with the data from this study, I wanted to focus foremost on understanding qualitatively the dynamics of role construction rather than on the quantitative activity of predicting and evaluating outcomes (Lee, 1999). As stated in the introduction, one of the goals of this study was to understand how role construction takes place in an interprofessional health care setting. Rather than evaluating a level or degree of role construction I am presenting a description and understanding of the elements of role construction. Eisenhardt (1989) states that case studies are important for understanding the dynamics present within settings.

Second, by grounding this qualitative research within local settings, it becomes holistic and context rich (Lee, 1999; Marshall and Rossman, 2011). This research was locally grounded and examined role construction within two specific health care teams. Different health care teams possess a multitude of unique and shared characteristics that may influence role construction. The varying nature of these teams makes it important to capture the context in which role construction is taking place so that the results can be transferred to similar situations rather than generalized to dissimilar circumstances. Additionally, the participants' experiences as members of the health care team are what have allowed me to create an exploratory model of the dynamics of role construction. It is essential to have the team members' perspectives when trying to identify the dynamics involved in role construction. Instead of predicting and evaluating the dynamics of role construction on this team, these phenomena have emerged from the participants' experiences.

Third, the qualitative approach allowed for substantial flexibility in research procedures (Lee, 1999; Marshall and Rossman, 2011; Miles and Huberman, 1994). This attribute permitted me to be responsive to the data that I was gathering instead of entering into the data collection process with a strict model of evaluation (survey, laboratory experiment). I was able to incorporate unpredicted pieces of data from interview transcripts: in other words, elements emerging from the data that I did not foresee while conducting my literature review

and building a preliminary conceptual model, but that proved to be important for the understanding of role construction on interprofessional primary health care teams. For example, the relevance of professional knowledge was not an influence that I had identified through the literature review but I included it in the analysis because it was an element that came up frequently in the data. Also, this flexibility allowed me to modify my interview protocol in light of new and potentially important areas of inquiry that emerged from discussions with interviewees. For instance, I modified my interview protocol to include more probing around formal and informal education on roles and responsibilities for team members. (E.g. How do you negotiate your role→How do you create an understanding of your role/responsibilities with other team members?)

The specific qualitative approach that I adopted was the holistic, comparative multiple-case study. Adopting a case study design allowed me to focus on the culture and society within the group (Marshall and Rossman, 2011). Additionally, Yin states that the case study “is the method of choice when the phenomenon under study is not readily distinguishable from its context” (Yin, 2003, p.4). This case study followed Yin and Eisenhardt’s approaches to designing and conducting qualitative case studies. Multiple case studies are often considered to be more noteworthy and the overall study more robust, than single cases (Yin, 2009). For example, multiple case studies may generate more compelling evidence because they allow for the analysis of patterns between cases. As Eisenhardt (1989) advises, the selection of the two cases followed theoretical, not random, sampling. Cases were chosen that would be likely to replicate and extend theory (Eisenhardt, 1989). As Eisenhardt (1989) suggests, the health care teams also had diverse characteristics, so that my findings could be extended across more than one type of team.

According to Yin (2009), exploratory cases must have some underlying rationale and direction; the purpose of this research project was to understand the dynamics contributing to role construction in an interprofessional health care setting. Yin (2003) also states that the case study is applicable when investigators want to define research topics broadly, not narrowly and want to cover contextual or complex conditions and not just isolated variables: these criteria are applicable to my fairly broad research question and to the multiple

dynamics that are present on a health care team and that could contribute to role construction.

## **3.2 Data Collection**

### *3.2.1 Case studies*

Two interprofessional primary health care teams in Canada participated in this research. One of the teams transitioned from a group of independent physicians working in the same clinic to an interprofessional team model (Family Health Team) that incorporates allied health professionals to provide additional services to patients. The other team was created specifically to respond to the underserved primary health care needs of the local community in which it is situated. These two teams are similar in the types of services that they provide and in the types of professions found on the team (one team additionally has mental health professionals). Both teams are under 10 years old, and team members recalled instances of learning to integrate the roles of different health professions onto the team. The teams have some diverse characteristics as well: there is a large variation in the size of the two teams; one of the teams is in the phase of reaching sustainability as a clinic (registering enough patients to the clinic) and; perhaps most distinctly, the teams are organized under two different interprofessional models of care, one of which is found in Ontario. Hutchison, Abelson, and Lavis (2001) recommend a policy approach that tolerates the pluralism of organizational and funding models in order to achieve ‘planned diversity’ and ‘cumulative incremental change’ – over time this strategy should lead to effective health system change with an acceptable working environment for health care providers. Therefore, while I have collected data from two different models of interprofessional primary health care, the intent of this study was not to make conclusions about the value of one model over the other and thus I do not compare the merits of the different models of care. Instead, I consider the transferability of the conceptual model of role construction in this thesis across the two primary care teams.

### *3.2.2 Data sources*

Data for this research was collected through interviews, non-participant observations and written documents. Interviews were the most targeted form of data collection because

interview questions can be tailored to focus directly on a specific research area (Yin, 2003) and they often focus on the identification of meaningful categories of organizational phenomena (Lee, 1999). Another benefit to the interview was that it yields large quantities of data quickly (Marshall and Rossman, 2011). According to Marshall and Rossman (2011), interviews allow the investigator to discover the meanings that everyday activities hold for people. This aspect was useful because I was exploring how team members perceive their interprofessional roles to be constructed. For example, hallway conversations happen frequently and team members said that these informal meetings gave them the opportunity to discuss and learn more about the responsibilities and expertise of the other health professions. I conducted 13 interviews with each team (26 in total). The interviews ranged from approximately 25 to 60 minutes in length.

Data collection also involved conducting non-participant observations (Creswell, 2007). Observations were useful because they provided a record of events covered in real time and provided the context in which events occur (Yin, 2003). An observation protocol (Appendix A) was used to organize and record the data. For one team, I observed two one-hour meetings held with allied health professionals and led by the clinic's management. For the other team, I observed two two-hour meetings held with the entire team (lead by the clinical director and manager) and one one-hour meeting between the nurse practitioners at the clinic. These observations allowed me to gain a more general knowledge about how the teams work through administrative and clinical intricacies (e.g. one team took the opportunity to clarify the role and responsibilities of the RPN on the team), the kinds of challenges the teams are going through together at this time (for example, one of the teams discussed the complexities around the new 'Advanced Access' initiative whereby physicians see some short-notice patients and nurse practitioners catch up on the physicians' appointment backlogs), as well as the interactions between team members when they are assembled as a group.

Finally, written documents were also used as a source of data. For this research, documentation involved internet research such as collecting public documents relating to the mission and vision of the specific interprofessional health care teams under study and the

types of services and programs offered at the clinics. The two teams also provided me with some documentation relating to my study of role construction (e.g. an organizational chart of the different professions on the team and a general outline for the structure of the chronic disease management programs). There are several advantages to data collection via documentation. This form of data is stable and unobtrusive, and can provide a broad coverage of events (Yin, 2003). These written documents were mostly used to provide me with additional background information about the team while I was conducting the observations and interviews. They also helped to support some of the data analysis such as the discussion of hierarchy.

### **3.3 Data Analysis**

Data analysis involved coding the transcripts, reviewing the documents and observation field notes for pertinent information, intra case analyses and an inter-case analysis. Both inductive and deductive codes were used. Deductive codes were developed by creating a provisional start list from the research questions and literature review themes (Miles and Huberman, 1994). For example, this list included codes such as: blurred roles, siloed roles, leadership and power. Multiple reviews of the initial codes were carried out with my thesis supervisor. This step allowed the codes to be refined and collapsed into more precise analytical categories.

Also, the analysis took into account inductive codes that emerged from the data itself. Descriptive codes (e.g. recruitment process, community engagement) were written for the initial interview transcripts to summarize ideas, phrases and passages (Charmaz, 2006). Pattern codes (e.g. influences were used to achieve higher levels of abstraction). These codes were more inferential and explanatory and suggested thematic links between chunks of data (Miles and Huberman, 1994). The qualitative analysis software Atlas was used to facilitate the coding procedure to allow for easier retrieval and comparison of coded chunks of data.

The intra case analyses involved detailed case study write-ups for each of the two research sites. This step in the data analysis allowed the unique patterns of each case to emerge before

generalizations were made across the cases (Eisenhardt, 1989). For instance, not all of the influences on role construction were relevant for participants from both teams.

The inter-case analysis generated patterns across the two cases. This strategy allowed me to go beyond my initial impressions about the data and improve the likelihood of producing reliable findings (Eisenhardt, 1989). It was an iterative process that involved refining my representation of the data several times. For example, based on my review of the literature, I began the analysis by thinking about the construction of roles in terms of a ‘spectrum’ of blurred and siloed roles. However, after immersing myself iteratively in the data, I recognized that these concepts were more nuanced. Blurred roles link closely to the distribution of tasks and the interchangeable or differentiated repartition of responsibilities. On the other hand, siloing indicates isolation of health professionals from each other and this concept touches on interactions between team members. Thus, I developed my analysis to take into account role boundaries around interprofessional interactions (autonomous-collaborative role boundaries) and the distribution of tasks (interchangeable-differentiated role boundaries).

Finally, in the discussion I compared the emergent concepts with extant literature to find out whether the former confirmed or disproved the latter. This process is an important step in extending a body of knowledge (Eisenhardt, 1989).

### **3.4 Trustworthiness**

Ethics approval was obtained before conducting this study. In order to avoid unnecessary bias when using interviews as a data source, I took into account several potential weaknesses of this type of data collection namely, bias due to poorly constructed questions; inaccuracies due to poor recall; and reflexivity, where the interviewee gives the interviewer what they want to hear. The questions were carefully constructed using Patton’s (2002) procedures as a model (Interview Protocol, Appendix B). Using Patton’s (2002) discussion of qualitative interviewing as a reference, the interview protocol was generated as a combination of the interview guide approach and the standardized open-ended interview approach. This design calls for a list of questions to be explored in the interview where the interviewer is free to

probe and explore statements by the interviewee in order to illuminate a particular area or concepts that might emerge from the participant's responses. For instance, the questions were developed and revised to make them as open-ended, neutral, singular and as clear as possible (Patton, 2002). Examples were asked for when probing interesting areas of discussion. Also, the questions were worded carefully to avoid constraining the response. For example, dichotomous questions were avoided because they limit expression (Patton, 2002). Finally, an effort was made to use language that was understandable and part of the frame of reference of the participants being interviewed so that the clarity of the questions is increased (Patton, 2002). Consent was obtained from team members prior to their participation in an interview with the investigator (interview consent form, Appendix C).

To increase reliability, the procedures followed in the case study were well documented. Documentation helps to minimize errors and biases in the study (Yin, 2009). Additionally, trustworthiness was established through triangulation of the data, by obtaining member checks, by providing extensive quotes from the participants and by providing rich descriptions of the context and phenomena under observation. Triangulation was achieved through the use of different data collection modes: interviews, documentation and observation. Lincoln and Guba (1985) affirm that triangulating methods makes the data believable.

Also, the analysis was reviewed iteratively by the investigator's thesis supervisor to improve the thoroughness in interpreting the data and the representation of the dynamics of role construction. Member checks, whereby the conclusions of the study were tested with members of the teams from whom the data were originally collected, was used to establish credibility. A participant from each team reviewed the conceptual model and intra-case analysis for their respective research site. The associate director from Team 1 provided precise descriptive information on the team and stated that the report was reliable and represented well the dynamics of the team. The comments from the clinical director of Team 2 also gave precision to the descriptive information included in this research and indicated that the elements presented in the case study were reliable. Lincoln and Guba (1985) call member checks the 'most crucial technique' for establishing credibility.

In this section, I detailed the methods for data collection and data analysis. In Chapter 4, I will present the findings of this study starting with a presentation of the conceptual model, followed by the two intra case analyses and an inter-case analysis to compare the findings between research sites.

4.1 Overview of model

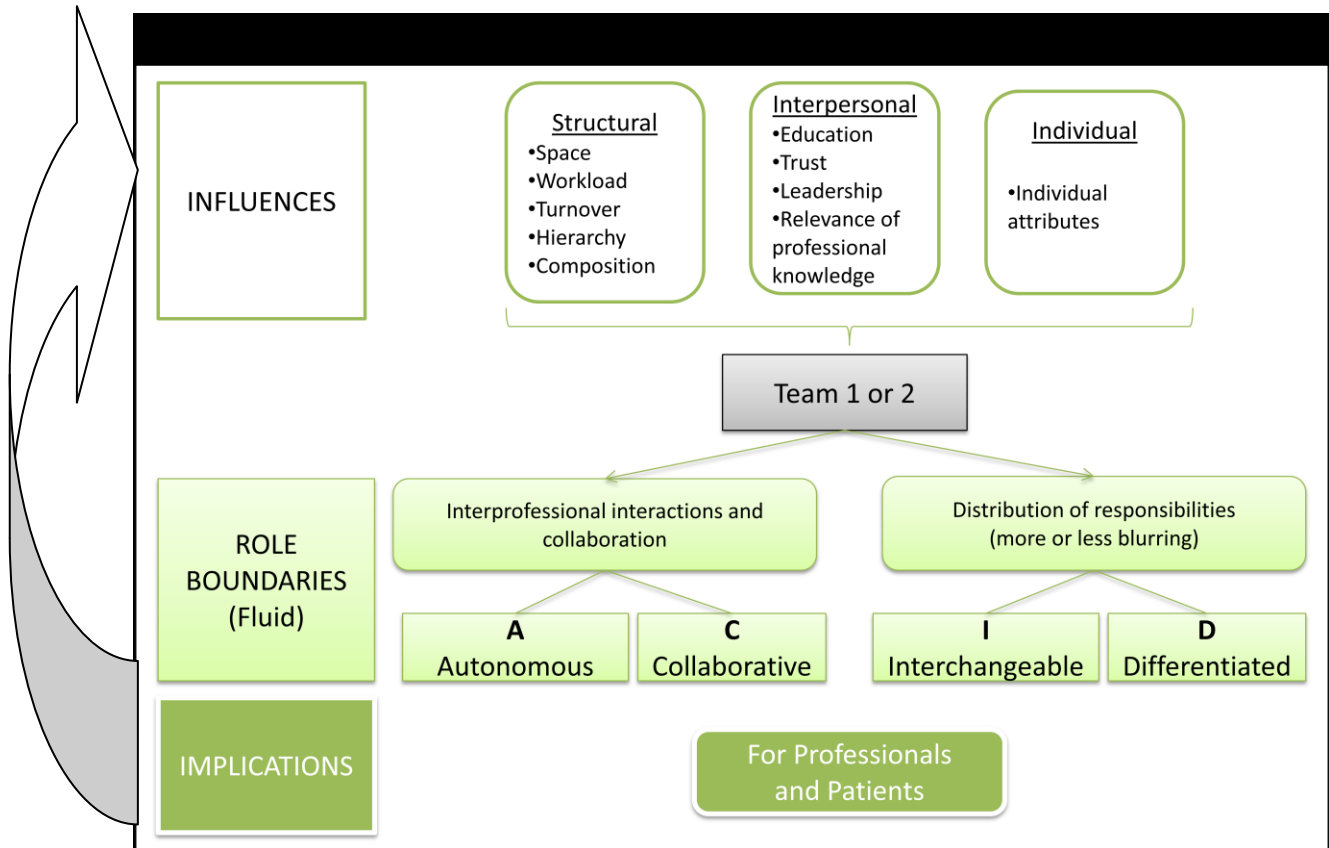


Figure 1. Model of role construction

This model illustrates the different elements of role construction that have emerged from the data. Situated at the top of the diagram are the influences that have been found to affect the role construction on the interprofessional primary care teams that participated in this study. These influences can be subdivided into structural, interpersonal and individual categories. The structural influences correspond to characteristics of the organization and the team workplace. They include workload, staff turnover, physical space, hierarchy, the model of care and team composition. The interpersonal influences encompass dynamics between team members and these include: trust, leadership, education around roles and responsibilities, and relevance of professional knowledge. The category ‘individual influences’ refers to the dynamics that individuals bring to the interprofessional team. The variable nature of these

different types of influences and the team context means that the former do not always manifest themselves in a pre-determined fashion (e.g. staff turnover could be high or low). These influences are not mutually exclusive and can affect each other. For example, the relevance of professional knowledge may change as providers are exposed to informal education that helps them to understand how another profession's knowledge can inform their care decisions. Also, rapid staff turnover makes it difficult for team members to build trust between each other.

The above-mentioned influences shape the boundaries around roles. These boundaries form around interprofessional interactions (collaborative and autonomous roles) and the distribution of professional responsibilities (interchangeable and differentiated roles). Collaborative roles occur where team members have frequent interactions, knowledge exchanges and collaboration; autonomous roles occur where team members have fewer interactions, less collaboration and work more independently from each other (note that these autonomous roles still have the potential to be complementary to the team). Interchangeable roles arise where the responsibilities of different team members overlap and this blurring can be beneficial for example, by helping to ease the workload of another health professional. Differentiated roles occur when team members have separate and distinct responsibilities.

These are four ideal types of roles. There is fluidity around how the boundaries of roles are constructed and re-constructed. For example, the chiropodist may move into different responsibilities depending on the influences: he could have few interactions with other team members in his role of providing foot care but, partly due to a heavy workload and long waiting list, other providers may also offer some basic foot care to their patients. Thus, he would be largely autonomous but some of his responsibilities would be interchangeable with other team members.

