ENGAGEMENT OF PRIMARY CARE PROVIDERS IN CARE COORDINATION FOR PATIENTS WITH COMPLEX MEDICAL CONDITIONS

by

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A thesis submitted in conformity with the requirements for the degree of Master of Science (Health Services Research)

Institute of Health Policy, Management and Evaluation

University of Toronto

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2015

ABSTRACT

Background: The Seamless Care Optimizing the Patient Experience (SCOPE) project was initiated to increase linkages between primary care physicians (PCPs), hospitals and community resources to improve care for patients with complex chronic disease. This thesis examines the key steps and influencing factors associated with PCPs’ engagement in SCOPE.

Methods: A case study design was employed to collect interview data from PCPs identified as ‘early’, ‘mid’, or ‘later’ adopters based on engagement during the first 14 months of SCOPE.

Results: Twenty two of 30 eligible PCPs participated. Several engagement factors and differences between adopter groups were identified. Contextual elements such as strained inter-provider relations; feelings of responsibility, isolation and burnout; and the provision of support in a trusting, collaborative manner further influenced PCPs’ engagement.

Conclusion: A framework of contextual elements relevant to the engagement process of PCPs in care coordination models, and potentially other practice change initiatives, is presented.
ACKNOWLEDGMENTS

This work could not have been completed without the support of many individuals.

I gratefully acknowledge the support and guidance of my thesis supervisors, Dr. Ross Baker and Dr. Gillian Hawker and thank them for their advice, motivation and time spent reviewing and providing feedback along the way. I feel fortunate to have had the opportunity to work with and learn from both of you. I would like to thank Dr. Noah Ivers for his participation on my committee, encouraging attitude, and thought-provoking questions. In addition, I would like to extend my thanks to Dr. Brian Hutchison and Dr. Jan Barnsley.

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Many thanks to my family – to my extended family and many nieces and nephews; to Kate for setting an example of the importance of trying something new and having the courage to pursue your goals; to Alex for bringing organization to the chaos that is family and for concurrently playing multiple roles to many people; to dad for the gentle reminders to be kind to oneself, enjoy and appreciate the present moment, and continue to strive for things, even when they seem outside your limits; to mum for everything, always.

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“You must do the thing you think you cannot do.” Eleanor Roosevelt
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<th>ACRONYM</th>
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<tbody>
<tr>
<td>AACU</td>
<td>Acute Ambulatory Care Unit</td>
</tr>
<tr>
<td>ACSC</td>
<td>Ambulatory care sensitive condition</td>
</tr>
<tr>
<td>AHRQ</td>
<td>Agency for Healthcare Research and Quality</td>
</tr>
<tr>
<td>CHC</td>
<td>Community Health Centre</td>
</tr>
<tr>
<td>CHF</td>
<td>Congestive heart failure</td>
</tr>
<tr>
<td>CIHI</td>
<td>Canadian Institute for Health Information</td>
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<tr>
<td>COPD</td>
<td>Chronic obstructive pulmonary disease</td>
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<tr>
<td>ED</td>
<td>Emergency department</td>
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<tr>
<td>FHT</td>
<td>Family Health Team</td>
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<tr>
<td>GiM</td>
<td>General Internal Medicine</td>
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<tr>
<td>GP</td>
<td>General practitioner</td>
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<tr>
<td>HSRC</td>
<td>Health Services Restructuring Commission</td>
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<tr>
<td>IHI</td>
<td>Institute for Healthcare Improvement</td>
</tr>
<tr>
<td>IT</td>
<td>Information technology</td>
</tr>
<tr>
<td>KI</td>
<td>Key informant</td>
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<tr>
<td>MOHLTC</td>
<td>Ministry of Health and Long-Term Care</td>
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<tr>
<td>NACRS</td>
<td>National Ambulatory Care Reporting System</td>
</tr>
<tr>
<td>OHA</td>
<td>Ontario Hospital Association</td>
</tr>
<tr>
<td>PCP</td>
<td>Primary care provider</td>
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<tr>
<td>PDSA</td>
<td>Plan-Do-Study-Act</td>
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<tr>
<td>PRO</td>
<td>Patient Results Online</td>
</tr>
<tr>
<td>QI</td>
<td>Quality improvement</td>
</tr>
<tr>
<td>REB</td>
<td>Research Ethics Board</td>
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<tr>
<td>SCOPE</td>
<td>Seamless Care Optimizing the Patient Experience</td>
</tr>
<tr>
<td>TC CCAC</td>
<td>Toronto Central Community Care Access Centre</td>
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<td>TGH</td>
<td>Toronto General Hospital</td>
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<tr>
<td>TWH</td>
<td>Toronto Western Hospital</td>
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<tr>
<td>WCH</td>
<td>Women’s College Hospital</td>
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<td>WHO</td>
<td>World Health Organization</td>
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CHAPTER 1: INTRODUCTION

The increasing prevalence of chronic conditions and their impact on the health of individuals and the health care system is a worldwide concern (Yach et al., 2004; Bloom et al., 2011). The World Health Organization (WHO) cautions that the global burden of chronic disease is rapidly increasing and that by 2020 chronic disease will account for approximately 75% of all deaths (WHO, 1998). Moreover, the number of individuals living with one or more chronic condition in Canada, and other western societies, is increasing (HSPRN, 2013). This is in part due to an aging population, the fact that individuals are living longer and with increasingly sedentary lifestyles, and rising obesity prevalence (Shields et al., 2010; Lamb, 2014; HSPRN, 2013).

Patients with complex chronic disease are typically high users of health care services and frequently transition between health care professionals in their journey to obtain care (Australian Government Department of Health and Ageing, 2009; Epstein et al., 2011). These patients are at an increased risk for emergency department (ED) visits and admission to hospital and, in Ontario, account for the majority of the province’s total health care costs (Epstein et al., 2011). Approximately 1% of Ontarians use 34% of health care spending, and 5% use 66% (Lamb, 2014). However, despite high health service use, these complex medical patients may experience sub-optimal care. The way health care services are currently structured, often focused on diseases and institutions rather than the whole-person, makes it challenging for patients to receive comprehensive and coordinated care (AHRQ, 2011). In Ontario, 75% of complex medical patients see 6 or more physicians and 25% of those patients see more than 16 (Lamb, 2014). These patients are among those in greatest need of coordinated care (ARHQ, 2011). Although variably defined in the literature, the Agency for Healthcare Research and Quality (AHRQ) identified the common core elements of ‘care coordination’ and defined it as “the deliberate organization of patient care activities between two or more participants in a patient’s care to facilitate appropriate delivery of health care services” (AHRQ, 2007). The lack of such care coordination between multiple health care providers, including family physicians, can lead to poor continuity of care.
and potentially avoidable negative health outcomes for these patients, such as ED visits and hospitalizations (Kripalani et al., 2007). Several studies have shown negatives outcomes associated with poor care coordination and a lack of communication between providers. Researchers found that 49% of patients experienced at least one medical error (e.g. medication continuity errors) related to discontinuity of care between inpatient and outpatient settings and that such errors may be associated with an increased risk of rehospitalization (Moore et al., 2003). Other studies have demonstrated that higher hospital readmission rates and an increased risk of PCPs inadvertently failing to perform recommended follow up procedures are associated with delayed or incomplete hospital discharge summaries and instances in which PCPs do not receive any discharge information at all (van Walraven et al., 2002; Roy et al. 2005). It is evident, through both health care system sustainability and patient quality of care lenses, that change is needed in regards to the management of care for individuals living with complex chronic conditions.

Many chronic conditions, such as hypertension and asthma, can be effectively managed in the community. Primary care providers (PCPs) can help keep their patients’ conditions under control by performing screening and ongoing monitoring procedures, prescribing medication and providing patient education and other supportive measures (Sanchez et al., 2008). While it is recognized that not all hospital visits or admissions can be avoided for patients with chronic disease, ambulatory care sensitive conditions (ACSCs), are commonly interpreted as a set of conditions for which effective and timely outpatient care can potentially prevent the need for hospitalizations (OMA, 2010; Purdy, 2010; Tian et al., 2012; Sanchez et al., 2008; Hawker et al., 2012). Although the definition of ACSCs varies in nature, there is general agreement that the following are considered to be included in this set of conditions: angina, asthma, congestive heart failure, chronic obstructive pulmonary disease, diabetes, epilepsy, and hypertension (Billings et al., 1993; Lui & Wallace, 2011; CIHI, 2012). Effective and timely outpatient primary care can help patients manage these conditions, reduce the risk of acute episodes, and prevent ED visits, hospitalizations, and readmissions (Sanmartin & Khan, 2011; OHA, 2006; Purdy, 2010; Ham et
Further to this point, it has been noted that patients over the age of 65 with ACSCs who do not receive follow up visits with their PCPs within 30 days of discharge from hospital are three times more likely to be readmitted (Purdy, 2010; Ham et al., 2010). Aligned with the research of Starfield et al. (2005) on the positive contribution of primary care to both patients and health systems, these findings suggest that investment in primary care is a feasible and effective way to enhance the provision of care to patients with complex health conditions while containing system costs by reducing the amount of care provided in acute care settings.