The construction of role boundaries on an interprofessional team has implications for team members and patients. These implications include professional satisfaction, the provision of holistic care to patients and access to more services in the same primary care location.

Finally, role construction is a fluid and ongoing process: the arrow from ‘implications’ to ‘influences’ illustrates this feedback loop. It is important to acknowledge that role construction is a process – it does not reach a steady-state but continuously evolves and changes in concert with the shifting influences. The process elements of role construction will not be explored in great depth due to the limitations of this study (one interview point in time).

This model was derived from the analysis of the two cases of this research study. Differences in each case appear in the type of influences mentioned, the effect of these influences, the overall tendencies of role boundaries on the teams and the implications for professionals and patients.

## 4.2 Case 1

### 4.2.1 Situating the case analysis

Table 1. Contextual characteristics of Case 1

<b>Characteristic</b>	<b>Data</b>
<b>Type of care provided</b>	Primary care
<b>Age of team</b>	Six yrs old
<b>Team size</b>	About 165 employees
<b>Health professions on team</b>	Family physician, Psychiatrist, Psychologist, Nurse practitioner, Registered nurse, Registered practical nurse, Dietician, Pharmacist, Chiropracist, Mental health counsellor <sup>1</sup>
<b>Number of interviews</b>	13
<b>Clinical programs and services provided by team</b>	Primary care consults, Diabetes, Cardiovascular, HIV, Asthma COPD <sup>2</sup> , Smoking cessation, Health lifestyles and Craving change, Mental health services and INR reviews <sup>3</sup>
<b>Interviewees’ average length of time on this team</b>	4 ½ yrs

<sup>1</sup> Other positions include: Medical director, Executive director, Associate director, Administrative assistant to the associate director, Receptionists. Not all team members are full-time.

<sup>2</sup> COPD: Chronic Obstructive Pulmonary Disease

<sup>3</sup> INR reviews: regular blood monitoring for patients who are taking anti-coagulants (blood thinners)

### Team Context and Objectives

This interprofessional primary health care team has been operational for around six years (at time of data collection). Prior to the creation of this team, health services were provided for many years by a set of physicians whose services are now complemented by various allied health professionals. The team's objectives and worldview emphasize: addressing the health needs of the surrounding community through prevention, diagnosis, acute care, and the development of chronic disease management programs; and by giving patients access to a wider range of services within one clinic as well as more continuity of care.

### Team Functioning

Patients must be registered to the clinic in order to receive care and are assigned to a physician who is their designated care provider. Alternatively, some patients can be assigned to a nurse practitioner who becomes their designated care provider. Patients can also see a nurse practitioner if their assigned physician is not available for an appointment. The physician or nurse practitioner assesses the patient's needs (together with the patient) and can also suggest referrals to other team members (dietician, chiropractor, mental health services) and to the clinic's chronic disease management programs (led by nurse practitioners, dietician and mental health counselor) if necessary. The physicians and nurse practitioners consult with the pharmacist for drug-related information and collaborate with the registered nurses (RNs) and registered practical nurses (RPNs) to provide certain services (e.g. vaccinations). The nurse practitioners will consult with a physician if something is outside of their scope of practice (e.g. prescribing narcotics, some referrals to specialists outside the clinic).

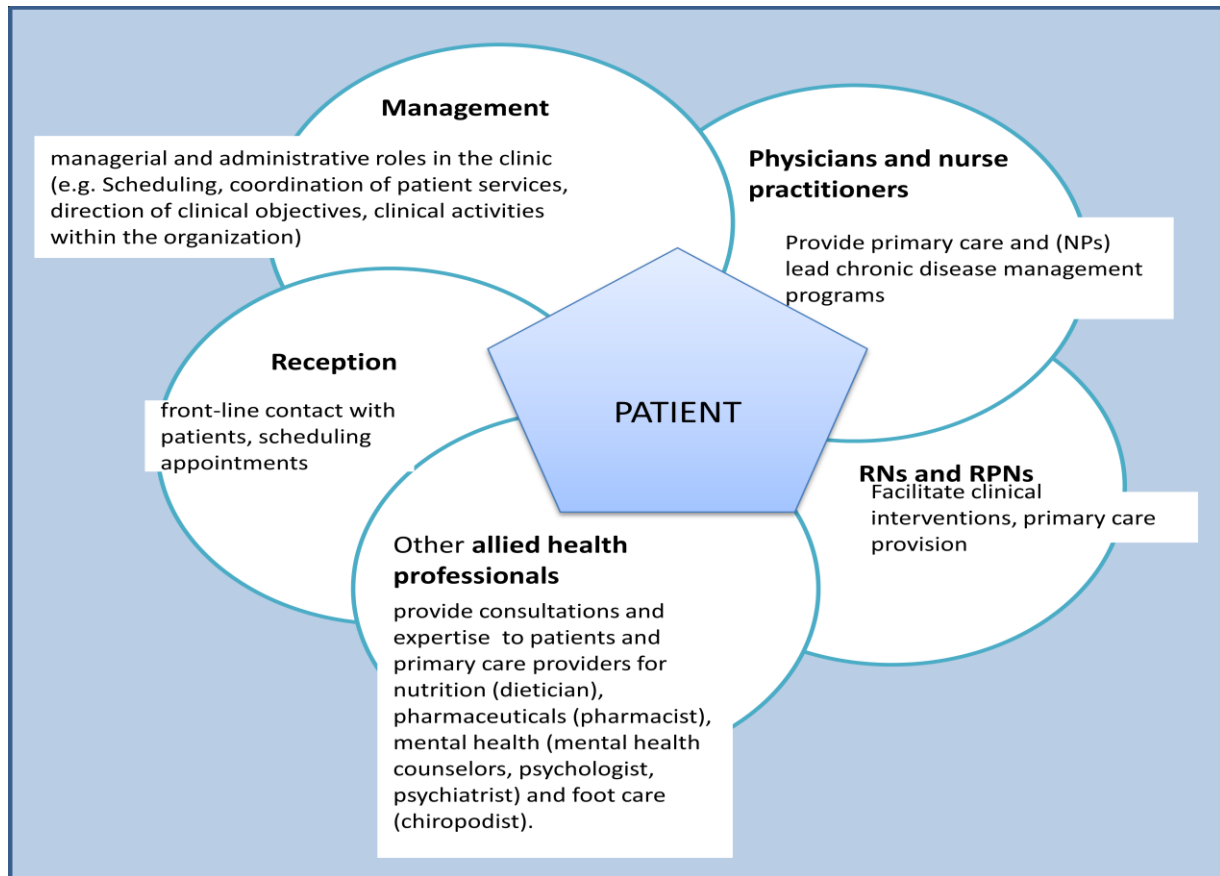


Figure 2. Simplified model of role content on Team 1.

#### 4.2.2 Introduction to the analysis of Case 1

Analysis of Case 1 will involve an exploration of the influences and their effect on role construction, the resulting role boundaries and, the overall implications of role construction for patients and professionals. Before looking at the influences, it will be helpful to give some examples of the role types (A, C, I, D) resulting from role construction as they are manifested on Team 1.

As stated earlier, health professionals with autonomous roles have less interaction with other team members.

“I’m with patients all day. I don’t really talk to anybody else that much. Acquaintances I’ll be like ‘hey, how’s it going’, but other than that I’m not

going to sit there and talk about work ever with anybody really...I'm more independent." Participant 13

Collaborative roles tend to engender more frequent interactions and knowledge exchanges between team members.

"If I'm wondering about medication interactions...I say to my pharmacist who's fantastic, can you look into this and find out...And the other thing she's really good for is, if you have an older patient who has seven million medications, they came to you from somebody else and you're trying to get rid of the medications or just figure out where the problems are, she can just streamline it all. That's very, very, very helpful." Participant 4

Interchangeable roles entail the sharing of professional responsibilities between professions.

"When I see diabetes patients, I can adjust their medications. So can the physician." Participant 7

Differentiated roles refer to situations where the scope and responsibilities of different health professions on the team do not overlap. While there might be overlapping responsibilities in some areas (interchangeable roles), there are also areas of 'specialty' that are associated uniquely with one health profession on the team (in terms of task and/or knowledge).

"It's really the NPs and the physicians who might overlap. Yeah there's very little technical overlap in what nurses and doctors do." Participant 3

"We are similar, because they (nurse practitioners) are nurses but they have a larger practice so we cannot compare the two. Because we (nurses) cannot prescribe, they can, they can make a diagnosis, we cannot." Participant 9

These role boundaries are not mutually exclusive. A team member with differentiated responsibilities might also have interchangeable elements in their role. Likewise, they can be quite collaborative with some health professionals and very autonomous from others. There are patterns of interaction and responsibility that develop on interprofessional teams however, these patterns of role boundaries are fluid and will develop and change in relation to the influences on role construction. The latter will be explored in the next section of analysis for Case 1.

#### *4.2.3 Structural Influences*

The structural influences for Case 1 are characteristics of the workplace and include, physical space, workload, turnover, hierarchy and team composition. These elements may be influenced in turn by other factors such as resource constraints (physical space) and professional culture (hierarchy) however interviewees did not mention these as salient influences perhaps because of their indirect effect on roles. As you will observe, these elements influence both interaction and the responsibilities of team members though some elements might influence one category more than the other. Following are explanations and examples of the manifestation of each structural influence on Team 1 role boundaries.

##### Physical Space

The layout of workspace can influence role construction. The variability of physical space between clinics is determined in part by the dimension of the building(s) that houses the team and the availability and location of office space (and size of the team). In the end, some health professionals will be located in relative proximity to one another while others will be farther apart. The layout of clinical space can affect the potential for interactions among team members. Members of Team 1 find that they interact more often with staff in close proximity to them. These interactions allow them to collaborate on patient cases.

“Our psychologist and the psychiatrist I interact with a lot. Not necessarily because our work overlaps but more just because we’re in the same proximity to each other.” Participant 12

Participants expressed that it was possible to collaborate with team members in other locations through the use of virtual technologies such as phone, email and the organization's clinical computer system.

I use the pharmacists a lot...They're easy to reach by phone. If they can't give me an answer right away, they'll tell me 'I'll work on it and get back to you'. Sometimes I have a patient with me so I'll say 'okay, I'll wait a bit and call you back'. And if it's very urgent, we try to solve the issue right away. If it can wait, we make a 'to-do'." Participant 8

Despite the ability to communicate virtually, team members also commented on the value of the in-person informal exchanges brought about by impromptu encounters in places such as the hallway and lunchroom. In-person exchanges strengthen the collaboration between team members.

"We can still communicate by email or phone call but email's not very personal, it's not the same as chatting with somebody. And phone call is difficult because I'm always seeing patients, they're always seeing their clients so it's hard to catch someone to chat on the phone. But if they're working in the same hallway then we bump into each other before and after our clinical hours or whatever. Informal contact like that often makes a big difference in how well you know somebody, how well you can trust them, you get a feel for what they're probably like when they talk to your patients and all around it's better if you work in physical proximity to somebody." Participant 3

The layout of workspace can affect the ability of team members to engage each other and can enhance the collaborative or autonomous dimensions of role boundaries.

### Workload

Workloads, for example the number of patients that a health professional must see in a day or the amount of administrative work and charting, influence role construction both in terms of

the frequency of interactions between health professionals and the distribution of responsibilities between different professions. Many team members suggested that a heavy workload could be a factor in reducing opportunities for interaction with other health professions.

“My own family physician is here and sometimes when I go in to see her she’ll ask me a bunch of questions about chiropody and ‘I have this patient or I have this patient and what would you do about this or how would you do this’. So there’s a lot of communication between us which is a good thing. I would like to have that communication with other physicians but everyone’s so swamped and so busy.” Participant 13

“The Ministry wants numbers so we have to see more patients so, I have to say I’ve backed off on participating in a lot of things because I don’t have a lot of extra time to do that.” Participant 10

“Maybe there’s not enough time to share things with all of the other team members...It’s hard to get to know each other or to decide how we’re going to work together or how we’re going to communicate.” Participant 7

Health professionals also noted that there were long waiting lists for patients to schedule appointments with some allied health professionals (e.g. dietician, chiropodist, mental health services). The long waiting lists tend to create a situation where primary care providers offer some services that are in the area of expertise of another health professional so that patients can avoid the wait. This dynamic in which roles are interchangeable also alleviates some of the work pressure on the allied health professional in question.

“Another thing we ask for is more chiropody hours...You know really, sending plantar warts to her, I think we can do that. Send your fungal nails to her...People who refer a lot end up with a lot more free time because they aren’t doing anything except for sending people out. You can manage your practice

pretty easily like that but it bogs down the system. Those people should be saved in my opinion anyhow for someone more serious. So the chiropodist maybe she'd have a whole lot more time because she'd do fewer plantar warts.”  
Participant 4

“The chiropodist is specialized in foot care, wounds, warts, injuries, nails...But we still do wart treatments. So yes, there is a duplication of services provided but she can't see everyone, she's already got a ridiculously long waiting list.”  
Participant 8

Therefore the workload of team members, and also how team members manage this workload, affects both their opportunities to interact with others and health professions' tendency to overlap in certain tasks in order to share the workload and create a more timely service for patients.

### Staff Turnover

The rate of staff turnover can have an influence on the construction of roles. Staff turnover can play into team members' familiarity with one another for example, their work habits and expertise which affect the development of collaborative and productive relationships.

“I work with the dietician a lot and the position was pretty stable. It reinforces the team more and you build a strong base. When there's been a lot of turnover....it's difficult to build something when it's always changing.”  
Participant 7

Turnover can also affect the continuity of services and programs at the clinic and by default, the responsibilities of primary care providers who make referrals to these programs and services. Programs with more longevity influence primary care providers' practice and collaboration more than shorter ones. Physicians' and nurse practitioners' roles are affected because they are able to hand pieces of their patients' care over to other health professionals.

“Knowing that [the diabetes chronic disease management leader] is here and not really making noise to leave, definitely makes me more confident to send my patients to her...[If] she might leave in six months, we keep on losing the NPs, I don’t use the program as much.” Participant 4

To summarize, staff turnover affects role boundaries in terms of team members’ ability to develop collegial relationships and collaborate together. It also influences whether primary care providers can or choose to access chronic disease management programs and services, an aspect that can change the primary care providers’ responsibilities towards the patient.

### Hierarchy

The hierarchical structure of professions influences role construction. Traditionally, physicians have been found to be at the top of the chain of responsibility for the patient.

“There’s definitely power dynamics. I think in general physicians tend to hold more weight.” Participant 12

Nurse practitioners also function as primary care providers and can overlap some of the physician’s responsibilities however, the physician is in a position of authority relative to the nurse practitioners and can influence the latter’s responsibilities.

“Sometimes it’s hard to know because I can adjust or change a medication but the physician might have already done it or he might be intending to do it. Sometimes it’s not clear who’s supposed to do what. [To clarify responsibilities] it’s a bit different with each person but you really have to talk to the physician to see if he’s okay with it.” Participant 7

Some physicians use their status to facilitate the professional development and growth of the nurse practitioner and other allied health professional roles on the team.

“You [the allied health professional] may be telling me that you can’t do that right. But I think you can and so I might put some referrals your way and maybe you don’t think you can manage but I think you actually can. So part of it is encouraging us to develop as professionals as well.” Participant 2

“When you work a bit more closely with the physicians sometimes they’ll give their own opinion: ‘Why would you do that, you’re a nurse practitioner and that’s an administrative task.’ So they themselves will say ‘You shouldn’t be doing that.’ So it’s easier after that to go and say ‘I don’t do that, give it to someone else’.” Participant 7

In addition to the hierarchical dynamic between physicians and nurse practitioners, both physicians and nurse practitioners, as primary care providers, have the authority to refer patients and can adjust the extent to which they collaborate with the rest of the team.

“Some providers feel that as primary care providers they should be providing all of the primary care and sort of doing everything and they really don’t refer a lot...For some physicians I’m really exclusively a drug information pharmacist. For other physicians I’m much more involved in a collaborative care approach.” Participant 11

Therefore, the hierarchical structure of Team 1 influences role construction in different ways. Primary care providers can influence the extent to which they collaborate and are interrelated with other health professionals. Physician influence can also stimulate the expansion of responsibilities of other health professionals, and in doing so, modify the boundaries around the distribution of responsibilities.

### Team Composition

The mix of professions on an interprofessional team can influence role construction. Primary care teams provide a set of services to their patients and team members have different responsibilities in delivering these services. When the professional composition of a team

changes, for example a new profession joins the team, certain responsibilities might shift to the new team member if the responsibility is more central to that profession especially if they have more knowledge and expertise in the delivery of that service.

“There’d been no consistency in this role. And other than the INR monitoring, that was the only thing that was consistently provided by a clinical pharmacist. And then there was no clinical pharmacist for a year and so it was a nurse practitioner that took it over.” Participant 11

“Our diabetes program that, for me, has totally changed how I manage diabetes in that, for the most part, I don’t manage it. [The NP] takes care of a lot of the day-to-day management stuff of diabetes and does a wonderful job right. Smoking cessation for example, now that program for us is up and down right. But [the NP]’s been revising it over the last few months and stuff so again, I don’t need to do as much smoking cessation when it comes to the more labour intensive, time-consuming counseling, I can say, okay we’ve got a great program, go see [the NP].” Participant 2

“I do less of that every three months, every six months checking in on [my diabetic patients] because I know [the diabetes chronic disease management leader] is seeing them and doing great, maybe changing medication and making sure that they’re seeing their eye doctors, all those things that they have to do, she does a very good job of it. So definitely that’s changed, that would be a big one.” Participant 4

Having different combinations of professions on the team including the types of professions and number of work hours, results in different distributions of responsibilities among the team members. A team member’s responsibilities can change as a function of the professional composition of the team.

#### *4.2.4 Interpersonal Influences*

Interpersonal influences for Team 1 include education, trust, leadership and the relevance of professional knowledge. These dynamics help to shape A, C, I, D role boundaries by acting on the relationships between team members.

##### Education around roles and responsibilities

Education around roles and responsibilities can influence role construction. Education is an important tool because, on an interprofessional team, health professionals will not necessarily join the team with an understanding of the responsibilities of all the other professions (and therefore the potential of those roles and how to engage the services of the other professionals in the care of the patient).

“When we first started out as a family health team I had no clue what a nurse practitioner did. I think that was part of the difficulty...trying to figure out who does what, when. I wasn’t trained to know what a nurse practitioner does; I wasn’t trained to know what role others could play.” Participant 2

“Most referrals will come from the same physicians. Some physicians I get no referrals from just because some of them don’t even really know what I do...so I’m supposed to do another presentation in a month and a bit.” Participant 13

It can be challenging to access other team members in order to deliver a formal presentation or message around an individual provider’s roles and responsibilities.

“Now sometimes I’ll do presentations on some of the conferences that I’ve gone to...But if there’s no lunch sponsored, like I had my intern do one [presentation] and then I did one, and three people came because there was no food provided. So, I’ve kind of stopped offering as many because it’s my time that I’m using and no one comes.” Participant 10

“We get updates [on changes in the responsibilities of different professions] by email, we get so many emails that sometimes you read them and sometimes you’re like yeah whatever. I suppose I would only, if I felt it had a negative impact on what I was doing I would look into it more...If there were an education forum would I go to it? Not sure.” Participant 4

Further, participants suggested that informal education mechanisms are often useful for clarifying roles and responsibilities and enhancing collaboration.

“Nurse practitioners for example, when we first started working with them, would come in and talk about ‘these are my roles and responsibilities, this is what I can do, this is what I can order, these are the things I can diagnose and then this is what I can’t do’. So those kinds of things were important. I think a lot of it though happens on a case by case basis so physicians, especially in their early days, would only discover what a nurse practitioner could and couldn’t do because the nurse practitioner would come and say ‘okay I can’t do this, I need you to prescribe this medication or make this diagnosis’ or whatever.” Participant 2

To summarize, both formal and informal education can help to develop team members’ understandings of different roles on the team. Based on how responsibilities are allocated when team members join the clinic, the potential to collaborate exists. Education, especially informal varieties, can facilitate the growth of collaborative relationships although delivering education can be a challenge when there are time pressures.

### Trust

Trust is a relational factor that affects the extent to which professionals are collaborative and are willing to delegate and share responsibilities. Trust develops through formal and informal (positive) interactions and experiences between team members. It helps them to gain confidence in other professionals’ skills and knowledge and leads to more frequent consultation and collaboration.

“I need to know who somebody is on a personal level, maybe I’m exaggerating to say before I can work with them, not entirely, but that plays a big role in terms of how I can work with them.” Participant 2

Not only does trust increase collaboration but it can also lead to greater responsibilities for some professionals.

“If you’ve got a clinical pharmacist who is very approachable, demonstrates to the physicians and nurse practitioners...that she’s very knowledgeable, that she’s thorough, answers their questions in a very helpful manner, provides good advice to them and to their patients, the role becomes defined not only by the profession but also the frequency within which people consult the pharmacist and the things they ask the pharmacist to do on behalf of their patient continue to increase.” Participant 1

Therefore, trust influences how team members work together. It takes time to develop and necessitates interacting with colleagues on a professional and personal level. The presence of trust makes providers feel more comfortable in relying on each other’s expertise and can foster greater sharing of responsibilities.

### Leadership

Leadership can influence the distribution of responsibilities and can also aid in developing collaborative tendencies of the interprofessional health care team. The largest group of interviewees were the allied health professionals. They identified the clinic’s management level as the source of their leadership. The leadership at this level can be a key in helping to integrate new professionals, for example nurse practitioners, into the team and in exploring which responsibilities or roles best fit their expertise and abilities.

“The physicians have finally accepted that they have to change or modify their practice to be more inclusive towards us...

*Interviewer: And what do you think helped create this change?*

I think that the role of the [management] definitely helped the physicians to work in a different way...[Person X] was better able to realize what was lacking and how to come up with a solution.” Participant 8

Collaborative tendencies are enhanced by the managerial leadership which facilitates opportunities for interprofessional interactions such as meetings.

“I think the more people talk to each other, the better. It’s one of the reasons why I continue to promote having the clinical team meetings even though sometimes we get to the day before the meeting and I don’t have anything for the agenda...It’s good to have everybody around the table and foster a dialogue...it provides opportunities for communication and good communication leads to collegiality and then collaboration.” Participant 1

Further evidence to support this notion comes from the observations of allied health professional team meetings. During one of the meetings that I observed, there were a number of administrative items addressed but in addition, before the meeting ended, each health professional was asked to tell everyone about a project that they were working on and how it was progressing. This question gave team members at the meeting an opportunity to discuss their area of expertise, some providers also mentioned their heavy workload due to a project, and it also gave others around the table a chance to learn more about the different areas that staff on the team are involved with.

To a certain extent, the leadership of the team indirectly influences role construction by empowering team members to negotiate the direction of their growing responsibilities on the team. In this way, professionals become more autonomous in their role relative to the team management.

“In my case, there was nobody in my position for a year before I started so there wasn’t much of a role. So there were some things that were expected of me, but to a large extent I was able to develop my role on my own...obviously I worked within the framework of the organization and what’s expected of me. But we are permitted a large degree of autonomy I guess because of the leadership style that permits that.” Participant 11

“I think that the expectations of my role are pretty clear. It’s not a place where you’re tightly kind of micro-managed...There’s maybe more flexibility in the role.” Participant 12

In general, the allied health professionals expressed that managerial leadership helps to integrate their role and responsibilities with other team members but allows for some autonomy in pursuing individual professional interests. Leadership also provides some opportunities for interprofessional interaction through formalized events such as interprofessional meetings.

#### Relevance of professional knowledge

The relevance of another profession’s knowledge to the care decisions made by a team member is an influence on role construction and particularly collaborative role boundaries. The usefulness of one health professional’s knowledge for another team member’s clinical decision-making leads health professionals to interact with some team members more than others. On an interprofessional team, health professionals have a tendency to interact more with professions that can provide them with additional knowledge and information to inform their care decisions.

“Let’s say if I send somebody to see a mental health counselor, there’s got to be a little bit more of sharing of information over there because how the person’s doing from a psychological perspective has a huge impact on their ability to manage whatever else they have got going on.” Participant 2

It follows that there is a tendency to interact less with professions whose information does not affect another team member's decisions of care directly.

“So the care that the chiropodist provides is more straightforward. I don't need to get involved in the care of the feet right. They have this little box. To me that's what it is right. Their square, their care is provided within a little box. Yes it may have an impact on how the patient functions, because whether they can walk or not has an impact on whether they can exercise so it has implications to the rest of the patient care. But to me it's a little bit more of an independent little box.” Participant 2

“The dietician to a certain extent [is independent] although she isn't really as siloed, her information's quite pertinent to other providers.” Participant 11

Greater relevance of professional knowledge and expertise for one's care decisions can increase the interactions between different professions on the team and shape collaborative role boundaries. When a profession's knowledge and information is not often used to inform another team member's care decisions, the knowledge exchanges between the two professions tend to decrease.

#### *4.2.5 Individual Influences*

##### Individual attributes

Personal attributes, such as an individual's approach to care or perspective on interacting with other team members, can influence role construction. Providers can have different approaches towards managing their patients' care. Many primary care providers see the patient ultimately as their responsibility and some may feel uncomfortable in relying on other team members to provide care for their patients. This attitude can affect collaborative and interchangeable dimensions of role construction.

“Part of the reason that I'm not involved in a pod, that I'm not working directly with a nurse practitioner is because I don't feel comfortable with them doing

primary care. A patient presents with abdominal pain or chest pain or something or neurological symptoms, I'm not comfortable with the idea of a nurse practitioner diagnosing a complex problem like that. If they were only involved in following people with diabetes for their regular three month check-up or Well Baby check-ups, I'd be okay with that." Participant 3

"Some people who I would've thought maybe might have referred more don't and others kind of surprise me because they've had an established practice for a long, long time and yet are open to this kind of model." Participant 11

Individual traits, such as self-assurance or reticence, can enhance or detract from role construction. It can influence team members' integration in an interprofessional team and their interaction with other health professionals.

"So if you have someone who is very timid and is intimidated by having to talk to a physician then the integration of that role might be a lot slower because the person is uncomfortable with going out and talking to the physicians and initiating that relationship with the different physicians." Participant 1

"It's a big clinic so certainly someone who is very talented and also, is good at communicating, at presenting themselves, is more affirmative – it inspires more confidence in others. It's easier for others to make a referral to them or to include them. Because they come to mind more than someone who doesn't say a word." Participant 7

Therefore, personal attributes can affect the distribution of tasks and interaction among team members.

#### *4.2.6 Summary of influences and role boundaries*

This data analysis looks at the role boundaries around patterns of interprofessional interaction and the distribution of responsibilities among team members. As seen in the

previous section on influences, they are shaped by dynamics on several levels: structural, interpersonal and individual, and they provide insight into interprofessional teamwork. Though role boundaries are fluid, certain tendencies are exhibited depending on the nature and type of influences at hand.

Autonomous and collaborative role boundaries are affected by structural influences of physical space, workload, staff turnover and hierarchy. The organization of physical space and the size of the workload can increase or decrease potential for engagement between clinicians. Turnover affects collaborative roles because it takes time for team members to become familiar with each other and develop habits of working together. The hierarchical structure of the team allows primary care providers to influence their interrelatedness with other team members.

Some interpersonal and individual influences also affect interactions on the team. Informal opportunities for education and the establishment of trust facilitate collaborative roles while leadership can be a factor in creating opportunities for interprofessional interactions. The relevance of professional knowledge provides a strong indicator for potential collaboration or autonomy. Personal attributes can help to determine the potential for interaction among team members.

Interchangeable and differentiated role boundaries are shaped by structural influences of workload, staff turnover, hierarchy and team composition. Workload is an influence on how responsibilities are shared among team members and staff turnover is a factor in primary care providers' comfort in handing over pieces of a patient's care to other professionals. Hierarchy allows physicians to play a role in determining or modifying the distribution of responsibilities of other team members and team composition is a characteristic that shapes the repartition of responsibilities.

There are interpersonal and individual dynamics that influence the distribution of responsibilities as well. Trust and individual attributes have an impact on decisions to share

responsibility and delegate. Leadership can help clarify responsibilities and also adjust the distribution of tasks to better meet the needs of professionals and patients.

While role boundaries are continuously changing, there are several tendencies that manifest themselves on Team 1. Many primary care providers (physicians, nurse practitioners) have frequent interactions with the pharmacist. Other allied health professionals tend to interact less frequently with primary care providers and with each other (notwithstanding the mental health service members who interact frequently among themselves) except via electronic communication (phone or computer).

The health professionals that work in a sub-team or 'pod' (this can include four to five physicians, a nurse practitioner and an RN or RPN who can rotate between pods) tend to interact more frequently with each other than with the rest of the team. Some physicians are very autonomous and do not refer to allied health professionals or collaborate with a nurse practitioner in a 'pod'. Nurse practitioners are quite autonomous in their roles as leaders of different chronic disease management programs while the dietician and one mental health counselor collaborate more actively together to present a joint program on eating and lifestyle changes.

The physicians and nurse practitioners tend to overlap in their responsibilities as 'omni-practitioner' primary care providers who meet all types of patients and then refer them to the appropriate specialty or health program. Other allied health professionals such as the dietician, chiropractor and mental health counselor have 'niches' of knowledge and expertise and overlap less in their responsibilities with other team members (although they might overlap with primary care providers who offer some similar services).

#### *4.2.7 Implications of role construction*

The manner in which boundaries manifest themselves on a given team can have implications for professionals and patients around professional satisfaction and access to more holistic care.

### Autonomous and collaborative role boundaries

Interviewees reported that more collaborative roles could lead to greater professional satisfaction and reduce stress. For example, professionals who are more collaborative feel supported in their care decisions by the expertise of other team members.

“I love having our pharmacist here, the mental health team, the nurse practitioner. They’re great supports and it’s nice feeling that you’re not alone in taking care of just a huge number of people. That there is a safety net. It’s nice to know that there are other people you can call and say I’ve got to change her off of all of these medications, can you please help me here.” Participant 4

Also, professionals who take the opportunity to share their expertise with other team members can derive a sense of self-worth from this contribution.

“I like to have people contributing and building on each other’s ideas because that way we can continue to move forward. People can be creative and feel that their input is valued. And that goes a long way from my perspective to creating job satisfaction.” Participant 1

Conversely, some allied health professionals with greater autonomy indicated that they felt isolated from the team environment and this reality can decrease care providers’ ability to build a support network with other team members.

“Sometimes it has the feeling for me almost as if I’m running a private practice...Most of [my interactions] tend to be casual and that’s something that I’m often pushing for is more case collaboration because it’s not necessarily built into this model...I think that you can’t afford not to [collaborate] when you’re doing this kind of work full-time, it’s just so important to help avoid burn-out and to give better care to patients....Personally I enjoy working on a multidisciplinary team so I would like to see more collaboration.” Participant 12

“I pretty much work solo honestly: I have my own schedule, I feel like it’s private practice for me...there’s nobody that can be like ‘Hey come see this, I’m having a tough time’.” Participant 13

Patients can also benefit from collaborative roles by receiving more holistic care and expertise.

“With the dietician it’s really nice for us to have collaboration because she might see a lot of patients who are struggling with disordered eating and so it’s a real nice complementary role to have a mental health team that she’s working alongside.” Participant 12

“I love having a mental health team...I don’t feel the panic that I have to counsel because I shouldn’t. It’s not what my training is, I’ve had training and I don’t think that I’m the person that they should be seeing. I think it clouds things sometimes as well so it helps that I don’t have to do any counseling anymore except for the interim stuff. ” Participant 4

On the other hand, the existence of more autonomous and independent workflows can affect the delivery of health services to patients.

“It doesn’t have as much of an impact on me in my day to day practice, having [the nurse practitioners] here. I don’t set up follow ups with them, I don’t actively have my patients see them...I don’t think our situation is ideal. I would prefer a more active role of the nurse practitioner like my patients knowing who she is and trusting and we don’t have that.” Participant 4

“Some teams do an approach where a patient would come in, they would see three different people and the doctor would come in at the end to check in with the patient, so you would get more of a joint approach. But then our team’s spread out, it’s hard to do that approach with our patients.” Participant 10

From the above example of interprofessional interactions, participants are suggesting that the collaborative dimensions of roles boundaries can benefit both themselves and patients.

#### Interchangeable and differentiated roles

Professions whose responsibilities overlapped in some areas (e.g. physician-nurse practitioner) suggested that the interchangeable nature of their roles could contribute to easing their workload.

“Nurse practitioners see a lot of patients by virtue of the fact that physicians are overwhelmed a lot of the time. And so they really help ease that burden.”

Participant 11

Nevertheless, overlapping responsibilities can cause confusion around referrals and the areas of responsibilities of some professions.

“I’ve had diabetic patients referred to me for recommendations of what the next step is when really they could have been referred quite as easily to the nurse practitioner. I think it probably is confusing for the provider as well. When would they refer to me...versus sending them to the nurse practitioner.” Participant 11

The skills of team members may not be truly maximized when different professions are performing the same responsibilities.

“There’s some of us that were more interested in a true comprehensive care model where the nurse practitioner supports the family physician and vice versa in the care of the patient...The nurse practitioner may do certain things and the family physician may do other things that are more commensurate with what they do best right. So for example, nurse practitioners are really well trained and have a greater capacity I think to do a lot of counselling, preventative care, these kinds of things. So in some FHTs, they use them largely for that reason as oppose to diagnosing

and treatment. We sort of use everybody the same for the most part. So in my opinion, we're sort of losing out on maximising peoples' skill sets. But that's the model we went with initially, we'll see where it goes, that could change."

Participant 2

Overlapping responsibilities could create tensions between the different professions (for example between nurse practitioners and physicians who both work in some capacity and circumstances as primary care providers to patients).

"It's hard to let go of something when it's been drilled into you that it's you, it's your role, it's your discipline, that you know better. You establish a relationship with your patient and then suddenly everyone's butting in – that's the impression that you get and that creates resistance." Participant 8

The differentiation of responsibilities can decrease power struggles between professions.

"I don't know if I do think anybody has any more power. I work really collaboratively with most of the nurse practitioners. I don't feel like I could do their role and I don't think that they really feel that they could do mine. So I think that we respect each others' boundaries and limits." Participant 11

Patients can benefit from shorter wait times when some of the responsibilities of different professions are interchangeable. In the following example, an interviewee explains that the clinic has assigned some patients to have a nurse practitioner as their primary care provider instead of the more traditional rostering to a physician in order to disperse the clientele more efficiently.