Aligned with the proposition that primary care is key to enhancing care for patients with complex medical conditions, the Seamless Care Optimizing the Patient Experience (SCOPE) project was initiated in 2012 with a group of PCPs to measure the potential impact of increased linkages with hospitals and community resources on ED visits for their patients living with ACSCs. Over the course of the project there was variable engagement from the enrolled physicians. The variation in engagement suggested that there may be lessons regarding project implementation and PCP engagement processes. These lessons could inform collaborative care models like SCOPE and similar work in this area. Through an in-depth study of PCPs’ participation in the SCOPE project, this dissertation examines the key steps and influencing factors associated with PCPs’ engagement in collaborative care coordination for complex medical patients.
CHAPTER 2: BACKGROUND

This chapter provides the context and significance of this research study. It presents an overview of recent changes in the organization of primary care in Ontario and the importance of developing a more integrated system to better support the management of complex medical patients. The chapter concludes by defining the research questions and situating the study within relevant literature regarding the adoption of innovations and physician engagement in health system improvement.

2.1 Primary Care in Ontario

PCPs often serve as the first point of contact and “gateway” to the health care system. They provide individuals with patient-centred care in a way that fosters continuity of care and coordinated access to additional services elsewhere in the health care system, when required. Primary care contributes positively to many aspects of individuals’ and the population’s health, including high quality of care, improved health outcomes, greater equity and lower health system costs (Starfield et al., 2005; TC CCAC, 2012).

Over the past 15 years, primary care in Ontario has undergone many changes. It is being increasingly recognized as the foundation of the health care system. However, prior to this period of transformation, which started in the early 2000s, the structure, funding and delivery of primary care were not core areas of interest and investment for the health care system in Canada. Fiscal pressures from the recession in the early 1990s limited health care spending and little investment was made in primary care during this time. As a result, Canadian primary care reform stagnated and quality and access indicators suffered (Hutchison et al., 2011).

With the economic recovery in the late 1990s and the rising prevalence of chronic disease, increased investments were made in the health care system, including in the primary care setting. The 2003 First Ministers Health Accord focused on increasing access to primary care and care delivered by multidisciplinary teams. Significant investments were made in the expansion of existing and
establishment of new interprofessional collaborative care models. In Ontario, this included the creation of additional Community Health Centres (CHCs) and the development of Family Health Teams (FHTs), and Nurse Practitioner-Led Clinics (NPLCs). These models have been designed to increase access to care, improve continuity and coordination of care, and deliver high-quality team-based care to prevent and manage mental health and chronic diseases (Barrett et al., 2007). Between 2002 and 2011, the number of PCPs working in interprofessional teams in Ontario rose from 176 to 2,500 (Hutchison et al., 2011). In 2012, there were 170 FHTs and 83 CHCs (Hutchison et al., 2011). These new and expanded models encourage PCPs to provide primary care within interprofessional teams, which commonly include nurses, nurse practitioners, dieticians, mental health workers, pharmacists, social workers and educators, and focus, to varying extents, on care coordination, prevention, care planning, and system navigation. However, it is currently estimated that 75% of Ontarians do not have access to team-based primary care and the potential benefits which such models may bring (Statistics Canada, 2009). Also, recent studies suggest that these new models of primary care organization and remuneration may not be meeting some of their intended goals (e.g. increasing team-based ways of working, improving access to care), in part due to misaligned incentive schemes (Glazier et al., 2012; Hutchison & Glazier, 2013). Additionally, concern has been raised that such models will not achieve maximum benefit without further system integration (BRIDGES, 2012). Furthermore, Canada continues to lag behind other countries with regards to primary care quality indicators (Commonwealth Fund, 2011; 2012). When compared to 10 other countries, including the United Kingdom (UK), Australia, and United States (US), Canada ranked in the bottom 3 on several indicators, including access to after-hours primary care, the ability of patients to obtain same or next day appointments with PCPs, physicians’ use of electronic medical records, and timely communication of hospital discharge information (Commonwealth Fund, 2011; 2012). Despite increased investment in primary care and movement towards team-based care it appears that there is more work to be done to improve the state of primary care in Ontario.
Additionally, changes in the health care environment, including hospital restructuring in the 1990s, a marked decrease in hospital beds in Ontario (reduction of 18.5% between 1995 and 1998), cost pressures, human health resource shortages, and the increasing burden of disease and resultant workload for hospitals and specialists, has meant that many PCPs have had to assume greater responsibility for managing increasingly acute and complex patients in the community, often with little acknowledgement from the health system regarding their changing role (CFPC, 2004; Cawston, 2012). Due to the increasing complexity of patients in PCPs’ practices, trying to maintain the commitment to provide comprehensive, continuing care to their patients, especially those with complex chronic conditions, is increasingly challenging.

2.2 The BRIDGES Initiative & SCOPE Project

Prompted in part by Ontario’s Action Plan for Health Care, released in 2012, attention has recently been placed on primary care as the centre of the care continuum, particularly for those patients with complex and chronic health conditions (TC CCAC, 2012; MOHLTC, 2012). In 2012, the Ontario Ministry of Health and Long-Term Care (MOHLTC) funded a series of “BRIDGES Projects”, which aimed to develop innovative models of health care delivery that linked hospitals, primary care practices, and community services to provide integrated care for patients with complex chronic medical conditions with the goal of reducing ED visits and hospitalization among these patients. One BRIDGES project was a collaborative quality improvement (QI) project – the SCOPE project. The purpose of SCOPE was to design, implement, and evaluate a multi-faceted intervention aimed at providing support to non-FHT/CHC affiliated PCPs in their management of patients with complex needs (Hawker et al., 2012). Non-FHT/CHC affiliated PCPs were targeted for the project for a number of reasons: i) enhanced primary care has been suggested to be an effective way to prevent and manage chronic disease exacerbations and resultantly reduce health system costs involved when such episodes are managed in acute care settings (Purdy, 2010; Ham et al., 2010); ii) family physicians, especially those that work in solo-practices, find it challenging to meet the needs of patients with chronic conditions (Grant et al., 2011);
iii) many family physicians currently do not work in a team-based care model (Epstein et al., 2011); and iv) in Ontario, health care for patients with complex medical issues needs to be coordinated between primary care, community, hospital and specialty care providers (OMA, 2010). Achieving a high level of care coordination is likely more challenging for community-based solo or small group practice PCPs who, unlike their colleagues in FHTs and CHCs, do not have ready access to other health professionals with whom they can collaborate in the management and coordination of care for patients with complex medical issues (Shields et al., 2010).

SCOPE started as a two-year collaborative QI project between Women’s College Hospital (WCH), University Health Network (UHN), and the Toronto Central Community Care Access Centre (TC CCAC). SCOPE aimed to improve care coordination for patients with complex medical needs who were receiving care from community-based PCPs and reduce these patients’ needs for hospital-based acute care, such as ED visits and hospitalizations. By providing support to a group of PCPs through a multifaceted intervention, the project assisted PCPs in proactively preventing and managing ACSC exacerbations and limiting episodes that typically result in ED visits and hospitalizations (Hawker et al., 2012). The SCOPE project was designed based on current evidence regarding strategies to reduce hospital readmissions, best practices for chronic disease management, and from findings of semi-structured interviews of 11 community-based PCPs with high ED use practices conducted the fall of 2011 (Hawker et al., 2012).

A suite of services was put together to form the SCOPE project’s multi-faceted intervention. The intervention was designed to address the gaps and needs identified in the pre-study interviews and was comprised of three main components (Figure 1): i) a Navigation Hub – a single point of access, operated by a Nurse Navigator and a TC CCAC Care Coordinator, for assistance with obtaining specialist referrals, tests and community services for PCPs’ patients; ii) General Internal Medicine (GIM) specialists ‘on-call’ to provide phone and email consultations between PCPs and a GIM staff physician from the WCH Acute Ambulatory Care Unit (AACU), semi-urgent in-person patient assessment, if required, and assistance with
troubleshooting medical issues; and iii) the Patient Results Online (PRO) system to enhance PCPs’ access to test results and hospital discharge notes. The project aimed to “create a ‘virtual team’ of health care professionals around PCPs/practices to enhance care coordination and thus proactively prevent clinical crises that result in ED visits and hospitalizations” (Hawker et al., 2012). The primary outcome for the SCOPE project was the rate of ED visits and hospitalizations (overall and for ACSCs, as defined by the Canadian Institute for Health Information, CIHI) by patients of participating PCPs from one year prior to the intervention to one year post-intervention.

Figure 1: Depiction of the services included in the SCOPE model

2.3 Variation in Engagement in SCOPE

SCOPE recruited 30 PCPs with large, established community-based practices to participate; the project launched in September 2012. Post launch, a number of strategies were utilized to increase and maintain engagement of participating PCPs. However, data presented at SCOPE Project Evaluation Committee meetings in Winter and Spring of 2013 indicated that PCPs enrolled in the SCOPE project were using its services to varying degrees (SCOPE, 2013). For example, physicians with high numbers of ED visits for their patients, who arguably may have been expected to use SCOPE interventions the most and be in a position to derive the most benefit from the interventions, were not consistently engaging with SCOPE. Additionally, the PCPs adopted the SCOPE interventions at different rates. Some physicians started using the interventions right away, others took some time before engaging, and some still
appeared to have low engagement with the project 14 – 19 months after the introduction of the interventions. It was deemed important to investigate why this variation regarding engagement in the SCOPE project existed and what factors may have been affecting PCPs’ participation. Such investigations became the basis of this Master’s thesis research project.

2.4 Study Purpose and Goals

The research for this thesis was not intended to critique the SCOPE project’s interventional components or assess whether the project achieved its outcomes of interest. The aim was to gain additional knowledge regarding the factors that may affect the adoption of collaborative QI interventions focused on supporting PCPs’ coordination and management of care for their complex patients. In the context of SCOPE, and in light of PCPs’ variable engagement in the project, this dissertation was undertaken to provide insight into the initial and ongoing engagement of PCPs in SCOPE. What were the key processes and factors that influenced engagement and adoption of the SCOPE services? And what were the factors that influenced varying participation by PCPs? More specifically, an investigation of the following aspects was conducted: 1) the initial decision to participate; 2) experiences with the SCOPE project and use of the interventional components; 3) factors which influenced PCPs’ experiences, including barriers and facilitators affecting use of the SCOPE services; and 4) perceptions of the additional value to their clinical practice resulting from participation in SCOPE. Within this context of inquiry, the following research questions were addressed:

1. What were the key steps involved and factors associated with PCPs’ initial participation with the SCOPE project and interventions?

2. What were the key factors that facilitated or impeded PCPs’ ongoing use of the SCOPE interventions?
2.5 Review of Relevant Literature

2.5.1 Diffusion of Innovation and Adoption Theory

As described by Rogers (2003), an “innovation” is an idea, practice or object perceived as new by an individual or organization. For the purpose of this study, the suite of services offered through SCOPE can be seen as an innovation as the services represent new ways of practice for PCPs in Ontario. Thus, engagement in the SCOPE study, measured by PCPs’ use of the SCOPE services over the course of the project, can be thought of as a process of adopting innovation. As such, it is important to situate the study in a review of the relevant literature regarding the diffusion of innovations, both in general and focused on health services organizations.

While research specifically on the adoption of innovations by PCPs is limited, a substantial body of literature exists regarding the diffusion of innovations more generally, and the factors which may affect how knowledge, processes, or new ways of working are adopted into practice. Rogers’ diffusion of innovations framework (1995; 2003) is one of the most well-known models in this literature and has been used extensively in the health sciences to understand the transfer of knowledge into clinical practice, adoption of new technologies, and changes in practice (Dobbins et al., 2002). According to the diffusion of innovation framework, ‘diffusion’ is defined as “the process by which an innovation is communicated through certain channels over time among members of a social system”, and can be thought of as a social change which occurs within the associated social system when new ideas are created, diffused and adopted (or not adopted) (Rogers, 1995). Rogers’ definition highlights four elements – the innovation, communication channels, time and social system – as the key components to the diffusion of innovations. Although there are a wide variety of staged diffusion of innovation models, there is substantial overlap between them. Rogers’ (1995) model is well known, longstanding, adaptable to a broad variety of disciplines, and has been frequently used to further understanding in the diffusion of innovations research area (Nutley, Davies & Walter, 2002; Dobbins et al, 2002). Dobbins and colleagues (2002) note that Rogers’ model has contributed significantly to understanding elements of
health care decision making and is applicable to health care settings. For these reasons, a decision was made to focus on Rogers’ framework for the purpose of this study.

Rogers’ framework outlines six characteristics of innovations (Table 1), which can serve as barriers or facilitators to implementation projects. Rogers’ work suggests that innovations will be more easily adopted if they: i) provide additional benefits to adopters compared to the alternative that they propose to replace (relative advantage); ii) are aligned with the adopters’ values, past experiences, and needs (compatibility); iii) demonstrate visible results upon use or adoption (observability); iv) are easy to use and implement (complexity); v) can be tried out on a limited basis or without a significant commitment (trialability); and vi) may be changed or modified to better suit the adopters’ needs (reinvention). Others’ work in this area has echoed the importance of these characteristics and identified additional attributes, such as centrality to individuals’ day-to-day work and need for additional resources for implementation, as potentially important (Wolfe, 1994).

Table 1: Rogers’ diffusion of innovation characteristics of innovations (Rogers, 1995)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Definition</th>
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<tr>
<td>Relative Advantage</td>
<td>The degree to which the innovation is seen as being better than the current technology or behaviour it replaces.</td>
</tr>
<tr>
<td>Compatibility</td>
<td>The degree to which the innovation fits with the existing values, past experiences, and needs of potential adopters.</td>
</tr>
<tr>
<td>Observability</td>
<td>The degree to which the innovation provides visible results to the adopters.</td>
</tr>
<tr>
<td>Complexity</td>
<td>The degree of difficulty associated with the innovation.</td>
</tr>
<tr>
<td>Trialability</td>
<td>The degree to which the adopters can experiment with or test the innovation before full implementation.</td>
</tr>
<tr>
<td>Reinvention</td>
<td>The degree to which the innovation can be adapted, refined, or modified to suit the adopters needs.</td>
</tr>
</tbody>
</table>

With regards to the element of channels, Rogers (2003) proposes that while communication about innovations can occur through mass media, interpersonal channels are often more influential in motivating change in others, as diffusion is “a very social process that involves interpersonal communication relationships”.

With regards to the element of time, Rogers’ framework proposes that there is a five stage “innovation-decision” process, which individuals go through when considering the adoption of innovations (knowledge, persuasion, decision, implementation, and confirmation) (Figure 2) (Rogers,
Passage through the stages is proposed to be influenced by individuals’ characteristics and exposure to prior conditions (e.g. degree of innovativeness and previous practice patterns), characteristics of the innovation itself, communication channels involved and the role of intermediaries (e.g. change agents and opinion leaders).

**Figure 2: Rogers’ five-stage representation of the innovation-decision process (Rogers, 1995)**

Rogers’ framework pays attention to the rate at which individuals involved in the process (the “adopters”) embrace the new product or activity and delineates adopter categories (Table 2) based on ‘innovativeness’ – the extent to which an individual or organization implements new ideas or ways of working sooner than other members of a social system. van Braak (2001) described innovativeness as a relatively stable, socially-constructed characteristic which influences individuals’ willingness to change their familiar practices.

**Table 2: Rogers’ diffusion of innovation adopter categories (Rogers, 1995)**

<table>
<thead>
<tr>
<th>Adopter Category</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovators</td>
<td>Willing to experience new ideas, prepared to cope with unsuccessful innovations and a high degree of uncertainty</td>
</tr>
<tr>
<td>Early Adopters</td>
<td>Less able to deal with uncertainty than innovators, decrease uncertainty about a new idea to others in the social system by adopting it</td>
</tr>
<tr>
<td>Early Majority</td>
<td>May deliberate for some time before adoption, are information seeking</td>
</tr>
<tr>
<td>Late Majority</td>
<td>Tend to be skeptical and cautious about new ideas and require peer influence to adopt them, low tolerance for uncertainty</td>
</tr>
<tr>
<td>Laggards</td>
<td>Can be suspicious of innovations, tend to be isolated, very low tolerance for uncertainty</td>
</tr>
</tbody>
</table>

The final element of the diffusion of innovation framework is the *social system*, which has been defined as “a set of interrelated units engaged in joint problem solving to accomplish a common goal” (Rogers 1995; 2003). Individuals, organizations, or agencies that share a common ‘culture’ comprise the social system. Rogers suggests that the diffusion of innovation process and individuals’ degree of innovativeness are shaped by social structure and dynamics of the system within which they operate.
In addition to Rogers’ four key elements, individual, organizational and environmental factors, independent of the innovation, have been suggested to also affect the adoption of new technology or behaviours. Studies have examined individual characteristics such as sex, age, values, cosmopolitanism and level of education (Gotham, 2004; Choudhry et al., 2005) and organizational characteristics such as the size, cultural and leadership style of organizations (Gotham, 2004; Glandon & Counte, 1995; Simpson, 2002). The literature also suggests the importance of a broad range of environmental factors (e.g. industry regulations, policy reforms), which Berta et al. (2005), in their study on clinical practice guidelines, note can exert profound influence on the way that new knowledge (or a new way of working in the context of SCOPE) is valued by potential adopters and on adopters’ decisions regarding embracing such innovations.