"I am the 'primary care provider' for some patients...It's to better distribute our clientele." Participant 8

Patients can also benefit from the differentiation of tasks when nurse practitioners are responsible for chronic disease management appointments because patients are given longer appointments.

“I was very happy to have the nurse practitioner take care of the diabetics and probably much better care with her than with me trying to race through an appointment. She has half-hour appointments, I have ten-minute appointments. It’s a very big difference you know.” Participant 4

Thus, the implications of role construction touch on the professional well-being of team members and the provision of patient care. Furthermore, different types of role boundaries can have conflicting implications. For instance, while more interchangeable role boundaries could help to lessen the workloads of team members, they could also increase the potential for power struggles because the roles of various professions would become less differentiated. Encouraging the expansion of one type of role boundary at the expense of another may have detrimental implications for the team and for patients. Therefore, it will be important to be aware of the implications of different role boundaries and to strike a balance between autonomous-collaborative and between interchangeable-differentiated role boundaries.

In this section, I provided the findings related to data analysis of Case 1. In the next section, I turn to the findings from the analysis of Case 2.

## 4.3 Case 2

### 4.3.1 Situating the case analysis

Table 2. Contextual characteristics of Case 2

Characteristics	Data
<b>Type of care provided</b>	Primary care
<b>Age of team</b>	Over two yrs old
<b>Team size</b>	13 team members
<b>Health professions on team</b>	Nurse practitioners, Physicians, Registered nurse, Registered practical nurse, Dietician, Social Worker, Pharmacist, Laboratory technician <sup>4</sup>
<b>Number of interviews</b>	13
<b>Clinical programs and services provided by team</b>	Primary care consults, Diabetes, Hypertension and INR reviews
<b>Interviewees' average length of time on this team</b>	Ten months

#### Team Context and Objectives

This interprofessional primary health care team had been operational for over two years (at time of data collection). The team is in the process of building up the number of patients registered to the clinic (a necessary step in being considered sustainable by the provincial government). Its objectives and worldview emphasize: preventative care and health education; greater access to health services for clients (e.g. extended hours of operation, interprofessional team members on site, an expanded range of services on site such as drawing blood); community engagement to build trust for this model of care (which has one nurse practitioner in a formal leadership position); and the use of evidence-based guidelines.

“So the model is more of a proactive, maintain wellness...We don't want to just see our patients when they're sick, we want to maintain their wellness.”

Participant 2

---

<sup>4</sup> Other positions: Clinical director, Manager, Receptionists

## Team Functioning

Patients must be registered to the clinic in order to receive care and are assigned a ‘Most Responsible Provider’ (a nurse practitioner) who is their designated care provider. They can see other nurse practitioners if their ‘Most Responsible Provider’ is not available for an appointment. The nurse practitioner performs an assessment through inputs provided by the patient and then discusses the priorities for the plan of care. The nurse practitioner will also suggest referrals to other team members (social worker, dietician) and to the clinic programs (led by the RN/RPN and pharmacist), hypertension and diabetes, if necessary. The nurse practitioners consult with the pharmacist for drug-related information and collaborate with the registered nurse (RN) and registered practical nurse (RPN) to provide certain services (E.g. Well Baby check-ups). The RN and RPN assume responsibility in areas such as immunizations, injections, intakes for new patients and program leadership. The laboratory technician is involved in performing lab tests. The nurse practitioners also consult with the physician if something is outside of their scope of practice (e.g. prescribing narcotics, some referrals to specialists outside the clinic). The collaborating physician will see patients that are out of the scope of practice of the nurse practitioners.

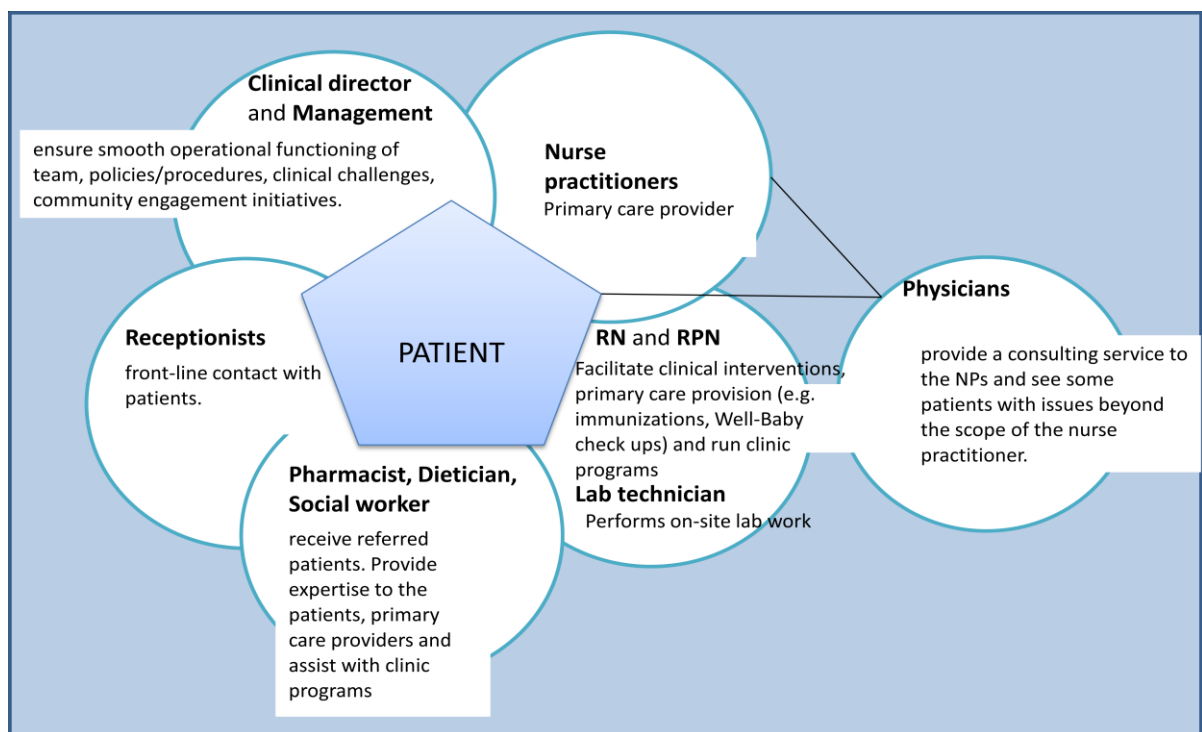


Figure 3. Simplified model of role content on Team 2.

#### *4.3.2 Introduction to analysis of Case 2*

Similarly to Case 1, analysis of Case 2 will include an exploration of the influences and their effects on role boundaries as well as the implications of role construction for Team 2. First, here are some examples of the role types (A, C, I, D) as they are manifested on Team 2.

More autonomous roles are characterized by less frequent interaction with other team members.

“[Social work]’s still part of the team but there isn’t that ongoing continuous daily talk to [the nurse practitioners]. Dietician, pretty much the same thing.” Participant 6

Collaborative roles tend to engender more frequent interactions and knowledge exchanges between team members.

“I really rely heavily on the other people that work here...I often share my findings on a patient with other colleagues or they share with me.” Participant 4

Interchangeable roles entail the sharing of professional responsibilities between professions.

“[New patients] fill out an intake form which details their medical history, previous physicians or care provider...Once that is filled out, we have them book an intake appointment where they may meet with the RN, RPN or the NP, depending on availability, where the intake is reviewed...and evidence-based screening that they require is identified.” Participant 1

Differentiated roles refer to situations where the scope and responsibilities of different health professions on the team do not overlap (in terms of task and/or knowledge).

“[The social worker] has quite a big role in our clinic...that none of us are quite as familiar with. Because societal factors are something we’re all aware of and I know the ones that are nutrition-pertinent, so cost of living and food budgets... and that kind of thing, but beyond that, I’m not that familiar with it.” Participant 10

A, C, I, D role boundaries are not mutually exclusive. A team member with differentiated responsibilities might also have interchangeable elements in their role. Likewise, they can be quite collaborative with some health professionals and very autonomous from others. There are patterns of interaction and responsibility that develop on interprofessional teams however, these patterns of role boundaries are fluid and will develop and change in relation to the influences on role construction, the latter will be explored in the next section of analysis for Case 2.

#### *4.3.3 Structural Influences*

The relevant structural influences that emerged for Case 2 include workload, hierarchy and team composition.

##### Workload

Workloads can influence role construction by compelling the primary care providers to retain responsibilities or to delegate more to others so that they can focus on the areas of their expertise that do not overlap with other team members.

“[The nurse practitioner] being so busy she can, as she says, share the wealth, so she can send the patients to the pharmacist, who can do diabetic educating, and then send them to an RN who can do the blood work, and that type of thing, so it frees up her time to do more of the higher stuff on her scope of practice.” Participant 12

“It really helps with time management to share in that sort of role [of taking a new patient’s health history]. If you want to own everything, you then get really

bogged down, and you're not able to do all the other things that are part of the role that we need to do." Participant 4

For Team 2, the workload tends to affect how responsibilities are spread out among team members. Having more work to accomplish leads primary care providers to delegate more tasks to other professionals thus engaging them and their capacities in their roles to a greater extent.

### Hierarchy

Professional hierarchy influences role construction. On Team 2, nurse practitioners are the primary care provider and are often responsible for making referrals and consultations with other team members. This hierarchy gives nurse practitioners the ability to influence the collaborative boundaries around roles.

"When the nurse practitioner does the physical, she will identify additional opportunities for other team members to be involved in their care. So if they're diabetic, she may refer them to the diabetic program, which is currently led by the registered practical nurse, who's a diabetic educator, and the pharmacist, who's a diabetic educator as well, with some RN involvement. Or they may be put into the INR program and the pharmacist takes the lead on that. He's the lead position on the INR program. Or they may be put into the hypertension program, which the RN takes the leadership position on." Participant 1

Furthermore, the nurse practitioner can influence the distribution of tasks and the interchangeable nature of certain responsibilities on the team. In the excerpt below, a nurse practitioner is discussing the pros and cons of delegating the intake appointment (the first clinical contact with a new patient) to the RN or RPN.

"I guess the first argument is, if you do the intake, then you get to know the patient. When they come back for the physical, you've already built a relationship. But on the other side, we can delegate. The RNs, it's perfectly

within their scope of practice to do interview, education, initial assessment. They will then come to us nurse practitioners if there's a concern or a pressing need to be dealt with. Also when that patient does come in for a physical exam, we can still go through part of that [intake] again as part of the physical." Participant 4

The nurse practitioners, owing to their position in the hierarchical structure, have the power to refer and delegate responsibilities. Thus, they can influence which types of responsibilities are associated with other roles on the team and also the interactions and collaboration that they have with other health professionals in terms of sharing knowledge about a particular patient.

Another way that hierarchy can influence role boundaries is by contributing to the separation of the physician role from the rest of the team.

"I'm finding that my interaction with my collaborating physician is very, very limited. And it actually doesn't bother me...I rely more heavily on my...lead nurse practitioner here for clinical-type problems or questions I have than my collaborating physician." Participant 4

This type of hierarchy can also shift the traditionally prominent role of the physician to more of a consultant position. In other words, the whole team, and especially the nurse practitioners, become more autonomous from the physician.

#### Team composition

The professional composition of a team can influence role construction. When the mix of professions on a team changes, the responsibility for certain tasks might shift as well. For example, this adaptation may take place because a new team member has more knowledge in an existing area of health service delivery.

"I've done the college thing...and I've written the certifying test, and I'm more familiar with the new scope of practice than maybe a nurse would be...[The RN]

was doing the blood work prior to me, her and the RPN...the RPN has had lab experience but she hasn't had the same training that I have. Same as the RN.”

Participant 8

“And as far as similarities with other professions, there's always a little bit of overlap. I mean, I know a little bit about what the dietician does in her role, so in a pinch I can assist a patient but I try not to go that route, because we do have a dietician here. If I'm working in a family health team for example where they don't have a dietician, you'd have to perhaps refer out to an outside body. Then I'd perhaps take on more of those types of responsibilities myself, in my role, but here I don't need to, because we have somebody here, on site.” Participant 4

Having different combinations of professions on the team results in different distributions of responsibilities among the team members. Responsibilities can shift as a function of changing team composition.

#### *4.3.4 Interpersonal Influences*

The interpersonal influences that emerged for Case 2 include education, leadership, trust and relevance of professional knowledge.

##### Education around roles and responsibilities

Education is a significant means of helping members to understand the responsibilities of different professionals on the team and also to learn the procedures for consultation, referrals and delegation that may be particular to their team.

“When I first came, everybody else had already been here for a while except me so I knew that anyone I asked would have the answer. So it was just a matter of catching on...it was a gradual process and slowly it all made sense, why we delegated the way we did.” Participant 10

Initial and ongoing education can facilitate the actualization of the interchangeable and differentiated role boundaries and permit better collaboration between professions.

“As part of my orientation when I started working here, I spent some time with each of those disciplines to get a little bit clearer idea of what their role is. I think it enhances the team, it enhances my work.” Participant 5

“When I first came, and this is something I was happy we got to do, is we got to do a referral presentation. So to show the team, this is what a dietician can do, the social worker did the same, the pharmacist did the same. What kind of referrals are most common, what areas of expertise we have, what types of appointments we do and the type of counselling we offer. And then from there I usually just give my feedback, for example at team meetings, if they bring up something I’ll mention, if it’s something that’s applicable to me, let the patient know I can offer this as well.” Participant 10

Education around roles and responsibilities is an important influence for Team 2 because it enables team members to develop a more cohesive pattern of working together. It helps staff to understand the scope of the different members on the team and allows them to access the different roles appropriately and also to utilize the knowledge of different professions fully thus facilitating collaborative patient care.

### Trust

Trust, or confidence in other team members’ skills and abilities, influences the degree to which professionals tend to collaborate with others. Regardless of how little or how much time it takes for trust to develop, it becomes a facilitator for collaboration with management (team leaders) and other colleagues.

“I found that a lot of people trusted me right away, which is a good thing. And it gave me a sense of responsibility that I’m the only dietician here so whenever it

comes to nutrition anything, they tend to look towards me to fill that need. I think it's been good so far." Participant 10

Managers can have a role in developing and maintaining an atmosphere of trust on the team.

"The [team leaders] are very team-oriented, the open-door policy, and you can literally talk to them about everything...Basically, it's discussed, and there are policies and differences that are discussed at a different level than the general team, but they are all brought forward eventually, and 'Hey, this is what's been going on', so it's all open. It's a very open door policy they run a very transparent organization." Participant 12

Trust and respect for team members' different areas of expertise can encourage collaboration and consultations about patient care.

"I have a lot of respect for what other people have to offer in terms of how they view situations and also just recognizing that there are things that I'm not going to know about nearly as well as somebody else would. And so sometimes it's me going to another professional on the team either to ask a question about this scenario or to refer back to them, for further exploration." Participant 9

Trust has the potential to enhance collaboration and allow professionals to integrate and share their knowledge with the team.

### Leadership

The leadership provided to team members influences role construction. The clinical staff identify most readily with the leadership of the clinical director and the administrative staff with that of the manager. This leadership can influence, among other things, recruitment strategies and role empowerment and these are elements that influence role construction. The recruitment process solicits input from current team members and can create a sense of

participation and implication in team growth as well as a sense of responsibility. It can foster current team members' sense of belonging to the team and legitimize their points of view.

“We all have a say in the hiring of our teammates and we discuss roles ahead of time. We collaboratively get together and say ‘okay, what are we missing in our model of care and which position would be able to fill that void, that gap’.”

Participant 2

“When I came for my interview...everybody that was in the clinic that day was at the table. So, there were administrative people, there were the RNs, the NPs, the dietician and the pharmacist...And they took turns asking questions, which was very interesting. So there's very much an attempt here to have everyone a part of the team.” Participant 5

The current recruitment process has the potential to facilitate role construction before a new team member actually joins the team. It can compel existing team members to consider the impact of the new role and responsibilities on the team. It can also allow the new team member to gain exposure to the different professions from the outset of their contact with the team. Recruitment strategies implemented by the leaders facilitate the development of collaborative roles by encouraging the team members to think about how they are going to interact with the new professional on the team.

Leadership can empower team members and allow them to grow in their roles and take on responsibility to improve the team. This type of role empowerment can be important on an interprofessional team where the team leads might not have clinical expertise in all of the different professional domains. It can help team members to feel that they can have some autonomy to negotiate their roles and pursue clinical areas of interest to them.

“Allowing the providers the flexibility and the respect of their profession and their knowledge to negotiate their role within the team. So then it's a bit flexible, it's not standardized, in that they're forced into this box that they don't want to

be in. But they do know that they have some power to negotiate their role and provide feedback and input into what their role will be in the team.”

Participant 1

On an interprofessional team, the leadership can employ strategies to maximize collaborative role boundaries and to allow professionals to develop some autonomy from the management level of the team. Collaborative recruitment strategies can encourage all staff to think about how they would interact with possible new recruits to the team. Also, by empowering professionals to negotiate their roles and allowing them opportunities to provide input on the distribution of responsibilities, leaders can help them to develop autonomy from management.

#### Relevance of professional knowledge

Team members consult some colleagues for advice and expertise more regularly than others. The relevance of professional knowledge plays a part in determining which professions will interact more often together. Health professionals tend to collaborate more frequently with the professions that have expertise than can impact on their care decisions.

“I really rely on the pharmacist heavily to ensure...I’m using the optimal medication for an individual patient, so there’s no guesswork involved when I write a prescription. I look things up, and I talk to the pharmacist...so I interact with him a lot. I do interact with the dietician and social worker as well, but it’s just more of a follow up after I’ve seen a patient in my clinic...It’s more informal, it’s more on just a nice-to-know type of basis, rather than really relying on skill sets of another professional to help me in my role.” Participant 4

“As a new nurse practitioner I’m learning, so I would go to the nurse practitioners but I would also go to [the consulting physician]. I was meeting him yesterday and I did present a couple of patients that I was trying to figure out. And I think I’ll still do that, and it’s really great, actually. He really helps you to think a lot more broadly, which is nice.” Participant 5

“The dietician is pretty much collaborative, because [patients are] referred not only from the NPs or from me, but the other members of the diabetes team, and she takes the lead on the group about diet, obviously, and her assessments are acted on pretty much by the NPs. There’s always actionable stuff to do with that.” Participant 11

There might also be a tendency to interact less with professions whose information does not affect another team member’s decisions of care directly.

“The social worker, once [patients] are with her, then they can continue to make appointments with her without going through the NP anymore, so then they can have a whole list of meetings about various family or personal-related stuff that doesn’t impact the rest of the team per se. I guess if there are some good changes and outcomes that lead to better health for that person, then obviously that’s going to be an impact, but directly communicatively, no.” Participant 11

The relevance of professional knowledge and expertise can have an impact on the frequency of interaction between different professions on the team. This dynamic may contribute to the construction of more autonomous or more collaborative role boundaries.

#### *4.3.5 Individual Influences*

##### Individual attributes

Individual attributes can influence role construction. For example, primary care providers may have different philosophies about continuity of care and collaborating within a team. These differing approaches can affect how responsibilities are distributed among other team members. Some providers may see the patients as the ‘team’s patient’ and this view can influence them to delegate more responsibilities and to collaborate with other health professionals.

“I really rely heavily on the other people that work here. I don’t sort of feel that a patient for example belongs to me, I feel that they’re part of the clinic’s responsibility, so I often share my findings on a patient with other colleagues, or they share with me...We’re quite happy to share among the team, because we see the value of more heads, really, more thinking heads coming together.” Participant 4

Others may see the patient as ‘their patient’ and therefore may be less likely to delegate and collaborate for that patient’s care.

“I have patients that are mine, that are registered with me, and I’m the most responsible provider, as one of the four NPs for that patient, but then the thought is, you can always come to the next available person, if need be. Which is fair, but I struggle with that a little bit, and I think it would be really good for continuity that someone is seen back with me.” Participant 5

Individual attributes that can affect the nature of interactions between team members. For instance, timidity or confidence may influence the extent to which team members wish to build collaborative relationships and thus have an impact on the success of collaborative endeavours.

“They choose people very carefully when they interview. They interview for personality, rather than for what you can do clinically...because they knew that I had reached a certain level, so I had at least the background to be able to intelligently look things up and ask questions if I didn’t find the answer or something. So they were definitely looking for very much more of a team-based individual to join their team, somebody they felt was a good fit personality-wise.” Participant 4

“There’s three [types of individuals]: there’s an individual who will negotiate their role and feel empowered; there’s a second individual provider who will just follow

the status quo, will do no negotiation, be quite happy to stay within the box that you've formed for them in terms of their role; and then there's a third type of provider who will not negotiate the role, will work within their role that they've been assigned but be silently unhappy and will grumble to other team members... It's highly related to individual personalities and their experience to date, whether it be in previous roles, previous education, previous life experiences.”

Participant 1

Individual influences can be a factor in determining how much team members are willing to work and grow in their role collaboratively as part of the team in addition to having autonomy as a health care provider. Thus individual attributes can affect both the distribution of responsibilities and the tendency of team members to be collaborative with one another.

#### *4.3.6 Summary of influences and role boundaries*

For Case 2, there are dynamics influencing the nature of autonomous-collaborative role construction and also some that shape the distribution of responsibilities.

The autonomous and collaborative role boundaries are affected by the structural influence of hierarchy. The hierarchical structure situates the nurse practitioner as patients' primary care provider while physicians provide a consultation service. This organization can create a tendency for the nurse practitioner and the rest of the team to have fewer interactions with physicians. Education, leadership, trust and the relevance of professional knowledge are interpersonal influences on these types of role boundaries. The first three dynamics can be important for fulfilling the collaborative potential between different professions on the team. The relevance of professional knowledge can help to explain why some health professionals interact more frequently with each other than with other team members. The nature of individual attributes can also serve to enhance or detract from collaborative role boundaries.

The structural influences that can shape interchangeable and differentiated role boundaries include workload, hierarchy and team composition. Workload, hierarchy and team composition help to determine how responsibilities are distributed in order to provide certain

services to patients. The distribution of responsibilities is also influenced by leadership (interpersonal dynamic) which can give professionals some autonomy to direct the development of their responsibilities on the team. The personal attributes of different team members can affect the distribution of responsibilities on the team.

While role boundaries are quite fluid, some tendencies are manifested on Team 2 in response to the influences summarized above. Some nurse practitioners choose to delegate more responsibilities than others. Nurse practitioners tend to collaborate very closely with the pharmacist, often relying on his expertise with regards to medications. They will also refer patients to the dietician and social worker but knowledge exchanges with these professionals tend to be more limited and collaboration is sometimes confined to recording information in the patient's electronic chart. The role of the dietician and social worker are more autonomous from the rest of the team.

The RN and RPN are quite collaborative with the nurse practitioners as they facilitate various clinical interventions and provide some patient assessments. They are more autonomous in their functions as leaders and co-leaders of clinic programs such as diabetes and hypertension. The RPN is a certified diabetic educator and has been able to pursue her interest in this area on this team.

The laboratory technician is often autonomous in her role because she has less frequent interactions with other team members however, she does need to receive requisitions from the nurse practitioners in order to carry out patients' lab work and will interact with the RN and RPN who also draw blood from patients. At the time of the interviews, the laboratory technician was a recent addition to the team so it remains to be seen whether the RN and RPN will continue to overlap with the laboratory technician in this area (the RN and RPN were responsible for drawing blood before the laboratory technician was hired).

The physician mainly interacts with the nurse practitioners however, as mentioned previously, the team as a whole is quite autonomous from traditional physician influences, such as physician hierarchy and leadership, when it comes to day to day patient care.

#### *4.3.7 Implications of role construction*

The configuration of role boundaries can affect team members and patients in different ways.

##### Autonomous and collaborative role boundaries

Team members suggested that their collaboration with different professions contributed to professional satisfaction. They may feel more supported by having access to a wide range of knowledge on the team. Opportunities for exchanges of information can provide clinical learning opportunities for team members and allow some health professionals to provide more targeted advice for specific patient conditions.

“We’re all there with the patient in the middle...A big piece of what we’re gaining from [the physician] is when you’ve got a situation is how to problem solve...to discuss patient situations and be able to step back and look at them more broadly.”

Participant 5

“When I started here, one of my thoughts was, am I going to miss being with other social workers or other people who are doing the same position as me? Because you kind of have that sense of being able to relate to what each other’s role is or the task or that sort of thing. And I’ve not found that to be the case and maybe it’s just because of that similar approach to patients or the camaraderie that exists among the team members. So it is nice to be able to work in a setting where you feel like you kind of have that whole picture around the people that you meet with. So everybody can have a perspective that might be useful or helpful to that patient. And it’s kind of nice that way...not doing it all on your own.”

Participant 9

Some health professionals also reported that they felt more professionally satisfied when they had greater responsibilities because the collaborative aspect of their relationships with other team members is enhanced. This sentiment is embodied largely by team members

whose roles have, in the past been limited to responsibilities at the lower end of their scope of practice.

I had worked in another doctor's office before but I never did immunizations and injections very often, I never did paediatric immunizations, so that was a new role for me, to do that with the children, so that was great." Participant 7

In the above excerpt the RPN expresses appreciation for the opportunity to share greater responsibility for patient care and also with the resulting collaboration and knowledge exchanges with the nurse practitioner. Having more responsibilities with the patient allows health professionals to contribute more information to their collaborative relationships with other team members. This situation could also benefit the team as a whole because greater responsibility encourages some team members to work harder.

Extreme forms of autonomy may lead to a decrease in team members' ability to function well together.

"The way that I see [roles] negatively differentiated, and has come about, is providers, even though they're in a team environment, still function as a solo provider...They've set up their own way of doing things and they don't really follow or negotiate or share with the overall team how they're operationalizing their practice within the team." Participant 1

Patients can benefit from the collaborative aspect of interprofessional care because the health providers serving them are able to consult more easily with each other and create a more comprehensive body of knowledge relative to a particular patient's issues.

"I think it's helpful in the sense that everybody has their own discipline or way of viewing a situation. And so it really makes for interesting conversation around where a patient's at or how to best meet that patient's needs. Because we have

different things jump out to each of us given our own discipline so I think it makes for a more holistic or rounded approach to care.” Participant 9

Patients also gain an advantage through their ability to access a variety of health services and expertise in the same location.

“At the end of the day, [having an interprofessional team] benefits the patient. If they can come into one building and have one appointment with four different people in the same room, they’re getting everything all at once. They’re getting the nurse practitioner -it could be a diabetes appointment- the nutritionist, the diabetic educator and the RN, sitting right there in the room and they are developing a plan of action care plan with the patient. So the patient becomes part of the team in their own care.” Participant 2

“We do draw labs on site and the patients really like that advantage of having their labs drawn.” Participant 1

“That collaborative piece is much more satisfying in this environment [interprofessional vs. retail pharmacy], because you do have that personal connection as well, not just sending a fax, you get a fax back, I’ve never met this practitioner before. It allows us to collaborate. And I think it’s more effective because I have access to all the information. So suggestions [for patients] tend to be more current, more on track than they would be without all that information.”

Participant 11

Through the collaborative interprofessional team, patients receive greater continuity of care from their primary care health professionals and are able to access services in a more timely fashion.

### Interchangeable and differentiated role boundaries

The interchangeability of some responsibilities between professions allows team members to support each other in easing burdens of work.

“With the ‘Well-Baby’ visits, because I’m usually the one knowing the immunizations I usually do them but, if I’ve got two to give, then sometimes they [nurse practitioners] will come in and help me, even though that’s really not their role. But it’s still within their scope as a nurse practitioner to do it, so they will come and help me do it as well.” Participant 6

More differentiated role boundaries can lead to better time management as the skills of team members are maximized within their respective scopes of practice.

“Right now the RNs and the RPNs do the history [for newly registered patients]. Which is fair, and it’s a good use of different scope of practice for different practitioners...It’s probably a good fit for everybody’s abilities here.” Participant 5

Differentiated roles can also help to decrease power struggles among different professionals.

“When it was time to hire the registered nurses and develop the registered nurse role, it was trying to achieve a role where they wouldn’t be duplicating. That they’d be truly working side by side and not overlapping. And one of the interesting things that we found and went through...was the whole grabbing-and-letting-go process. Because there’s a lot of similar tasks in the roles...So how we worked to build a process was to keep reminding the nurse practitioners in this model that you are now a family doctor and those RNs are the nurse practitioners. So you know exactly what it’s like to feel like you’re compressed and not working your full scope, why would you do the same to an RN. And when they start thinking like that and putting themselves in the position, that’s when they start working together and they learn how to truly work as colleagues.” Participant 2

“We try and act as everybody being their own individual person and even though someone might be an admin or someone might be an NP, everybody has their own role, their own responsibilities, so it just works out as ‘do your responsibilities, and work as a team, and nobody is that much better than anybody else’.”

Participant 13

Having team members with some interchangeable responsibilities means that patients might encounter different professionals on subsequent health care visits. This variability can increase patients’ familiarity with different team members.

“It helps with the whole philosophy that this is a team-based approach, it’s not just the one nurse practitioner and the one doctor that sees you; it’s everybody, and we all have different skill sets and they might come to me, and then the next time they need to go back to the RN because now they need some diabetic education. So the argument could be said, well if the RN’s never seen that patient, where does she start building that relationship?” Participant 4

Patients can benefit from shorter wait times because some responsibilities can be performed by more than one profession on the team for instance, nurse practitioners and the RPN/RN have some overlapping tasks.

“If the nurse practitioners have a full schedule and can’t fit in an acute visit or a sick visit, the nurses can come in and do the acute visits. They can still have an appointment at the clinic that day, the nurse would assess them, and then go to the nurse practitioner with what her assessment is, so then the nurse practitioner can decide to come in and see them too, or based on the nurse’s assessment she can decide what to do. So that way the patient is not having to wait a whole day to get in, they still get in and get seen and get treated quicker.” Participant 6

“They’re patients of the clinic. The purpose of that is so that they will always have access. So if one provider’s sick or, leaves the clinic, it’s not you know ‘it’s not

my patient, not my problem'. The patient's registered to the clinic the patient has access to any provider in that clinic on a need-be basis." Participant 1

For Case 2, role construction and the manifestation of role boundaries have implications for professionals in terms of job satisfaction and ability to perform to full scope of practice, and also for patients regarding wait times, ease of access and continuity of health services and familiarity with the different members of their primary care team.

## 4.4 Inter-case analysis

### 4.4.1 Influences

Table 3. Summary table comparing the influences and their relevance to different types of role boundaries for cases 1 and 2.

<b>Influences</b>	<b>AC</b> <i>(Interactions)</i>		<b>ID</b> <i>(Distribution of responsibilities)</i>	
	<b>Case 1</b>	<b>Case 2</b>	<b>Case 1</b>	<b>Case 2</b>
Space	X			
Workload	X		X	X
Turnover	X		X	
Hierarchy	X	X	X	X
Team composition			X	X
Education	X	X		
Trust	X	X	X	
Leadership	X	X	X	X
Relevance of professional knowledge	X	X		
Individual attributes	X	X	X	X

**Legend:**

X	= the influence affects the indicated role boundary for the specified case
	= the influence does not affect the indicated role boundary for the specified case

The above table helps to summarize and compare the influences and their impact on role boundaries across the two cases. If we first make a comparison between the broader categories of structural and interpersonal influence, for both cases we notice that the role boundaries associated with the distribution of tasks are more often influenced by structural elements whereas the autonomous-collaborative role boundaries are more frequently influenced by interpersonal elements. This pattern suggests that the distribution of tasks may be more heavily and directly influenced by the organizational aspects of the team environment, while collaboration and autonomy may be established in larger part due to interactional dynamics between team members. Individual attributes influence interactions and responsibilities for both cases.

By taking a closer look at the influences and the variability of their effects between cases, we can deepen our understanding and explanations of role construction. To begin, notice that the influences of hierarchy, team composition, education, leadership, relevance of professional knowledge and individual attributes behave similarly to one another in both cases 1 and 2 in terms of the role boundaries that they influence. The intra case analysis elaborated on how these influences act on the role boundaries and this action is summarized in the above table, but I would like to explore the nuances of education in greater detail. For both cases, education appears to influence autonomous-collaborative role boundaries but does not have a salient effect on the distribution of responsibilities among team members. This variation may exist because responsibilities are firstly defined by scope of practice and also by the health care team itself however, interactions must be fostered for the collaborative potential of a role to be fulfilled. Thus the *potential* for interaction is created in part by the pre-established responsibilities associated with different roles and domains of expertise but collaboration *occurs* when the right conditions, or influences, are present (e.g. knowledge around responsibilities, trust). Also, analysis of both cases shows that some primary care providers prefer to remain more independent and differentiated from other professionals even when the potential for more sharing of responsibilities exists. However, this is a mindset of a particular primary care provider, an individual attribute or perspective that is not necessarily swayed by more knowledge around roles and responsibilities. Therefore, as suggested by interviewees, education influences interactions between team members much more directly than it impacts on the differentiation or interchangeability of responsibilities.

If we now turn to the differences in the influences at work on A,C,I,D role boundaries in cases 1 and 2, it can be observed that physical space, workload, turnover and trust offer points of contrast for our consideration.

#### Physical space

Physical space is an influence that is often mentioned by participants from Team 1 yet is rarely seen to have a direct effect by Team 2. One interviewee from Case 2 did acknowledge the importance of the location of different team members:

“We tried our best to position everyone in the clinic. Their actual physical location is extremely important...Having the two leads right in middle, we’re more accessible because we’re seen all the time. We’re more involved in collaborative operations and the productivity of the staff is totally different when the leads are there. And the dynamics and the interaction: when we are among them it’s easier to foresee possible conflict and eliminate it before it actually comes to pass.”

Team 2, Participant 2

It is possible that physical space is seen as an influence by team members when it prevents interactions between them. On a smaller team, the location of health professionals can seem to have less of an impact because all team members are situated at a close distance to each other and therefore see one another frequently. Given that the positive impacts of the layout of clinical space may not be as apparent to staff as the negative ones would be, the fact that space is not mentioned as a barrier to interaction by Team 2 interviewees is noteworthy.