2.5.2 Adoption of Innovations in the Health Care Setting

The work of many researchers in the health care field have contributed to the literature regarding the adoption of innovations and built upon Rogers’ seminal work (Greenhalgh et al., 2004; Chaudoir et al., 2013; Dobbins et al., 2002). Greenhalgh et al. (2004) conducted a systematic review and found the following factors to be important for the diffusion of innovations in health service organizations: attributes of the innovation, adopter characteristics, contextual factors and dissemination efforts. Another systematic review (Chaudoir et al., 2013) built upon Rogers’ findings to propose a five-factor framework to understand the implementation of health innovations, which includes consideration of structural, organizational, provider, patient and innovation level factors. The multi-level factor frameworks are consistent with findings of other empirical research and studies of existing conceptual frameworks, which identify similar constructs as important to the adoption of innovations in health settings (Durlak & DuPre, 2008; Damschroder et al., 2009). Similarly, Carlfjord et al. (2010) acknowledge that implementation research emanates from Rogers’ theories and research. They propose that implementation theory is relevant and can be effectively applied in the primary health care setting. Carlfjord and colleagues found that context (e.g. working conditions, emotions), dissemination process (e.g. support activities, obstacles to changing routines), innovation (e.g. relative advantage, complexity),
and individual (e.g. opinions about change) factors were important in the adoption of new ways of working in the primary care setting. These works reiterate the importance of the key elements of Rogers’ framework (e.g. innovation, individuals, process, social structure) and further emphasize the effect of contextual and broader environmental factors on the adoption or implementation process in health care settings.

Rogers’ diffusion of innovation framework, and models adapted from it, have been extensively drawn upon and used in investigations of the adoption of new health care practices, medical devices, clinical practice guidelines and health technology (Stokes et al., 2014; Denis et al., 2002; Greenhalgh et al., 2004; Carlfjord et al., 2010). According to Gotham et al. (2004) diffusion of innovation theory and research can be effectively applied to better understand the adoption and integration of new approaches into real-world health settings. Application of Rogers’ model, or those adapted from it, can be helpful to shed light on how specific innovation attributes and organizational factors may affect implementation and to develop potential strategies for the dissemination of new approaches. While this literature helps to explain the process of adopting or implementing new ideas, attending to the characteristics described within the literature will not guarantee successful uptake of a new intervention as the interaction between the innovation characteristics and the adopting system characteristics will define the implementation and result in a unique pattern of diffusion (Denis et al., 2002). As such, this literature is important to draw on in order to understand the general theory of implementing new interventions and it can serve as a starting point to guide understanding of PCPs’ participation in SCOPE. However, it is also important to ground the study of SCOPE PCPs’ engagement within the relevant setting and context. Thus, the diffusion of innovation literature was used in concert with insights on physician engagement and clinicians’ participation in QI initiatives in primary health care settings to frame the context of the study in a more comprehensive manner.

There appears to be considerable ‘fit’ between the key elements proposed by Rogers (i.e. innovation, communication channels, time, social system) and factors found to be important to
physicians’ adoption of innovations and engagement in QI in the literature. While not meant to be comprehensive of the literature in these areas, Tables 3 and 4 present the proposed fit between the key elements of Rogers’ diffusion of innovation framework and influencing factors outlined in other adoption of innovation literature and research focused on physician engagement.

### 2.5.3 Physician Engagement

**Physician Engagement in Quality Improvement**

In discussing physician leadership, Lee (2010) noted that engaging physicians in change initiatives can be difficult and suggested potential incentives and barriers that may influence physicians’ behaviour towards change. With regards to performance targets and comparative data, Lee noted that “peer pressure”, competitiveness, professional pride, offering strategies to facilitate improvement, and trust in the integrity of the data may serve as levers to motivate behavior change in physicians.

Suggested barriers to engaging physicians in QI work included a view that the work associated with the change intervention is greater than the potential gain, and a resistance to teamwork. Lee elaborated on the need for creating a “culture of process improvement”, appealing to physicians’ altruism and desire to help patients, sharing credible and useful data, and defining strategies around patients’ needs as ways to enhance physician engagement in QI processes.

Dickinson and Ham (2008) conducted a literature review on the topic of engaging physicians. The report provides insight into the roles of champions, informal leaders, and collective leadership or “constellations of leadership” more suited to smaller, team-based units of health care. The social nature of medical engagement is also touched upon, as the report notes that leaders influence followers through social processes and by resonating with and drawing upon shared experiences and identity. Dickinson and Ham note that a “magic bullet” for medical engagement does not exist and that individual actors, team and professional cultures and wider systemic factors must be considered to achieve effective physician engagement. This review also notes that additional conditions important to the success of QI initiatives include: leadership at senior administrative levels, receptive and supportive...
organizational contexts, team development, preparation and training for change, and a consistent vision regarding the desired change.

On the topic of engaging physicians in improving health care, Berwick and Nolan (1998) discussed the ‘Model for Improvement’ which includes 4 key elements: i) an improvement aim; ii) measurement; iii) ideas for change; and iv) testing of change. Drawing upon Rogers’ (1995; 2003) description of the social system, the model recognizes that change related to health care improvements take place within a complex system and proposes that the “pursuit of change is context-dependent”.

With regards to health-related QI work, the authors also encourage increasing cooperation across traditional professional boundaries and changing the patterns of interaction between the various players in the health care system.

Further along the lines of physician involvement in quality initiatives, in 2007, the Institute for Healthcare Improvement (IHI) released a white paper as a part of its innovation series, which presents a framework for engaging physicians in quality and safety and highlights challenges and facilitators common in this type of work (Reinertsen et al., 2007). The framework highlights 6 elements for physician engagement in QI work, many of which share similarities with the Model for Improvement: i) agreement on a common purpose; ii) inclusion of physicians as ‘true partners’ and encouraging them to develop personal responsibility for the work; iii) segmentation of the engagement plan; iv) use of methods that are engaging, useful and relevant to the target group; v) provision of support for those that engage and share their experiences; and vi) ongoing recognition of the value of physicians’ participation and regular, candid communication. The authors note that physician engagement is essential to QI initiatives as physicians’ acceptance is required for any changes to the design and delivery of health care services. The importance of physician acceptance can be seen as the authors further note that a belief in personal responsibility is “engrained in the physician professional culture – and is largely responsible for physicians’ fierce attachments to individual autonomy”. It is proposed that this core belief in the medical community is at odds with the systems view of QI and may lead to a mindset, in
which physicians believe that those that “work hard enough or study enough” will not make a mistake or need to ameliorate their practice through QI initiatives. Overall, the IHI framework presents factors and techniques to consider in order to support and enhance physician engagement.

Siriwardena (2009) notes that engaging clinicians is increasingly being acknowledged as an essential ingredient for the success of QI initiatives. The information presented by Siriwardena shares commonalities with the salient points of the IHI report and expands on potential barriers to clinician engagement. Potential barriers relevant to QI initiatives noted by Siriwardena include: lack of time, inadequate resources, competing demands, lack of information systems and training, insufficient skills, inadequate rewards, staff turnover, disinterest, resistance, presentation of inaccurate or incredible information, impractical solutions, and issues and concepts that are not easily recognizable as relevant to clinicians’ day-to-day practice. Also noted were common facilitators: if the area of interest is recognized as an area of in need of improvement and/or of significance, patient or staff dissatisfaction with a related issue, the ability of the intervention to enable the provision of more effective and timely care to patients, public reporting of related results, pressure from leadership, financial incentives, and the availability of education, training, tools and solutions. Developing a communication strategy that addresses the relevant barriers and emphasizes the potential benefits of participation, and using opinion leaders, practice champions, and supportive clinicians to provide support to others, were also suggested to enhance engagement.

Others have also recognized physician engagement as an essential element of health system improvement and performance. A review conducted by Denis and colleagues (2013) examines the dynamics of physician engagement and leadership in health system improvement and proposes recommendations to enhance physicians’ participation in this type of work. The review explores the impact of health system context, organizational dimensions, and individual determinants. The authors note the importance of understanding and addressing individual (e.g. physicians’ values, characteristics) and organizational (e.g. an organization’s ‘climate’ or readiness for change) level factors which may
influence the engagement and leadership of physicians. Interestingly, the researchers found that trust between physicians and organizations was important to the success of strategies aimed at strengthening engagement and leadership. The development of trust was linked to: communicating openly, sharing relevant data willingly, creating a shared vision, and documenting and learning from evidence of successful initiatives. Similarities exist between these actions and the salient points of other work in this domain, including the IHI framework and Model for Improvement. Aligned with Berwick and Nolan’s (1998) emphasis on promoting collaboration amongst health care professionals, Denis and colleagues suggest that in order to realize potential benefits associated with ‘structural’ changes of physician engagement in health system improvement (e.g. participation in formal leadership positions, creation of committees), ‘cultural work’ to ameliorate or strengthen the relations between physicians and organizations is likely required.

**Physician Engagement in Quality Improvement Initiatives in Primary Care Settings**

Several investigations of the engagement of physicians in QI specifically in primary care settings have been conducted in recent years. Goetz Goldberg and colleagues (2013), employed a qualitative research design to achieve the following objectives: i) to understand what motivates primary care practices to engage in QI work, ii) identify external and internal facilitators and barriers, and iii) refine a conceptual framework for primary care practice engagement. Their analysis revealed four key pressures that influenced practices’ adoption of improvement efforts: i) incentives and requirements; ii) organizational relationships; iii) availability of financial, knowledge, and time resources; and iv) competing work demands. Several practice characteristics were found to mitigate these pressures: leadership priorities and support as well as a culture which promoted innovation and improvement. The researchers also found that the decision to adopt an initiative is influenced by the characteristics of the initiative, and perceptions of the ease of implementation, costs and time involved.