### Workload

For Team 2, workload does not affect autonomous-collaborative relationships as much as it affects Team 1: recall that members of Team 1 find that the workload decreases their opportunities for interaction with other health professionals. Team 2 appears to have some buffering characteristics that facilitate interaction in spite of the size of the workload. All Team 2 staff is located in relative proximity to each other which allows for frequent informal meetings as team members walk up and down the hallway. Also, Team 2 has more intensely scheduled team interactions (e.g. a two-hour team meeting every month vs. a one-hour team meeting every two months). Thus physical space and scheduled formal interactions may mitigate the influence of workload on autonomous-collaborative role boundaries for Case 2.

### Turnover

Turnover, similarly to physical space, is seen to have an influence by Team 1 but not by Team 2 participants. In this situation, it can be noted that Team 2 is quite young and therefore it is unlikely that a rate of turnover has been established. For instance, the average

length of time on Team 2 (at the interview stage) is ten months; this duration likely does not give current team members a good indication of how and if turnover affects their role construction. However, some of the more senior team members did acknowledge that the departure of professionals can have an effect on them.

“Two nurse practitioners left so things completely shifted. You sort of pick up the pieces.” Team 2, Participant 3

At this phase of Team 2’s development it is difficult to discern what the rhythm of turnover is, let alone what type of influence it has on role boundaries.

### Trust

At this point in the life of Team 2, trust is described by interviewees as either implicit or rapidly established between team members whereas, on Team 1, trust develops at a slower pace. Whether the almost inherent nature of trust on Team 2 is due to the small size of the team, the collaborative recruitment strategies, another mechanism, or a mixture of the different elements, the result is that trust has only been shown to be an influence on interchangeable-differentiated role boundaries on Team 1. On Team 1, an absence of trust between a primary care provider and an allied health professional, such as a dietician, could lead to few or no referrals of patients to the dietician. On Team 2, it is possible that because trust is present from the outset between the different professionals, trust is not seen by team members as having an effect on the interchangeability and differentiation of responsibilities.

#### *4.4.2 Contextual contrasts generated by local conditions*

I would like to touch on several elements (team size, age of team and model of care) that were not brought up as influences in the intra case analysis because interviewees did not expand on them but that nevertheless should be mentioned because they are points of significant contextual contrast in the local conditions of Case 1 and 2 and may have an impact on the role construction of the two teams.

### Team size

The size of a team may affect the influences on role construction (e.g. physical space). As can be noted in the sections on ‘situating the case analysis’ (p.33 and p.57), Team 1 has approximately ten times the number of employees when compared with Team 2. This circumstance undoubtedly contributes to the spatial organization of the clinics and likely also has spillover effects onto staff turnover, opportunities for trust-building and education, and the form or accessibility of leadership found on the two teams.

### Age of team

The age of the team (Team 1 – 6yrs; Team 2 – over 2yrs) may affect the distribution of responsibilities. For example, Team 1 has more programs established, and professionals working on these programs, than Team 2. Some members of Team 2 have expressed a desire to be more involved in program leadership:

“There was some discussion about ‘[the RN and RPN] would also be up to working closer on the programs,’ but we are in the process of building up our clients, building our clinic, to get that full complement of patients, so we’re not at the point, as a whole clinic, where we can start to really work on programming.”

Team 2, Participant 4

The clinic is at present focused on acquiring new patients through their intake process which leaves less opportunity for team members to work on establishing programs. At a later date, it is possible that the role of some team members will expand to include more responsibilities linked to a greater variety of programs offered to patients.

### Model of care

The model of care (nurse practitioner leadership vs. physician leadership) may affect the responsibilities of different team members. It would be an oversight not to point out that having different models of care, where nurse practitioners might be in the position of leadership that physicians have traditionally occupied, could have an impact on role construction. This is a point along which the two cases could be compared however, it is not

the focus of this research project so I will touch only briefly on it here. The model of care of Case 2 is younger and more of a departure from traditional models than that of Case 1. Moreover, the Team 2 model of care, at this point in time, is much less widespread than that of Team 1. These factors make it difficult to draw conclusions about the models' similarities and differences. With these issues in mind, it is still important to consider which aspects of the models could have an influence on interprofessional interactions and the distribution of responsibilities.

On Team 1, the physician has the primary responsibility for their patients: even when the patient is assigned to a nurse practitioner at the clinic, the patient is still provincially rostered to the physician. On Team 2, the nurse practitioners have a primary responsibility for patients as the primary care provider. The physician assumes the role of 'expert consultant' and his or her responsibilities are in part directed by the nurse practitioner's insights into the needs of each patient and their requests for input into a case. The professional hierarchy is maintained in Case 2, though without the physician.

“Within our team, we have two collaborating physicians, one who comes in once a week, and one who's at a distance. Now both of these physicians actually are paid a stipend by the team to collaborate when needed for those patients who are out of the scope of the current team. So their role and their interaction with the team is very different in our model than it is with other models.” Team 2, Participant 1

It should also be noted that while there is a need for greater accessibility to primary care in many parts of Canada, some members of Team 2 play a stronger community role in informing and recruiting their patients. The role of the nurse practitioner in this clinic includes community outreach. In addition, the clinical director and receptionist are actively involved in exploring potential sources of new patients.

“I deal with community partnerships, so I'm constantly engaging with the public, to educate them and identify opportunities to improve access.” Team 2, Participant

1

The emphasis on community outreach could be attributed to different factors such as: the youth of the team (presently in the stage of building up the patient roster); the community's unfamiliarity with the new model of care and the services and programs available at the clinic; and/or the sentiment of resistance to this model among some of the medical community.

Finally, I would like to mention that the Team 1 and 2 nurse practitioners are overseen by managerial support and leadership whereas the physicians see themselves as more independent from 'being managed'.

“The only leadership is administrative, it's not to do with me practicing medicine, seeing my patients...Me seeing a patient and deciding on their care, treatment, their diagnosis, etc., the advice I give them that is not influenced at all by administrative aspects of the clinic.” Team 1, Participant 3

“The two leaders are the [clinical director and the manager]...The [clinical director] is really looking to see: are we providing the best for patients, are we looking at providing health promotion and are we doing a good job individually with the care that we're providing and appropriate tests, investigations, medications.” Team 2, Participant 4

The difference between these two situations is that the Team 2 nurse practitioners are the primary care providers of their patients and have leadership support whereas the Team 1 physicians assume this responsibility and are more autonomous from the managerial leadership. Does the presence or absence of this managerial leadership and support play a part in the role construction of the different teams? It is difficult to discern the answer to this question from this study but it is an area that could be contemplated in future research.

#### *4.4.3 Role boundaries*

Let us examine where the similarities and differences lie in the A,C,I,D role boundaries across the two primary care clinics. Teams 1 and 2 offer many of the same services (e.g. primary care consults, INR review, hypertension and diabetes programs). They both report close associations between their primary care providers (nurse practitioners, physicians) and their pharmacists, suggesting that the pharmacist provides those health professionals with significant expertise to inform their care decisions. The two health professions tend to collaborate frequently though the responsibilities of the pharmacist are mostly oriented towards pharmaceutical dimensions and the primary care provider covers a broader range of care for the patient.

The primary care providers on both teams have a marked influence on the responsibilities of other team members. Although the position of different professions in the hierarchy is somewhat different (e.g. nurse practitioners on Team 2 are in a more direct leadership role on their team than physicians), the effect and the potential effect of the uppermost professionals on the responsibilities of other team members remains similar. That is, these primary care providers can influence the distribution of tasks on the team by retaining or relinquishing certain responsibilities that can be performed by other professions. On both teams, the primary care providers vary in their approach to care and their views on the patient being ‘my patient’ or ‘the clinic’s patient’. Perspectives on the patient’s ‘belonging’ have an impact on how the different primary care providers collaborate with other health professionals, regardless of the team in question.

On Team 2, the RN and RPN assume more autonomy as leaders and co-leaders of the chronic disease management programs when compared to the situation of Team 1 where the nurse practitioners are responsible for running similar chronic disease management programs in their organization. This difference in repartition of responsibilities suggests that hierarchy and team composition can have some influence on the level of responsibility that is given to different health professions. Just as the hierarchical status of the nurse practitioner on Team 2 is heightened (more leadership and decision-making power), so too is that of the RN and RPN. Although allied health professionals besides the nurse practitioner can participate in

leading health programs, they may also require additional professional education to be eligible. For instance, the pharmacist and RPN on Team 2 are both certified diabetes educators and co-leaders of the diabetes program. Thus, education may be another factor in determining whether a particular allied health professional leads a program on their interprofessional team.

On both teams, the allied health professionals other than the nurse practitioners, RNs, RPNs and pharmacists, interact less frequently with other team members. The autonomy of the dietician, social worker, mental health counselors, chiropractist and laboratory technician, could be due to various factors, one of the most expected being the relevance of professional knowledge. While these allied health professionals do enter information into the patient's electronic chart (thus initiating a type of interaction), their branch of knowledge is often specific enough that they function more independently and direct collaboration is not necessarily utilized to inform the care decisions of primary care providers.

#### *4.4.4 Implications*

Tables 4 and 5, below, provide a summary of the implications of role boundaries for professionals and patients. Notice that for both cases, the implications of A,C role boundaries are different from those of I,D role boundaries. In other words, the same implication does not appear in both types of role boundary. This trend does not mean that the implications of how responsibilities are distributed could not influence interprofessional interactions or vice versa (e.g. a workload that has been relieved might contribute to more collaborative endeavours between team members) but it is interesting to see that different implications arise from the different types of role boundaries because it supports the notion that distribution of tasks and interprofessional interactions have different types of role boundaries.

Table 4. Implications of Autonomous-Collaborative role boundaries

Implications	For professionals		For patients	
	Support network	Professional satisfaction	Holistic care	Coordination of health services and information
Case 1	X	X	X	X
Case 2	X	X	X	X

Table 5. Implications of Interchangeable-Differentiated role boundaries

Implications	For professionals				For patients		
	Work-load	Confusion around responsibilities	Maximization of professional skill sets	Power struggle	Wait times	Familiarity with care team	Length of appointment
Case 1	X	X	X	X	X		X
Case 2	X		X	X	X	X	

In terms of the implications stemming from autonomous-collaborative role boundaries (Table 4), both Case 1 and 2 participants find an advantage in being supported by the knowledge of other professions (for example, physicians and nurse practitioners see consultations with a pharmacist as valuable encounters) and link collaborative exchanges with professional satisfaction. Patients can benefit from collaborative endeavours by receiving more holistic care and through better coordination and continuity of health services and their health information. These implications suggest that positive effects can be derived from collaborative interactions between different professions on the primary health care team.

Turning to the implications of interchangeable-differentiated role boundaries (Table 5), interviewees on both teams commented that the interchangeable nature of some responsibilities between certain professions contributes to alleviating the burden of their workload. Interchangeability can also engender confusion around roles and responsibilities: this situation is experienced by members of Team 1 but it is not a significant issue for Team 2. Possible explanations for the variability in this implication could include the size of the team: on a smaller team, it might be easier to facilitate a standardized understanding of roles and responsibilities. It is probably also easier to address a misunderstanding with the whole team in order to clarify procedures and expectations. For instance, during my observations of team meetings for Case 2, the entire team, including the administrative personnel, was present to address a medication error that occurred with a newly registered patient and to decide how to avoid future mistakes. Consequently, the pharmacist was given the responsibility of verifying pharmaceutical information on a new patient's intake form before prescriptions could be filled. The team was enabled to respond collaboratively to the situation at hand and the new procedure was elaborated in the presence of the whole team. This strategy likely helps to reduce confusion around roles and responsibilities however, it would probably not be practical for Team 1 because the logistics of conducting such a process would be very complex in light of the team size.

Team members from both cases suggest that the differentiation of roles can entail certain advantages such as allowing the skills and abilities of professionals to be focused on a specific area of expertise within the team (maximization of skills) and by decreasing the likelihood of power struggles related to overlapping responsibilities. It should be pointed out here that 'differentiated' not only refers to the separation of responsibilities but also necessitates a common understanding and acceptance of the way in which responsibilities are distributed to each role in order to lessen power struggles.

The advantages that accompany both the interchangeability and the differentiation of responsibilities imply that it is important to strike a balance when influencing how tasks are distributed among team members: an extreme of either interchangeability or differentiation could have negative implications for the interprofessional team.

Similarly to the way in which the interchangeability of responsibilities can ease the workload of a health care provider, it can also result in shorter wait times for patients. This benefit is proposed by interviewees from both cases. On the other hand, greater familiarity with the whole care team, due to the interchangeability of responsibilities, is an advantage suggested by Team 2. It is possible that fostering patient familiarity with the diverse team members (or even with those within a sub-team or 'pod') is not an immediate goal or concern for Team 1 and this could again be partially attributed to the large team size. Nevertheless, one physician did mention patients' unfamiliarity and reaction to different care approaches.

“It's hard because the patients don't know [the nurse practitioner] as well. They've known me for ten years so they know what I'm going to say almost before I say it and they know my approach and she has a different approach. Patients show it that they don't like the approach so she'll usually come to me and say, well what would you do, cause they're not liking what I want to do.' So that sort of stuff is just to make sure everyone's happy.” Team 1, Participant 4

On Team 1, nurse practitioners see patients for chronic disease management sessions and their appointments for these issues are three times as long as those of a physician (30 minute vs. 10 minute appointments). Patients can benefit from the extra time with a health professional: they may receive more information to help manage their disease and possibly also feel less rushed throughout the encounter. On Team 2, the issue of length of appointment did not arise with participants, probably because the clinic is organized differently and the result is that nurse practitioners are the main primary care provider for all patients with no discrepancy between appointment times with different primary care providers.

To summarize, the inter-case analysis shows that there are many similar influences at work on role construction in both cases and that the role boundaries manifest themselves in several similar ways. Some of the differences between the two sites can be at least partly attributed to the contrasts in the context of the primary health care teams. The inter-case helps to form

more general categories of how the influences and role boundaries might be related and supports the notion presented in the model derived from the analysis, that interactions and the distribution of responsibilities are linked, but separate, elements of role construction.

## CHAPTER 5: DISCUSSION

In the analysis, I explored the themes emerging from the data and proposed a model to conceptualize the elements of role construction. These elements include the different types of boundaries around roles (A,C,I,D), influences on the construction of role boundaries (structural, interpersonal, individual) and the implications of role construction for professionals and patients. In the inter-case analysis I examined the similarities and differences in the findings between the two cases. In this section, I will compare my findings to the extant literature on interprofessional collaboration.

### **5.1 Model of collaboration**

Models of collaboration have been proposed in previous research by Mulvale and Bourgeault (2007), among others. Although these models are focused more generally on interprofessional collaboration rather than specifically on role construction, a comparison can be made with the conceptual model developed in this thesis.

Mulvale and Bourgeault (2007) have produced a model of factors that affect the mix of health human resources and the quality of collaboration in interdisciplinary primary mental health care delivery. This model considers global, local and within team factors for collaborative care, of which the third group of factors is most relevant to my focus on the micro-dynamics of role construction. Four within team factors are identified: degree of hierarchy, professional cultures and practice styles, team vision and communication (Mulvale and Bourgeault, 2007). My findings around the influence of hierarchy and individual attributes on role construction are consistent with Mulvale and Bourgeault's (2007) discussion of the impact of the 'degree of hierarchy' and 'practice styles' on the quality of collaboration within teams. Also highlighted is the importance of a 'team vision': my exploration of the influence of leadership in facilitating interprofessional interactions and

participants' sense of belonging to a team can be seen as complementary to this notion. Professional cultures, another factor put forth by Mulvale and Bourgeault (2007) was not a salient dynamic in my research despite its inclusion in the literature review and interview protocol. This discrepancy suggests a need for further study to confirm or disprove the possibility that professional cultures are not an influence on role construction. Mulvale and Bourgeault (2007) explain that the 'communication' factor includes joint education sessions, meetings and hallway conversations: these are instances that can lend themselves to education around roles and responsibilities and thus can be linked to my discussion of the latter. Therefore, apart from professional cultures, the factors outlined by Mulvale and Bourgeault's (2007) model are comparable to some of the influences on role boundaries in my model of role construction. My research also serves to extend the work on within-team factors by proposing several additional dynamics that influence role construction (e.g. physical space, trust). Given the similarities drawn in the above comparison, some of these influences on role construction may also have the potential to be factors that affect the quality of collaboration.

## **5.2 Influences on role construction**

Recalling the information presented in the literature review, it is evident that several of the influences on role construction have also been researched more generally in relation to health care teams. Salient factors for team functioning and effectiveness that I have proposed to have an impact on role boundaries include: physical space (Choi and Pak, 2007; Chreim et al., 2010; Oandasan, 2009), workload (Brown et al., 2011; Grumbach and Bodenheimer, 2004; Oandasan, 2009), staff turnover (Hall and Weaver, 2001; Xyrichis and Lowton, 2008), hierarchy (Abbott, 1988; Baldwin Jr., 2007), team composition (Choi and Pak, 2007), education (Dufour and Lucy, 2010; Mian et al., 2012), leadership (Brown et al., 2011; D'Amour et al., 2008; Nancarrow, 2004), trust (D'Amour et al., 2008) and individual attributes (Mathieu et al., 2008; Saba et al., 2012). Some concepts that appeared in the literature review (and that were explored in the semi-structured interviews) were not attributed great significance for role construction by the team members namely, the variability in professional values, language and culture. The relevance of professional knowledge was not considered as an influence in the literature reviewed, however it appears

to contribute to the frequency of interactions between different professions. Although research has looked at the importance of communication for effective collaboration (Henneman et al., 1995), I have not sought to explore communication as a distinct phenomenon in this study. Following from the data, I have implicitly included the notion of communication under the category of interprofessional interactions, where I mention phenomena relating to knowledge exchanges, information-sharing and decision-making. Below, I will expand my comparison to the literature for the influences of hierarchy, leadership, relevance of professional knowledge and individual attributes.

### *5.2.1 Hierarchy*

Research on collaboration and health care teams indicates that flat hierarchical structures are more conducive to building collaborative teams (Henneman et al., 1995). Given that hierarchy is quite pervasive among the health professions (Baldwin Jr., 2007), and is present as an influence in both of my case studies, it is important to acknowledge this reality and to continue to explore how it can be improved in practice. The physician is habitually at the top of the hierarchy although hierarchical power can be wielded by nurse practitioners who are primary care providers. While some primary care providers who are ‘gatekeepers of referrals’ may choose to limit the delegation of responsibilities, my research has shown that these gatekeepers can also help to expand the roles of other professionals when they seek additional interactions and knowledge exchanges with them. Our focus should therefore be on lessening the detrimental effects of hierarchical influence on role construction through mechanisms such as education (for students and practitioners) and modeling appropriate behaviours. To some extent, patients can benefit from having someone to help them navigate through the complex health care system (Virani, 2012). It is possible that trying to eliminate ‘gatekeeping’ to create a flat hierarchy is less feasible than teaching and motivating traditional gatekeepers to utilize fully and appropriately the health professions and resources at the disposal of the patients.

### *5.2.2 Leadership*

Leadership can be important for the success of teams in health care (Brown et al., 2011) and has also been found to be an influence on role construction. It appears in the form of

distributed and managerial leadership in this study. Distributed leadership is brought about partly because of the variety of programs and services offered by the teams, such that nurses, nurse practitioners and other allied health professionals organize and run the different programs (e.g. for chronic disease management). The development of these emergent forms of leadership are supported by more formally designated leaders on the team who see distributed leadership as necessary because they do not have the same depth of clinical knowledge in all of the different professional areas on the team. Different professions must provide the expertise in their own domain. Distributed leadership helps to expand the role of the individuals heading the programs. Chreim et al. (2010) suggest that distributed leadership is fostered by trust (this supports the notion of the interconnectedness of influences on role construction) and is an important mechanism for achieving change.

In my research study, managerial leadership is also central to the integration of different health professions together. It is interesting to consider that physicians do not expect, or want, this type of leadership – they perceive this scenario as someone overseeing their clinical decision-making and as a threat to their professional autonomy. Lane (2006) states that professions such as medicine are currently experiencing a decline in their exclusive authority relative to managers who become the drivers of collaborative care endeavours that “inevitably challenge hierarchical relations.” (p.345). Hutchison et al. (2001) indicate that physicians resist changes that they think will affect their professional autonomy. This resistance could help to explain the managerial divide between physicians and the allied health professionals. According to West and Poulton (1997), separate lines of management can prevent teams from developing clear, shared work objectives and can cause interprofessional conflict. Thus, professionals that want to protect their autonomy might resist managerial leadership. The latter might otherwise have a unifying effect on the team members and promote collaborative roles boundaries.

### *5.2.3 Relevance of professional knowledge*

The relevance of professional knowledge was not part of my literature review but, through data analysis I have found it to be an important influence on autonomous-collaborative role boundaries. It helps to predict which professionals will interact more often with each other. It

is logical that team members will engage in more knowledge exchanges with health professionals whose expertise is more relevant to their own responsibilities. It suggests that team members may form patterns of interaction based on the relevance of professional knowledge. It also indicates that the intensity of collaboration is not the same between all team members.

This influence could be important for the co-location of team members. For example, since primary care providers find the knowledge of the pharmacist to be very relevant to their care decisions and consult them frequently, the co-location of these two health professions may facilitate this interaction.

#### *5.2.4 Individual attributes*

Similarly to the summarized literature about the influence of individual attributes on interprofessional collaboration (Choi and Pak, 2007; Saba et al., 2012), these case studies show that individual dynamics influence the delegation of tasks and the frequency of interprofessional interactions. Despite the fact that the patients in one case study are registered directly to a physician whereas the patients of the other case study are registered to the clinic, primary care providers in both cases had mixed perceptions of a patient's 'belonging'. The view that a patient is 'ours' instead of 'mine' seems to encourage more interchangeability of responsibilities (where applicable) and also more interactions and knowledge exchanges to inform patient care.

Individual traits also influence the ability of team members to work in a team environment. Ragaz and colleagues (2010) found that some clinical and administrative team members left their Family Health Team because of inflexibility and discomfort with change. Likewise, in Case 1 and Case 2 of this research, there were team members who left because they experienced difficulty in learning to collaborate and share responsibilities with other health professionals. A study by Chreim et al. (2007) indicates that changes in professional roles are facilitated by life experiences and personal maturity. Facilitating change is important given the evolving nature of interprofessional collaboration and scope of practice. My findings support the literature suggesting that individual attributes have an impact on team work.

Health care teams that are in the process of recruitment should therefore consider not only the clinical experience of a candidate but also how their individual characteristics will allow them to fit in with the rest of the team members.

### **5.3 Role boundaries**

Collaboration is currently the subject of much research around health care teams and there are a variety of definitions and concepts that have been developed in relation to this phenomenon. Many studies refer to interprofessional collaboration and models of collaboration as a broad designation under which they discuss elements of team functioning, precursors to, and outcomes of, team success (D'Amour et al., 2005). In fact, collaboration is often ambiguously defined (Henneman et al., 1995) so here I would like to clarify how I am using this term in relation to my study of role construction.

I did not seek to define collaboration - many studies have already proposed definitions that include notions of sharing, partnership, interdependency and power (D'Amour et al., 2005) - nor was I attempting to re-affirm a particular model of collaboration. The interactional dimension between team members is a component of this study because it is linked to the construction of different roles in a team environment. Some team members had fewer interactions and were more autonomous while others had more interactions and were more collaborative. Also, some health professionals interacted frequently with particular team members and very little with others. To look at interactions in the context of interprofessional roles, I explored the manifestations of autonomous-collaborative role boundaries for the two cases.

Some studies have indicated that sharing responsibilities is a collaborative endeavour (D'Amour et al., 2005). In the context of studying interprofessional roles, I have made a distinction between the concept of autonomous-collaborative relationships (interactions and knowledge exchanges) and the distribution of responsibilities among team members. I derived these two categories of role boundaries from the analysis because team members could be very autonomous from each other (limited contact with others) and still have interchangeable responsibilities with other professions.

The phenomenon of collaboration has often been examined in more depth than that of autonomy, which is also a factor on interprofessional teams. The ability to work both independently and interdependently is important (Rafferty et al., 2001) although when certain professions tend to one extreme or the other it could be detrimental to team effectiveness (Saba et al., 2012) (e.g. a physician who does not interact with other team members or a nurse with very few autonomous dimensions to her/his role).

To a certain extent, empowering team members to develop autonomy can complement the collaborative nature of interactions between team members. Guzzo and Shea (1992) state that to develop effective teamwork, it is necessary for roles to be indispensable and essential; meaningful and rewarding, with intrinsically interesting tasks to perform. Also, an important element of team functioning is participation: participation is high when the influence of two or more parties in a decision-making process approaches an equal balance (Wall and Lischeron, 1997). As seen in Case 2, providing an RN or RPN with additional responsibility, which gives them the opportunity to work more independently and autonomously, would also allow them to make more meaningful contributions during consultations with primary care providers around patient care. To a certain point, it appears that autonomy may enhance participation and make a role more meaningful and rewarding. Therefore, it would be useful to explore autonomy in greater depth to understand when it can be a constraining or facilitating factor for collaborative role boundaries.

#### **5.4 Implications**

Many of the implications presented in this study can be found in the literature on interprofessional collaboration. For example, the interchangeability of responsibilities is important for relieving the heavy workloads of professionals, (Grumbach and Bodenheimer, 2004) can contribute to shorter wait times (Pottie et al., 2008) and can encourage continuity of care for patients (Haggerty et al., 2003). Also, the analysis suggested that more differentiated or demarcated roles reduce competition over professional jurisdiction. This finding can be related to Abbott's (1988) description of professions as cultivators of unique knowledge systems that want to protect their jurisdiction. Control must be relinquished when

tasks become more interchangeable; however, this exchange may give some professions the motivation to engage in power struggles to protect their turf.

Greater familiarity with the different members of a care team is not an implication that was seen in the literature review. Interviewees did indicate that the interchangeability of roles gave patients the opportunity to develop relationships with different health professionals at the clinic. This aspect also has the potential to help patients develop a better understanding of the functioning of the team and the resources that are available to them at their clinic.

According to a 2007 CHSRF<sup>5</sup> synthesis of interprofessional collaboration and quality primary health care, there is low-level evidence of the linkages between interprofessional collaboration and positive outcomes (Barrett, Curran, Glynn, and Godwin, 2007). This study provides further evidence to support the success and positive implications of models of interprofessional collaboration in primary care for professionals and patients.

In summary, several findings of this study are supported by extant literature on interprofessional collaboration. Exploring the elements of role construction leads us to a more profound understanding of the types of role boundaries that may exist, their variability within teams and the influences on role construction. The implications that have been associated with role boundaries in this study give us greater knowledge about the effects and the interplay between role boundaries and may provide practitioners with more information around how to facilitate autonomous-collaborative and interchangeable-differentiated role boundaries on their team.

---

<sup>5</sup> CHSRF: Canadian Health Services Research Foundation

## CHAPTER 6: CONCLUSION

In this section, I summarize the contributions of this research to the body of knowledge around interprofessional primary health care teams and present several implications for practice. I also review the limitations of this study and the possibilities for future research in this area to carry these findings forward.

### **6.1 Contributions**

In this study, I have provided a model derived from analysis to conceptualize role construction on interprofessional primary health care teams. I have developed different categories of role boundaries (autonomous-collaborative and interchangeable-differentiated) that are supported by findings from the two case studies. Based on the participant experiences, I have been able to suggest dynamics (structural, interpersonal and individual influences) that shape role boundaries within the team environment. I have also identified potential implications resulting from the different role boundaries.

Further, I have used a comparative approach to substantiate the findings of this study. Many of the influences and implications are similar across the two cases and I have proposed that some of the differences that were discussed in the inter-case analysis stem from the variability in contextual factors between the two teams.

In Virani's (2012) synthesis of research on interprofessional collaborative teams, the description of the interprofessional team model states that the "team members divide the work based on their scope of practice." (p.3). I have sought to extend this understanding of the distribution of responsibilities by further examining the complexities around the distribution of tasks and by proposing to view it in terms of interchangeable and differentiated roles boundaries. In this way, I am able to elaborate what, in addition to scope of practice, may be influencing the distribution of responsibilities on an interprofessional primary health care team.

I have endeavoured to increase the transferability of the conceptual model while being attentive to the interconnectedness and variable nature of the dynamics of role construction. I have contributed to an understanding of role construction on interprofessional health care teams by exploring a range of dynamics that emerged from the data. I have also made efforts to acknowledge the interplay between different elements, to discuss the changing impact of some elements, and to remain open to the possibility that some influences will be more significant than others for different teams. The process of analysis was very iterative in order to capture a reliable picture of the data for the two cases. I believe that this approach is a necessary part of ‘embracing the complexities of current team arrangements’ (Mathieu et al., 2008).

This study shows the importance of pursuing a better understanding of role construction on interprofessional teams because of the potential benefits and challenges brought about through the construction of roles.

## **6.2 Implications for practice**

The model and findings that I presented in this study may add to interprofessional health care teams’ appreciation of the importance of role construction for health professionals and patients. More specifically, it calls for professionals and those in leadership positions to be aware of the need to develop autonomous and collaborative aspects of roles. Likewise, it is necessary to recognize the potential benefits of both interchangeable and differentiated dimensions of roles on the team. Attention should be given to the contextual factors of a specific team that may influence role construction: teams should consider whether they need to adapt their current strategies in order to modify either of these two aspects of role boundaries. For example, a large team may want to consider developing a range of functional work teams with links between them because, as West and Poulton (1997) point out, most organizational behaviourists view maximum effective team size as being between eight and twelve members and the team size may affect role construction.

The model of role construction indicates some of the salient influences on role boundaries that may be useful for influencing role construction. Here are some examples of the practical

considerations that can be drawn from these influences. First, team members may want to consider the impact of spatial layout on autonomous-collaborative role boundaries (interprofessional interactions).

Also, leadership can be influential in creating spaces for interprofessional interactions: team meetings may provide opportunities for education (role clarification) and trust building. Managers can support emergent leadership in order to help expand the roles of health professionals with lower levels of autonomy on the team. Formal leadership can be a key for facilitating the integration of different professionals onto the team: presentations about the role of a new team member and orientations that involve the new staff shadowing other team members to learn more about the different responsibilities and knowledge areas are two of the strategies enacted by the management from these case studies to facilitate education around roles and responsibilities.

As a third example, individual attributes can help to determine an individual's ability to fit in with the team and to provide complementary care along with other health professionals. This influence suggests that it may prove helpful to get a sense of the individual attributes of a candidate during the recruitment process.

Interprofessional primary health care teams may use this research to enrich their knowledge of the elements of role construction. It may also provide them with an exploratory model through which they can examine the dynamics of role construction in their own setting.

### **6.3 Limitations**

In this section, I will highlight the main limitations of my study. Outlining the scope of my research is an important step in making a valid contribution to the existing body of knowledge on interprofessional health care teams.

First, the findings of this study are specific to the two cases that were the subject of my analysis and generalizability to other settings may be constrained. However, case studies should be evaluated on the basis of transferability to other settings with similar contexts

(Creswell, 2007) and serve to build, not test, theory (Eisenhardt, 1989). I have tried to facilitate this transferability by providing thick contextual descriptions of the research sites.

Second, the study was conducted within a short time period and data collection was limited to a relatively small sample size (13 interviewees at each site). Having one interview-point in time did not allow me to examine the process elements of role construction. Nevertheless, because the sample size for each team was fairly small, I was able to conduct an in-depth analysis of both cases which has allowed me to add further depth to the findings.

This research does not provide an exhaustive examination of the influences and implications surrounding role construction but it identifies the most salient themes from the data. Accordingly, my study provides an exploration of the dynamics around roles and role construction derived from the analysis of the two cases. As Chreim et al. (2007) indicate, categorizing influences involves a certain level of arbitrariness, as is often the case in classification. For example, I have discussed the relevance of professional knowledge as an interpersonal influence but in certain situations, it might be considered a structural dynamic. Also, there is limited consideration of the patient in this model of role construction although some implications for patients are offered in the analysis.

Finally, the cross-case comparison has been useful in confirming patterns of similarity and differences between the teams (Eisenhardt, 1989). Eisenhardt affirms that cross-case comparison allows one to go beyond initial impressions, improve the likelihood of a reliable conceptual formulation and helps to capture the novel findings in the data (1989).

#### **6.4 Future Research**

My research explores what role construction looks like on interprofessional primary health care teams. As a next step, it would be helpful to validate my model of role construction by conducting more case studies with teams in a variety of different contexts to assess and refine my representation of role construction. For instance, it would be important to extend the concept of role boundaries, deepen our understanding of influences and implications as well as explore the salience of additional influences and implications. Given that the

influences laid out in this thesis are not exhaustive, other case studies may find additional dynamics that shape role boundaries such as organizational rewards.

It would also be useful to map out patterns of role boundaries on these teams and compare their similarities and differences (as I have done briefly in the inter-case analysis) to learn more about how to utilize the structural, interpersonal and individual dynamics from the outset of an interprofessional team in order to facilitate role construction that will have positive implications for professionals and patients. As well, future research could consider elements relating to the construction of relationship roles, or 'teamwork', on interprofessional health care teams. This aspect deals with another type of role found on teams that may have an impact on interprofessional collaboration.

## REFERENCES

- Abbott, A. (1988). *The system of professions: An essay on the division of expert labor*. Chicago: The University of Chicago Press.
- Ashforth, B. E. (2001). *Role transitions in organizational life: An identity-based perspective*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Baldwin Jr., DeWitt C. (2007). Some historical notes on interdisciplinary and interprofessional education and practice in health care in the USA. *Journal of Interprofessional Care*, 21(S1): 23-37.
- Barrett, Juanita, Vernon Curran, Lindsay Glynn, Marshall Godwin. (2007). CHRSF synthesis: interprofessional collaboration and quality primary healthcare. *Canadian Health Services Research Foundation*, retrieved from [www.chrsf.ca](http://www.chrsf.ca).
- Bourgeault, I.L. and G.Mulvale. (2006). Collaborative health care teams in Canada and the U.S.: confronting the structural embeddedness of medical dominance. Special issue of *Health Sociology Review on Medical Dominance*, 15(5): 481-495.
- Bourgeois-Law. (2008). Debates: do nurse practitioners pose a threat to family physicians? No. *Canadian Family Physician*, 54:1669,1671.
- Brown, Brian, Paul Crawford and Jurai Darongkamas. (2000). Blurred roles and permeable boundaries: the experience of multidisciplinary working in community mental health. *Health and Social Care in the Community* 8(6): 425-435.
- Brown, Judith, Laura Lewis, Kathy Ellis, Moira Stewart, Thomas R. Freeman and M. Janet Kasperski. (2011). Conflict on interprofessional primary care teams – can it be resolved? *Journal of Interprofessional Care*, 25: 4-10.
- Byrnes, Vaughan, Anne O’Riordan, Corinne Schroder, Christine Chapman, Jennifer Medves, Margo Paterson, Robyn Grigg. (2012). South eastern interprofessional collaborative learning environment (SEIPCLE): nurturing collaborative practice. *Journal of Research in Interprofessional Practice and Education*, 2(2): 168-186.
- Charmaz K. 2006. ‘Coding in grounded-theory practice.’ In *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks: Sage, pp. 42-71.