In a study of primary health care teams involved in a diabetes care QI project, four features of the teams were found to be associated with successful improvement of care (Stevenson et al., 2001). Through semi-structured interviews with general practitioners (GPs) and nurses, researchers identified
that QI success was more likely in teams in which: i) felt personal involvement in the initiative; ii) perceived their teamwork positively, iii) recognized the need for systematic plans to address obstacles to QI, and iv) had a positive attitude toward continued monitoring of care.

Wolfson and colleagues (2009) interviewed 39 physicians in small to moderate sized primary care practices (<25 physicians) to investigate the characteristics and organizational cultures of physicians and practices who actively engage in QI programs. These types of practices (considered as relatively small compared to large primary care organizations common in the US) were selected for study as they were believed to face unique challenges in implementing QI initiatives, including limited resources, staff, and information technology (IT) systems. Time constraints, associated costs, problems with IT systems, lack of motivated staff, and lack of financial incentives were found to be common barriers to participation. Internal facilitators to engagement included the designation of a practice champion, cooperation of other colleagues, and involvement of practice leaders.

The sections above provide a summary of common facilitators and barriers to physicians’ engagement in QI projects and adoption of innovations or new ways of working. However, many of these studies have been conducted in hospitals or medium to large team/group practices. The extent to which these findings can be generalized to the setting of this research study – solo or small group (2-5 physicians) practices – is unclear.

2.6 Significance of the Study

While there is ample literature available on the adoption of innovations in general, and physician engagement in QI specifically, as well as considerable attention paid to the participation of primary health care teams’ in QI, there appears to be significantly less work focused on the engagement of community-based solo-practicing PCPs in this domain. A considerable amount of the published research and QI work is situated in the context of primary care in the US and focuses on large group practices with substantial organizational, administrative and technological support. In Ontario, primary care groups are less prevalent and the established groups tend to be smaller, newer and less well
organized and supported than those in the US. Furthermore, this dissertation focuses on solo or small group practice PCPs who work in environments different from primary care group models in both Ontario and other jurisdictions. According to a national survey administered in 2013, approximately 2,600 PCPs work in a solo practice setting in Ontario (CFPC, CMA, Royal College, 2013). This statistic underscores the importance of examining the engagement process of these providers in more detail.

In the available engagement literature, consistent physician involvement has been noted to be difficult to achieve (Reinertsen, 2007). It has been suggested that engagement may not be a fixed construct and may be “acquired or generated through the quality improvement process” (Caverzagie et al., 2009). Furthermore, it has been noted that characteristics of the innovation or practice change to be adopted and the adopting system, as well as their interaction, are situation-specific (Denis et al., 2002; Berwick, 2003). Therefore, a study focused on physicians’ participation in the SCOPE project was believed to be warranted in order to further the understanding of PCPs’ engagement in the project as well as the understanding of solo or small group practice PCPs’ experiences with QI initiatives focused on improving the coordination of care for patients with complex medical conditions.
Table 3: Mapping of Rogers’ diffusion of innovations framework key elements to influencing factors found in the adoption of innovation and physician engagement literature reviewed

<table>
<thead>
<tr>
<th>Rogers’ Diffusion of Innovations 4 Key Elements</th>
<th>Mapping of Rogers’ 4 Key Elements to Adoption of Innovation / Physician Engagement Literature</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Innovation</strong></td>
<td><strong>Adoption of Innovation</strong></td>
</tr>
<tr>
<td>Intervention characteristics</td>
<td>- Berta et al., 2005</td>
</tr>
<tr>
<td><em>(relative advantage, compatibility, observability, complexity, trialability, reinvention)</em></td>
<td>- Berwick, 2003</td>
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<tr>
<td></td>
<td>- Carlfsjord et al., 2010</td>
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<tr>
<td></td>
<td>- Chaudoir et al., 2013</td>
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<tr>
<td></td>
<td>- Damschroder et al., 2009</td>
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<tr>
<td></td>
<td>- Denis et al., 2002</td>
</tr>
<tr>
<td></td>
<td>- Dobbins et al., 2002</td>
</tr>
<tr>
<td></td>
<td>- Durlak &amp; DuPre, 2008</td>
</tr>
<tr>
<td>Communication Channels</td>
<td>- Gotham, 2004</td>
</tr>
<tr>
<td>Mass media, interpersonal channels</td>
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<tr>
<td></td>
<td>- Govert, 2003</td>
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<td></td>
<td>- Greenhalgh et al., 2004</td>
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<td></td>
<td>- Nutley et al., 2002</td>
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<tr>
<td></td>
<td>- Stokes et al., 2014</td>
</tr>
<tr>
<td></td>
<td>- Wolfe, 1994</td>
</tr>
<tr>
<td></td>
<td>- Lee, 2010</td>
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<tr>
<td></td>
<td>- Reinertsen et al., 2007</td>
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<tr>
<td></td>
<td>- Siriwardena, 2009</td>
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<tr>
<td><strong>Time</strong></td>
<td>- Berta et al., 2005</td>
</tr>
<tr>
<td>Innovation-decision process</td>
<td>- Berwick, 2003</td>
</tr>
<tr>
<td>Rate of adoption by individual</td>
<td>- Carlfsjord et al., 2010</td>
</tr>
<tr>
<td></td>
<td>- Damschroder et al., 2009</td>
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<tr>
<td></td>
<td>- Denis et al., 2002</td>
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<td>- Dobbins et al., 2002</td>
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<td>- Durlak &amp; DuPre, 2008</td>
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<td></td>
<td>- Gotham, 2004</td>
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<td>- Nutley et al., 2002</td>
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<td></td>
<td>- Stokes et al., 2014</td>
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<tr>
<td></td>
<td>- Wolfe, 1994</td>
</tr>
<tr>
<td><strong>Social System</strong></td>
<td>- Berta et al., 2005</td>
</tr>
<tr>
<td>Social structure/networks, opinion leaders,</td>
<td>- Berwick, 2003</td>
</tr>
<tr>
<td>influential inter-organizational relations</td>
<td>- Carlfsjord et al., 2010</td>
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<td>- Damschroder et al., 2009</td>
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<td>- Gotham, 2004</td>
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<td>- Greenhalgh et al., 2004</td>
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<td>- Stokes et al., 2014</td>
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<td>- Wolfe, 1994</td>
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<tr>
<td><strong>Additional factors discussed in the literature</strong></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>- Berta et al., 2005</td>
</tr>
<tr>
<td>Other variables, independent of the actual</td>
<td>- Berwick, 2003</td>
</tr>
<tr>
<td>innovation, that may affect adoption:</td>
<td>- Carlfsjord et al., 2010</td>
</tr>
<tr>
<td><em>individual</em> *(e.g. age, sex, education),</td>
<td>- Chaudoir et al., 2013</td>
</tr>
<tr>
<td>organizational *(e.g. structure leadership,</td>
<td>- Damschroder et al., 2009</td>
</tr>
<tr>
<td>readiness to change), environmental *(e.g.</td>
<td>- Denis et al., 2002</td>
</tr>
<tr>
<td>anxiety/frustration in the setting, legislation,</td>
<td>- Dobbins et al., 2002</td>
</tr>
<tr>
<td>policy)*</td>
<td>- Durlak &amp; DuPre, 2008</td>
</tr>
<tr>
<td>**Rogers (1995; 2003) discussed individual</td>
<td>- Gotham, 2004</td>
</tr>
<tr>
<td>characteristics in association with the element</td>
<td>- Greenhalgh et al., 2004</td>
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<tr>
<td>of ‘Time’</td>
<td>- Nutley et al., 2002</td>
</tr>
<tr>
<td>characteristics in association with the element</td>
<td>- Stokes et al., 2014</td>
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<td>of ‘Time’</td>
<td>- van Braak, 2001</td>
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<tr>
<td>of ‘Time’</td>
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</table>
Table 4: Examples of congruence between Rogers’ diffusion of innovations key elements and facilitators and barriers to physician engagement and participation in QI noted in the literature reviewed

<table>
<thead>
<tr>
<th>Rogers’ Diffusion of Innovations 4 Key Elements</th>
<th>Facilitators</th>
<th>Barriers</th>
</tr>
</thead>
</table>
| Innovation Intervention characteristics (relative advantage, compatibility, observability, complexity, trialability, reinvention) | - alignment with patient needs (Lee, 2010; Siriwardena, 2009)  
- alignment with physicians’ goals; innovation co-developed by physicians (Reinertsen et al., 2007; Siriwardena, 2009; Berwick & Nolan, 1998; Denis et al., 2013)  
- engaging, useful, relevant innovations/methods (Reinertsen et al., 2007; Berwick & Nolan, 1998)  
- perceived ease of implementation (Goetz Goldberg et al., 2013) | - effort/cost to engage is greater than potential benefits (Lee, 2010; Siriwardena, 2009; Goetz Goldberg et al., 2013)  
- impractical solutions, issues/concepts not easily recognizable as relevant (Siriwardena, 2009) |
| Communication Channels Mass media, interpersonal channels | - performance targets; comparative, credible, useful data (Lee, 2010; Siriwardena, 2009; Berwick & Nolan, 1998; Denis et al., 2013)  
- regular, candid communication (Reinertsen et al., 2007; Denis et al., 2013)  
- communication strategy that addresses relevant barriers and promotes benefits (Siriwardena, 2009) | - presentation of inaccurate or incredible information Siriwardena, 2009) |
| Time Innovation-decision process Rate of adoption by individual | - segmentation of the engagement plan (Reinertsen et al., 2007) | |
| Social System Social structure/networks, opinion leaders, influential inter-organizational relations | - peer pressure/encouragement from colleagues / leadership (Lee, 2010; Siriwardena, 2009; Wolfson et al., 2009)  
- champions, informal leaders, collective leadership (Dickinson & Ham, 2008; Siriwardena, 2009; Wolfson et al., 2009; Denis et al., 2013)  
- team development; cooperation between providers (Dickinson & Ham, 2008; Stevenson et al., 2001; Berwick & Nolan, 1998; Denis et al., 2013)  
- ongoing recognition of participation; support of those that engage (Reinertsen et al., 2007) | |
Table 4 (Cont.): Examples of congruence between Rogers’ diffusion of innovations key elements and facilitators and barriers to physician engagement and participation in QI noted in the literature reviewed