- Choi, Bernard and Anita Pak. (2006). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 1. Definitions, objectives, and evidence of effectiveness. *Medical clinical experience*, 29(6): 351-364.
- Choi, Bernard and Anita Pak. (2007). Multidisciplinarity, interdisciplinarity and transdisciplinarity in health research, services, education and policy: 2. Promoters, barriers, and strategies of enhancement. *Medical clinical experience*, 30(6): 224-232.
- Chreim, S., Williams, B., Janz, L., Dastmalchian, A. (2010). Change Agency in a Primary Health Care Context. *Health Care Management Review*, 35(2): 187-199.
- Chreim, S., Williams, B.E., Hinings, C.R. (2007). Inter-Level Influences on the Reconstruction of Professional Role Identity. *Academy of Management Journal*, 50(6): 1515-1539.
- CHSRF. (2006). Teamwork in healthcare: promoting effective teamwork in healthcare in Canada, a policy synthesis. *Canadian Health Services Research Foundation*.
- Creswell, John W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- D'Amour, Danielle and Ivy Oandasan. (2005). Interprofessionalism as the field of interprofessional practice and interprofessional education: an emerging concept. *Journal of Interprofessional Care, Supplement 1*, 8-20.
- D'Amour, Danielle, Lise Goulet, Jean-Francois Labadie, Leticia San Martin-Rodriguez, Raynald Pineault. (2008). A model and typology of collaboration between professionals in healthcare organizations. *BMC Health Services Research*, 8, 188-202.
- D'Amour, Danielle, Marcela Ferrada-Videla, Leticia San Martin Rodriguez, and Marie-Dominique Beaulieu. (2005). The conceptual basis for interprofessional collaboration: core concepts and theoretical frameworks. *Journal of Interprofessional Care, Supplement 1*, 116-131.
- Dent, M. and s. Whitehead. (2002). Configuring the 'new professional'. In M. Dent and S. Whitehead (Eds.), *Managing Professional Identities; Knowledge, Performativity and the 'New' Professional*. London: Routledge.
- Dufour, Sinead P. and Deborah Lucy. (2010). Situating primary health care within the international classification of functioning, disability and health: enabling the

- Canadian family health team initiative. *Journal of Interprofessional Care*, 24(6): 666-677.
- EICPHC. (2005-A). Enhancing Interdisciplinary Collaboration in Primary Health Care in Canada. *EICPHC Initiative*.
- EICPHC. (2005-B). Enhancing interdisciplinary collaboration in primary health care, barriers and enabling factors task groups report. *EICPHC Initiative*.
- Eisenhardt, Kathleen M. (1989). Building theories from case study research. *Academy of Management Review* 14: 532-550.
- Engel Small, Erika and Joan R. Rentsch. (2010). Shared leadership in teams: a matter of distribution. *Journal of Personnel Psychology*, 9(4): 203-211.
- Falk, H.S. (1977). Interdisciplinary education and implications for social work practice. *Journal of Education for Social Work*, 13 (30): 30-37.
- Ferlie, Ewan, Louise Fitzgerald, Martin Wood, and Chris Hawkins. (2005). The nonspread of innovations: the mediating role of professionals. *The Academy of Management Journal*, 48(1), 117-134.
- Forsyth, Donelson R. (2009). *Group Dynamics* (5<sup>th</sup> ed.) . Belmont, CA: Wadsworth Publishing.
- Fournier, V. (2000). Boundary work and the unmaking of professions. In N.Malin (Ed.), *Professionalism, Boundaries and the Workplace*. London: Routledge.
- Grumbach, Kevin and Thomas Bodenheimer. (2004). Can health care teams improve primary care practice?. *Journal of the American Medical Association*, 291(10): 1246-1251.
- Guzzo, R. A. and G.P. Shea. (1992). Group performance and intergroup relations, in M.D. Dunnette and L.M. Hough (eds) *Handbook of industrial and organizational psychology*, 2<sup>nd</sup> edition, volume 3: 269-313. Palo Alto, CA. Consulting Psychologists Press.
- Haggerty, Jeannie L., Robert J. Reid, George K. Freeman, Barbara H. Starfield, Carol E. Adair, Rachael McKendry. (2003). Continuity of care: a multidisciplinary review. *British Medical Journal*, 327: 1219-1221.
- Hall, Pippa and Lynda Weaver. (2001). Interdisciplinary education and teamwork: a long and winding road. *Medical Education*, 35, 867-875.

- Hall, Pippa. (2005). Interprofessional teamwork: professional cultures as barriers. *Journal of Interprofessional Care, Supplement 1*, 188-196.
- Health Force Ontario. (2006). Retrieved from <http://www.healthforceontario.ca>.
- Henneman, Elizabeth A., Jan L. Lee and Joan I. Cohen. (1995). Collaboration: a concept analysis. *Journal of Advanced Nursing, 21*, 103-109.
- HPRAC. (2008). Interprofessional collaboration: a summary of key reference documents and selected highlights from the literature. *Health Professions Regulatory Advisory Council*. Retrieved from: <http://www.hprac.org/en/projects/resources/hprac-collaboration.LitReviewENFINAL.feb1208.pdf>
- Hutchison, Brian, Julia Abelson, John Lavis. (2001). Primary care in Canada: so much innovation, so little change. *Health Affairs, 20*(3): 116-130.
- Irvine D., S. Sidnia, I. McGillis Hall. (1998). Finding value in nursing care: a framework for quality improvement and clinical education. *Nursing Economy, 16*: 110-116.
- Ivey, S.L., K.S. Brown, Y. Teske, D. Silverman. (1988). A model for teaching about interdisciplinary practice in health care settings. *Journal of Allied Health 17*(3): 189-195.
- Laguë, Guylaine. (2008). Debates: do nurse practitioners pose a threat to family physicians? Yes. *Canadian Family Physician, 54*:1668, 1670.
- Lane, K. (2006). The plasticity of professional boundaries. *Health Sociology Review, 15*(4): 341-352.
- Lee, T.W. (1999). Qualitative and quantitative traditions. In *Using qualitative methods in organizational research* Thousand Oaks, CA: Sage, pp. 5-14.
- Lemieux-Charles, Louise and Wendy L. McGuire. (2006). *Medical Care Research and Review, 63*(3): 263-300.
- Lincoln Y.S. and E.G. Guba. (1985). *Naturalistic inquiry*. Beverly Hills, CA.
- MacIntosh, Judith and Dianne McCormack. (2001). Partnerships identified within primary health care literature. *International Journal of Nursing Studies, 38*, 547-555.
- Marshall C. and G.B. Rossman. (2011). *Designing qualitative research, 5<sup>th</sup> ed.* Thousand Oaks: Sage.

- Mathieu, John, M.Travis Maynard, Tammy Rapp and Lucy Gilson. (2008). Team effectiveness 1997-2007: a review of recent advancements and a glimpse into the future. *Journal of Management*, 34:410-476.
- McCallin, Antoinette. (2001). Interdisciplinary practice – a matter of teamwork: an integrated literature review. *Journal of Clinical Nursing*, 10, 419-428.
- Mian, Oxana, Irena Koren, Ellen Rukholm. (2012). Nurse practitioners in Ontario primary health care: referral patterns and collaboration with other healthcare professionals. *Journal of Interprofessional Care*, 26:232-239.
- Miles, M.B. and A.M. Huberman. 1994. *Qualitative data analysis*, 2<sup>nd</sup> ed. Thousand Oaks, CA: Sage.
- Mizrachi, Nissim and Judith T. Shuval. (2005). Between formal and enacted policy: changing the contours of boundaries. *Social Science and Medicine*, 60: 1649-1660.
- Mulvale, G. and I.L.Bourgeault. (2007). Finding the right mix: how do contextual factors affect collaborative mental health care in Ontario? *Canadian Public Policy*, 33(Supplement): 49-64.
- Nancarrow, Susan. (2004). Dynamic role boundaries in intermediate care services. *Journal of Interprofessional Care*, 18(2):141-151.
- Nancarrow, Susan and Alan M. Borthwick. (2005). Dynamics professional boundaries in the healthcare workforce. *Sociology of Health and Illness*, 27: 897-919.
- Oandasan, Ivy. (2009). The impact of space and time on interprofessional teamwork in Canadian primary health care settings: implications for health care reform. *Primary Health Care Research Development*, 10(2): 151-62.
- Patton, M.Q. (2002). *Qualitative research and evaluation methods*, 2<sup>nd</sup> ed. Newbury Park, CA: Sage.
- Petronio, Sandra, Naomi Ellemers, Howard Giles and Cynthia Gallois. (1998). (Mis)communicating across boundaries: interpersonal and intergroup considerations. *Communication Research*, 25(6), 571-595.
- Pfeifer, Gail M. (2012). Shifting boundaries in health care: scope of practice is at the center of the discussion. *American Journal of Nursing*, 112(2):19-20.
- Pottie, Kevin, Barbara Farrell, Susan Haydt, Lisa Dolovich, Connie Sellors, Natalie Kennie, William Hogg, Carmel M. Martin. (2008). Integrating pharmacists into family

- practice teams: physicians' perspectives on collaborative care. *Canadian Family Physician*, 54: 1714-1715e5.
- Rafferty, A.M., J. Ball, L.H. Aiken. (2001). Are teamwork and professional autonomy compatible, and do they result in improved hospital care?. *Quality in Health Care*, 10(S2):ii32-ii37.
- Ragaz, Nick, Aaron Beck, David Ford, Matthew Morgan. (2010). Strategies for Family Health Team leadership: lessons learned by successful teams. *Healthcare Quarterly*, 13(3): 39-43.
- Reeves, Scott, Kathleen MacMillan, and Mary Van Soeren. (2010). Leadership of interprofessional health and social care teams: a socio-historical analysis. *Journal of Nursing Management*, 18: 258-264.
- Saba, George W., Teresa J. Villela, Ellen Chen, Hali Hammer, Thomas Bodenheimer. (2012). The myth of the lone physician: toward a collaborative alternative. *Annals of Family Medicine*, 10(2): 169-173.
- Seneviratne, C.C., J.A. Stone, K.M. King. (2009). Achieving interprofessional practice in cardiac rehabilitation. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 29(6): 380-384.
- Stets, J. E., & Burke, P. J. (2003). A sociological approach to self and identity. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity*: 128-152. New York: Guilford Press.
- Stryker, S., & Serpe, R. T. (1982). Commitment, identity salience, and role behavior: Theory and research example. In W. Ickes & E. S. Knowles (Eds.), *Personality, roles, and social behavior*: 199-218. New York: Springer-Verlag.
- Van Maanen, J., & Schein, E. H. (1979). Toward a theory of organizational socialization. *Research in Organizational Behavior*, 1: 209-264.
- Virani, Tazim. (2012). Interprofessional collaborative teams. *Canadian Health Services Research Foundation*, retrieved from <http://www.chsrf.ca>.
- Wall, T.D. and A. Lischeron. (1977). *Worker participation: a critique of the literature and some fresh evidence*. London: McGraw-Hill.
- West, Micheal A. and Brenda C. Poulton. (1997). A failure of function: teamwork in primary health care. *Journal of Interprofessional Care*, 11(2): 205-215.

- Xyrichis, Andreas and Karen Lowton. (2007). What fosters or prevents interprofessional teamworking in primary and community care?: a literature review. *International Journal of Nursing Studies*, 45, 140-153.
- Yin, Robert K. (2003). *Applications of case study research*, 2<sup>nd</sup> ed. Thousand Oaks, Sage.
- Yin, Robert K. (2009). *Case study research: design and methods* 4<sup>th</sup> ed. Thousand Oaks, Sage.
- Zeiss, Antonette and Dolores Gallagher Thompson. (2003). Providing interdisciplinary geriatric team care: what does it really take?. *Clinical Psychology: Science and Practice*, 10, 115-119.

## APPENDIX A: Observation Protocol

### OBSERVATION PROTOCOL

Date:

Location:

Team:

Descriptive	Reflective

## APPENDIX B: Interview Protocol

### **Background questions about the team**

---

*(1-2 key informants from each team answered these preliminary questions - e. g. clinical director, manager)*

What are the objectives of this team?

How long has the team worked together?

What professions are represented on your team?

What is the size of the team?

Can you describe to me how the team deals with a typical patient situation, starting at the point of entry of patient into the clinic?

### **Background questions for the interviewee**

---

1. How long have you been a member of this team?
2. Can you give a brief description of your role on this team?
3. Roles of members on an interprofessional team can be highly differentiated or they can be very similar. How would you describe the roles on the team in terms of differentiation or similarity?

### **Role boundaries and influences on role construction**

---

4. What are the other professions that you interact with the most? What are the interactions that you have with those other professions?
5. How do you create an understanding of your role with the team members that you interact with?
6. Has the way that you perform your role changed since you joined this team? If so, how?

7.
  - a. How do professional differences influence how the team operates? How do they influence interactions among team members? What influence does this have on how you perform your role?
  - b. How is leadership provided for the team? How does leadership influence how roles are defined and coordinated?
  - c. Are there individuals who are more influential or who have more power on the team? What impact does this have on how roles are defined and enacted?
  - d. Are there other important factors that help define roles on the team? (Summarize influences discussed)
8. What are the instances of blurred roles on the team? What are the instances of siloed roles on the team?  
How is confusion around roles and responsibilities clarified?
9. Are there interprofessional tensions or differences in points of view among team members?  
Can you give me one example?  
How are these tensions resolved?
10. What facilitates rapport between members of your team?

### **Evaluation of Role Construction on this Team**

---

11. What recommendations do you have regarding how the coordination of roles could be improved on your team?
12. Finally, these are all the questions that I wanted to ask, do you have any further thoughts that you would like to share?

## APPENDIX C: Interview consent form



### Interview Consent Form

#### Title of the Study: Role Construction in Interprofessional Health Care Settings

Researcher: Kate MacNaughton  
M.Sc. Candidate, Health Systems  
Telfer School of Management, University of Ottawa

Supervisor: Samia Chreim  
Associate Professor  
Telfer School of Management, University of Ottawa

**Invitation to Participate:** I am invited to participate in the abovementioned research study conducted by Kate MacNaughton in fulfillment of the requirements for the master's thesis in Health Systems.

**Purpose of the Study:** The purpose of the study is to explore how roles are negotiated and constructed on an interprofessional health care team. The objective is to determine what influences the construction of roles and how the different professional roles function together.

**Participation:** I am asked to participate in an interview that will last approximately one hour. My participation will consist of providing my views on how interprofessional roles are constructed in my health care setting. This interview will be audio-recorded. I may request a copy of my transcript to review. Reviewing the transcript will entail my providing the researcher with a mailing or email address. I understand that material sent via email has the risk of being intercepted by someone in the organization or by a hacker, thus risking confidentiality.

**Risks:** My participation in this study will entail that I discuss tensions or conflicts that arise in the interprofessional environment and this may cause me to feel psychological or social discomfort. I have received assurance from the researcher that every effort will be made to minimize these risks by protecting my confidentiality and anonymity.

**Benefits:** My participation in this study will provide insight into how interprofessional collaboration can be enhanced through effective negotiation and sharing of roles in interprofessional health care settings.

**Confidentiality and anonymity:** I have received assurance from the researcher that the information I will share will remain strictly confidential. I understand that the contents will be used for the purpose of the research and that my confidentiality and anonymity will be protected. The Health Care Team will remain anonymous to safeguard the identity of participants. Only the student researcher and the student's thesis supervisor will have access to interview transcripts. Since it is common for research based on interviews to report quotations from participants, I have been assured that, in written reports, my name and position title will be disguised through the use of pseudonyms.

**Conservation of data:** The data collected consisting of digital recordings and transcripts of interviews will be kept in a secure manner on the University of Ottawa campus for a period of ten years from the time of completion of the researcher's master's studies at which time they will be deleted. Digital recordings and interview transcripts will be stored on the researcher's computer, which is protected by password.

**Voluntary Participation:** I am under no obligation to participate and if I choose to participate, I can withdraw from the study at any time and/or refuse to answer any questions, without suffering any negative consequences. If I choose to withdraw, all data gathered until the time of withdrawal will be used for the purpose of analysis unless I request otherwise.

**Acceptance:** I, \_\_\_\_\_, agree to participate in the above research study conducted by Kate MacNaughton of the Master's Health Systems, Telfer School of Management, University of Ottawa, under the supervision of Samia Chreim, Associate Professor, Telfer School of Management, University of Ottawa.

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

If I have any questions regarding the ethical conduct of this study, I may contact the Protocol Officer for Ethics in Research.

There are two copies of the consent form, one of which is mine to keep.

\_\_\_\_\_  
Participant's signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Researcher's signature

\_\_\_\_\_  
Date