<table>
<thead>
<tr>
<th>Rogers’ Diffusion of Innovations 4 Key Elements</th>
<th>Facilitators</th>
<th>Barriers</th>
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<tbody>
<tr>
<td>Additional factors discussed in the literature</td>
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<tr>
<td><strong>Other</strong></td>
<td>Individual</td>
<td>Individual</td>
</tr>
</tbody>
</table>
| Other variables, independent of the actual innovation, that may affect adoption: *individual* (e.g. age, sex, education), *organizational* (e.g. structure leadership, readiness to change), *environmental* (e.g. anxiety/frustration in the setting, legislation, policy) | - competitiveness (Lee, 2010)  
- professional pride, altruism (Lee, 2010)  
- professional/personal responsibility for QI work (Reinertsen et al., 2007; Stevenson et al., 2001)  
- able to recognize the needs for QI (Stevenson et al., 2001)  
- positive attitude towards monitoring/evaluation of care (Stevenson et al., 2001)  
- trusting regarding change/reforms (Denis et al., 2013)  
- physicians’ values (Denis et al., 2013) | - resistance to team work (Lee, 2010)  
- attachment to autonomy (Reinertsen et al., 2007; Denis et al., 2013)  
- lack of time, inadequate resources, competing demands, insufficient skills (Siriwardena, 2009; Goetz Goldberg et al., 2013; Wolfson et al., 2009; Denis et al., 2013)  
- disinterest, resistance (Siriwardena, 2009) |
| **Organizational** | | |
| | - culture of process improvement (Lee, 2010; Goetz Goldberg et al., 2013)  
- support of senior administrative levels; receptive, supportive organizational contexts (Dickinson & Ham, 2008; Goetz Goldberg et al., 2013; Denis et al., 2013)  
- availability of training, education, tools (Siriwardena, 2009; Denis et al., 2013)  
- organizational readiness for change (Denis et al., 2013)  
- trusting physician-organization relationships (Denis et al., 2013) | |
| **Environmental** | | |
| | - financial incentives (Siriwardena, 2009; Denis et al., 2013)  
- incentives and requirements (e.g. regulatory) (Goetz Goldberg et al., 2013)  
- system context (Berwick & Nolan, 1998) | |

**Rogers (1995; 2003) discussed individual characteristics in association with the element of ‘Time’**
CHAPTER 3: RESEARCH METHODS

This chapter provides a description of the research methodology employed in this study, including descriptions of the study design, sampling strategy, data collection, data analysis, and research ethics considerations.

3.1 Study Design

Broadly, the purpose of this study, as presented in the previous chapter, was to gain additional knowledge regarding the influences and contextual factors that may affect the adoption of collaborative QI interventions focused on supporting PCPs’ coordination and management of care for medically complex patients. In order to develop a greater understanding of the factors that influence PCPs’ use of multi-faceted, care coordination QI interventions like SCOPE, this study employed a case study design, data collection through key informant interviews, and a grounded theory approach to coding and analyzing the data.

3.2 Rationale for Qualitative Methods

This study employed a qualitative approach to examine PCPs’ experiences and perceptions of their participation in the SCOPE project. Qualitative research seeks to understand, as completely as possible, the phenomenon or construct of interest and “attempts to depict the fullness of experience in a meaningful and comprehensive way” (Winget, 2005). Thus, a qualitative approach was well suited to the nature of the inquiry – describing and further understanding the experiences and engagement of PCPs in the SCOPE project. Additionally, qualitative designs are often used in situations where little is known about a subject (Gerrish & Lacey, 2006). Although there is literature available regarding physician engagement and the adoption of new innovations in general, this study aimed to develop a deeper understanding of a more focused area of interest – how the engagement process of PCPs in QI initiatives focused on coordinating care for patients with complex medical problems occurs, specifically within the Ontario context. This study was unique as it specifically examined the engagement process of solo or small group based PCPs in Ontario, who have not been investigated in such a focused way before.
Furthermore this study was the first in-depth investigation of such elements in the specific context of PCPs enrolled in SCOPE, a provincially funded QI initiative.

3.3 Theoretical Framework

A constructivist case-based, grounded theory approach (Strauss & Corbin, 1998; Charmaz, 2000) was undertaken to conduct the study. This form of grounded theory is underpinned by a relativist ontological position and constructivist epistemological beliefs (Mills et al., 2006). Such an approach recognizes that “realities are social constructions of the mind and that there exist as many such constructions as there are individuals (although clearly many constructions will be shared)” (Guba & Lincoln, 1989). Researchers who adopt the constructivist paradigm propose that “the truth is relative and that it is dependent on one’s perspective” (Baxter & Jack, 2008). This thinking is aligned with a case study approach as case study design focuses on uncovering the contextual conditions at play and emphasizes their relevance to the phenomenon of interest (Yin, 2003). Furthermore, from an epistemological standpoint this approach emphasizes the subjective two-way relationship between the researcher and participants and co-construction of meaning that occurs during the research process (Mills et al., 2006). These aspects of constructivism are consistent with this research as each PCP’s experience was a construction of past experiences, the specific characteristics at play in his/her practice setting, experiences with the SCOPE interventions, as well as the interpretation of the engagement process both by the interviewees and researcher.

Understanding of the engagement process of PCPs in QI projects, such as SCOPE, was constructed by examining concepts grounded in the data collected (Starks & Brown Trinidad, 2007). In particular, the analysis focused on achieving a greater understanding of the process of adopting care coordination QI strategies that provide support to PCPs of patients who are frequent users of the ED, and the contextual factors that affect engagement with such QI interventions. A case study design allowed for a rich exploration of the adoption process and relevant influencing factors in ‘real life’ or local contexts and how these elements may have differed amongst groups of PCPs that adopted the
project interventions to varying degrees (Yin, 2003). The grounded theory approach to data analysis was well suited to the research undertaken, as audiences for grounded theory work have been noted to include ‘clinicians, practitioners, and researchers who are interested in designing interventions to support people engaged in the social processes explained by the theory’ (Starks & Brown Trinidad, 2007).

3.4 Sampling

SCOPE was directed at a sample of 50 community-based PCPs in solo or small group practices who had been identified through UHN health administrative data as having practices with consistently high overall use of the Toronto Western Hospital (TWH) ED. All eligible PCPs were mailed an invitation letter inviting them to attend information events to learn about SCOPE. Of the 50 PCPs approached, 30 consented to participate in SCOPE, which commenced in Fall 2012. Due to project resource and design considerations, participation in SCOPE was limited to 30 physicians, with priority given to individuals who either attended an information event or expressed interest but could not attend. Of the 50 PCPs approached, 16 declined participation, 2 were deemed ineligible (i.e. on leave at the time of the study, was not a PCP), and the SCOPE project team was unable to establish contact with 2 PCPs.

Stratified purposive sampling was used to identify potential key informants for this study from the pool of 30 PCPs enrolled in SCOPE. Purposive sampling is used in most qualitative research and involves selecting participants “who are likely to generate appropriate and useful data” (Green & Thorogood, 2009). The use of purposive sampling facilitated the collection of a wide range of perspectives, provided a degree of control over the sample, and allowed for the inclusion of individuals who were actually participating in the SCOPE project (Barbour, 2001). In stratified purposive sampling, the sample can be sorted into subpopulations on the basis of a key dimension (Cohen & Crabtree, 2006). For this study, a stratified purposive sampling approach was appropriate as there was a pool of PCPs enrolled in SCOPE who were able to provide insight into the area of study, and this pool of potential
participants could be sorted by the amount of experience/level of engagement with the SCOPE interventions.

### 3.4.1 Case Selection

The process of developing a sampling approach for this study began with the SCOPE project team’s observation that there appeared to be four types of ‘SCOPE users’ among the 30 participating PCPs. The SCOPE project team categorized the types of ‘SCOPE users’ according to PCPs’ SCOPE use and PCPs’ patients’ ED use, based on the number of contacts to SCOPE per PCP, as recorded by the project team, and National Ambulatory Care Reporting System (NACRS) UHN ED data, respectively. SCOPE use was defined as the sum of the number of contacts with any of the SCOPE services (i.e. Navigation Hub, PRO, CCAC, GIM on-call) and was reported on a weekly basis. ED use reflected the number of visits to the TWH ED or Toronto General Hospital (TGH) ED by SCOPE PCPs’ patients, whether or not the visit resulted in a hospital admission. To investigate the types of SCOPE users, PCPs were ranked into quartiles of their SCOPE use and their patients’ ED use. The lower quartiles (1st and 2nd) indicated relatively low use of SCOPE services and practices with low volumes of ED visits, while the upper quartiles (3rd and 4th) represented relatively high SCOPE use and high volumes of ED use. Participating PCPs were categorized as having: i) low SCOPE use and practices with high ED use (i.e. number of contacts to SCOPE in the 1st and 2nd quartiles and ED visits by their patients in the 3rd and 4th quartiles), ii) high SCOPE use and high ED use; iii) low SCOPE use and low ED use; and iv) high SCOPE and low ED use (Figure 3).

Further analysis of the different types of SCOPE users’ adoption of the project interventions over time led to the grouping of PCPs into three groups at the outset of this study: i) ‘early adopters’ (PCPs enrolled in SCOPE who reached ≥ 10 contacts with SCOPE within 0 – 8 weeks, the first ¼ of the project term), ii) ‘mid adopters’ (PCPs enrolled in SCOPE who reached ≥ 10 contacts with SCOPE within 9 – 24 weeks, the middle 2/4 of the project term), and iii) ‘later adopters’ (PCPs enrolled in SCOPE who reached ≥ 10 contacts with SCOPE within 25 – 32 weeks, the last ¼ of the project term OR had not yet reached 10 contacts at week 32). The categorization of PCPs into these three groups was reassessed when the
interviews commenced, at which time the groups were defined as: i) ‘early adopters’ (PCPs enrolled in SCOPE who reached ≥ 10 contacts with SCOPE within 0 – 16 weeks, first ¼ of the project term), ii) ‘mid adopters’ (PCPs enrolled in SCOPE who reached ≥ 10 contacts with SCOPE within 17 – 48 weeks, middle 2/4 of the project term), and iii) ‘later adopters’ (PCPs enrolled in SCOPE who reached ≥ 10 contacts with SCOPE within 49 – 64 weeks, last ¼ of the project term or had not yet reached 10 contacts at week 64). The single case study design with the aforementioned embedded groups of PCPs (Figure 4) was adopted to allow for the development of an understanding of engagement of the different types of users (i.e. ‘early’, ‘mid’, and ‘later adopters’) as well as focused investigation of the experiences of individual PCPs categorized within these groups.

Figure 3: Profile of SCOPE users - ED visits vs. SCOPE contacts by PCP

<table>
<thead>
<tr>
<th>Contacts with SCOPE (Quartile)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Low ED Use</td>
<td>High SCOPE Use</td>
<td>High ED Use</td>
<td>High SCOPE Use</td>
</tr>
<tr>
<td>3</td>
<td>Low ED Use</td>
<td>High SCOPE Use</td>
<td>High ED Use</td>
<td>High SCOPE Use</td>
</tr>
<tr>
<td>2</td>
<td>Low ED Use</td>
<td>Low SCOPE Use</td>
<td>High ED Use</td>
<td>Low SCOPE Use</td>
</tr>
<tr>
<td>1</td>
<td>Low ED Use</td>
<td>Low SCOPE Use</td>
<td>High ED Use</td>
<td>Low SCOPE Use</td>
</tr>
</tbody>
</table>

Figure 4: Conceptual structure of case study design

Case: SCOPE Project - PCPs’ adoption of interventional components

Multiple PCPs enrolled in SCOPE Project categorized as ‘Early Adopters’

Multiple PCPs enrolled in SCOPE Project categorized as ‘Mid Adopters’

Multiple PCPs enrolled in SCOPE Project categorized as ‘Later Adopters’

Understanding the variation in the adoption of SCOPE interventions and what factors may have affected PCPs’ participation were key research foci. By including PCPs with varying levels of participation with SCOPE interventions, the stratified sample was aligned with a grounded theory approach “which involves recruiting participants with differing experiences of the phenomenon so as to explore multiple
dimensions of the social processes under study” (Starks & Brown Trinidad, 2007). The sample also enabled the investigation and identification of contextual factors that differed between PCPs that readily adopted the SCOPE interventions and those that engaged at a slower pace and/or to a lesser extent.

As data collection and analysis progressed, purposive sampling was used to facilitate thorough description of the emerging categories by interviewing individuals identified as having varying experiences (e.g. PCPs with varying levels of engagement with SCOPE interventions, PCPs serving particular cultural groups, etc.). Interviewing continued until further data collection and analysis failed to contribute new information. The grounded theory notion of saturation – when “categories are fully accounted for, the variability between them is explained and the relationships between them are tested and validated and theory can emerge” – was used to assess data collection and analysis at various timepoints in the study (O’Reilly & Parker, 2014). Furthermore, the size of the sample was consistent with Kuzel’s (1999) observation that while sample sizes in qualitative research are not fixed, when aiming to obtain maximum variation in samples, between 12 and 20 sampling units are generally required. However, it is important to note that in qualitative work the adequacy of the sample is not determined solely on the basis of the number of participants but the appropriateness, quality and richness of the data (O’Reilly & Parker, 2014).

3.5 Data Collection

3.5.1 Key Informant Recruitment

An invitation letter (Appendix A), which explained the study, encouraged participation, and noted that the PCPs would soon be contacted to discuss participation, was signed by the SCOPE Primary Care Lead and sent to all 30 SCOPE PCPs. Approximately two weeks following the distribution of the invitation letters, potential participants were sent an information letter (Appendix B), which contained additional information about the nature of the interviews and provided the research team’s contact information so that PCPs could get in touch to indicate whether they would like to participate in an
interview and discuss scheduling. Physicians also received follow-up phone calls after the information letters had been sent out to confirm their receipt, discuss participation and, if willing, to schedule an interview.

3.5.2 Interviews

Following a pilot test of the interview guide and the incorporation of suggested revisions, semi-structured interviews were conducted with key informants. Fitting with the study’s aims and constructivist approach, interviews have been noted to have the ability to “yield a great deal of useful information” and are interactions “in which the researcher and the interviewee produce language data about beliefs, behavior, ways of classifying the world, or about how knowledge is categorized” (Green & Thorogood, 2009; Leedy & Ormrod, 2010). Seidman (2006) notes that interviewing offers “access to the context of people’s behavior and thereby provides a way for researchers to understand the meaning of that behavior”. By using a semi-structured interview approach, an agenda of interview topics believed to be relevant to the research questions was set out, but the interviews remained flexible enough for the interviewees’ responses to “determine the kinds of information produced about those topics, and the relative importance of each of them” (Green & Thorogood, 2009). Semi-structured interviews provided the opportunity to explore key informants’ perspectives and opinions in-depth.

Interviews were conducted in-person when possible, to facilitate the ability to build rapport with key informants, gain additional contextual insights by visiting PCPs’ practice settings, and observe informants’ nonverbal behaviour (Seidman, 2006; Neutens & Rubinson, 2002). Following a brief introduction to build rapport with informants, the interview guide (Appendix C) began with a broad question: ‘Could you please describe why you decided to participate in the SCOPE project?’ Further questions were aimed at eliciting data regarding key informants’ engagement with the project and perceived facilitators and challenges to participation and use of the SCOPE services. The interview guide was periodically refined based on feedback from members of the thesis committee, the SCOPE project evaluation team, and emerging themes from the interviews.
Interviews were conducted approximately 14 – 19 months after the initiation of the SCOPE services, between November 2013 and April 2014. The sequence of initial interviews was determined by the availability of the PCPs to participate. Key informants were given scheduling options in selecting the date, time and location of the interview that worked best for them (Morse & Field, 1995). Each interview lasted approximately 30 – 60 minutes.

3.6 Data Analysis

All interviews were audio-recorded and transcribed verbatim into text files in Microsoft Word. The written transcripts were uploaded into qualitative data management and analysis software (NVivo 10).

The data analysis approach of this study was informed by grounded theory methodology. Glaser and Strauss describe the overall grounded theory analysis as following a cyclical process of collecting data, analyzing data, developing a coding framework, considering further sampling, and gathering additional data until no new themes appear to develop (Green & Thorogood, 2009). Coding of the interview transcript data was guided by the two phases described by Charmaz: 1) initial coding – “an initial phase involving naming each word, line, or segment of data”; and 2) focused coding – “a focused, selective phase that uses the most significant or frequent initial codes to sort, synthesize, integrate, and organize large amounts of data” (Charmaz, 2011). Following analysis of interview transcripts of PCPs within each group, a comparative analysis of interview transcripts between groups and synthesis of these analyses were conducted. Diagramming (Strauss and Corbin, 1998) was also used during the analysis of the data to illustrate the connections between evolving categories (Strauss & Corbin, 1998; Strauss, 1987; Strauss & Corbin, 1990). Additionally, the emergent findings were discussed and further analyzed with members of the thesis committee and SCOPE Project Evaluation team.

Following initial interviews, a draft coding scheme was developed and shared with members of the thesis committee. The coding scheme was refined based on feedback, as data familiarization was
enhanced, and as the coding process progressed. Code definitions were created and reviewed with members of the thesis committee.

Members of the thesis committee independently coded a randomly selected sample of the transcripts. This technique, referred to as “double coding”, allowed for the coding process to be compared and discussed in an effort to validate the coding strategy and ensure consistency and comprehensiveness in data interpretation (Barbour, 2001).

3.7 Quality and Rigor

3.7.1 Trustworthiness

Various trustworthiness factors were taken into consideration during the design, data collection, and analysis stages of the research in order to enhance its quality. Interviews were audio-recorded to promote accuracy of the data collected and carried out by one interviewer in order to maintain internal consistency. The interviewer also transcribed all recordings, further promoting internal consistency.

In this study, interviewing PCPs that fell into the three categories of SCOPE users (i.e. early, mid and later adopters) was aligned with the technique of ‘fair dealing’, which promotes designing research so that it incorporates a range of different perspectives and that the viewpoint of any one group of individuals is not presented as representative of “the truth” of a given situation (Anderson, 2010).

3.7.2 Researcher reflexivity

The issue of bias in qualitative research is often discussed in methodology texts and there are varying ideas on how much researcher influence is acceptable, whether or not it needs to be ‘controlled’ and how it might be accounted for (Ortlipp, 2008). ‘Reflexivity’ refers to being sensitive to the ways in which the researcher’s “own actions, values and perceptions impact upon the research setting and affect the data collection and analysis” (Gerrish & Lacey, 2006). In order to acknowledge and bring transparency to such elements, research memos and reflective journal entries were written throughout the course of the research process. Research memos and reflective journaling are two practices that aim to make visible the “constructed nature of research outcomes, the influence of various choices and decisions made during the process, and researcher values and assumptions” (Ortlipp, 2008). These
practices were employed to facilitate documentation of the context and early impressions of the interview sessions, emerging thoughts regarding the data, how data could be categorized, and how the categories were linked together (Cutcliffe, 2000).

In grounded theory, the researcher must be ‘honest and vigilant about her own perspective, preexisting thoughts and beliefs, and developing hypotheses’ and should engage in self-reflective practices to facilitate the ability to “analyze the data received from participants with an open mind” (Starks & Brown Trinidad, 2007). To facilitate an open-minded analysis of the data, the primary researcher engaged in recommended reflexive practices, such as consulting and sharing available results with thesis committee members and SCOPE project colleagues throughout the analysis process (Cutcliffe, 2003; Finlay, 2002).

3.8 Ethical Considerations

The overall SCOPE project was granted ethics approval from the UHN Research Ethics Board (REB) and Women’s College Hospital (WCH) REB. To conduct this Master’s thesis study, amendments to the overall SCOPE project REB approvals from UHN and WCH were required and were obtained in September 2013 (Appendix D). Ethics approval for the study was also obtained through the University of Toronto’s Health Sciences REB in October 2013 (Appendix D).

Consent for participation was obtained from key informants by way of a written informed consent form (Appendix E). The purpose of the study, privacy and confidentiality provisions, and key informants’ rights as research participants were discussed prior to the commencement of the interviews. Prior to starting the interviews, time was provided to key informants to discuss any questions and/or concerns that they may have had at the time of the interview. Permission to record the interviews was requested and obtained prior to interview commencement as well. Informants’ identifiers were removed from transcripts and other study documentation. Transcripts were identified by an informant-specific code during the analysis.
CHAPTER 4: RESULTS

Successful health system reform relies on physician engagement. The SCOPE project aimed to link PCPs’ practices with hospital and community-based resources to decrease ED use by complex medical patients. The key influencing factors associated with PCPs’ initial and ongoing use of the SCOPE interventions are outlined in this chapter. This chapter also provides insights into the types of scenarios for which participating PCPs found SCOPE most useful and to what extent PCPs foresaw adopting SCOPE services as an ongoing part of their practice. Additionally, descriptions of differences noted between adopter groups with regards to key influencing factors are outlined.

4.1 Key Informant Participation

Twenty two of the 30 (73%) PCPs participating in SCOPE agreed to be interviewed: 6 ‘early adopters’, 13 ‘mid adopters’ and 3 ‘later adopters’ (Table 5). Of the 22 interviews, 8 (36%) were conducted in person in the physicians’ offices and 14 (64%) were conducted via telephone. Descriptive data of office profile characteristics of all SCOPE PCPs and study key informants, gathered through a SCOPE project survey conducted prior to the interviews, are presented in Tables 6 and 7. SCOPE PCPs who participated as key informants in this study ranged in age from 30 to >60 years of age and had been in practice from <5 years to >15 years. PCPs were predominantly male (n=18, 81.8%) and without university affiliation (n=15, 68.2%). The majority of these informants were in solo practices, where they were the only physician in their office/practice (n=17, 77.2%). A few key informants participated in a group practice consisting of 2-5 physicians.

Table 5: Key informant participation by adopter group

<table>
<thead>
<tr>
<th>Adopter Group</th>
<th>Number of Invitees</th>
<th>Number accepted (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Adopters</td>
<td>7</td>
<td>6 (86%)</td>
</tr>
<tr>
<td>Mid Adopters</td>
<td>18</td>
<td>13 (72%)</td>
</tr>
<tr>
<td>Later Adopters</td>
<td>5</td>
<td>3 (60%)</td>
</tr>
<tr>
<td>TOTAL</td>
<td>30</td>
<td>22 (73%)</td>
</tr>
<tr>
<td>Office Profile Characteristics</td>
<td>SCOPE PCPs (n=30) n (%)</td>
<td>Key Informants (KI) (n=22) n (%)</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>25 (83.3)</td>
<td>18 (81.8)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39 years</td>
<td>2 (6.7)</td>
<td>1 (4.5)</td>
</tr>
<tr>
<td>40-49 years</td>
<td>8 (26.7)</td>
<td>7 (31.8)</td>
</tr>
<tr>
<td>50-59 years</td>
<td>8 (26.7)</td>
<td>6 (27.3)</td>
</tr>
<tr>
<td>60+ years</td>
<td>12 (40.0)</td>
<td>8 (36.4)</td>
</tr>
<tr>
<td>Years in Family Practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 5 years</td>
<td>1 (3.3)</td>
<td>1 (4.5)</td>
</tr>
<tr>
<td>6-10 years</td>
<td>1 (3.3)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>11-15 years</td>
<td>2 (6.7)</td>
<td>2 (9.1)</td>
</tr>
<tr>
<td>&gt; 15 years</td>
<td>26 (86.7)</td>
<td>19 (86.4)</td>
</tr>
<tr>
<td>Practice size</td>
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</tr>
<tr>
<td>≤1000</td>
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<td>0 (0.0)</td>
</tr>
<tr>
<td>1001-2000</td>
<td>11 (36.7)</td>
<td>8 (36.4)</td>
</tr>
<tr>
<td>2001-3000</td>
<td>6 (20.0)</td>
<td>4 (18.2)</td>
</tr>
<tr>
<td>&gt; 3000</td>
<td>12 (40.0)</td>
<td>10 (45.4)</td>
</tr>
<tr>
<td>Patients ≥ 65 yrs*</td>
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<td></td>
</tr>
<tr>
<td>&lt; 30%</td>
<td>6 (20.7)</td>
<td>4 (19.0)</td>
</tr>
<tr>
<td>30-50 %</td>
<td>19 (65.5)</td>
<td>14 (66.7)</td>
</tr>
<tr>
<td>&gt; 50 %</td>
<td>4 (13.8)</td>
<td>3 (14.3)</td>
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<tr>
<td>Family practice profile</td>
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<tr>
<td>Solo practice, university affiliated</td>
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<td>6 (27.3)</td>
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<tr>
<td>Solo practice, non-university affiliated</td>
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<td>11 (50.0)</td>
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<tr>
<td>Group practice, university affiliated</td>
<td>2 (6.7)</td>
<td>1 (4.5)</td>
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<tr>
<td>Group practice, non-university affiliated</td>
<td>6 (20.0)</td>
<td>4 (18.2)</td>
</tr>
<tr>
<td>Experience in the ED (range 1-18 years)</td>
<td>17 (56.7)</td>
<td>15 (68.2)</td>
</tr>
</tbody>
</table>

*One PCP in the key informant group did not provide this information.
Table 7: Key informant office profile characteristics by adopter type

<table>
<thead>
<tr>
<th>Office Profile Characteristics</th>
<th>KI Early Adopters (n=6) n (%)</th>
<th>KI Mid Adopters (n=13) n (%)</th>
<th>KI Later Adopters (n=3) n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>30-39 years</td>
<td>1 (16.7)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>40-49 years</td>
<td>0 (0.0)</td>
<td>6 (46.2)</td>
</tr>
<tr>
<td></td>
<td>50-59 years</td>
<td>2 (33.3)</td>
<td>3 (23.1)</td>
</tr>
<tr>
<td></td>
<td>60+ years</td>
<td>3 (50.0)</td>
<td>4 (30.8)</td>
</tr>
<tr>
<td>Years in Family Practice</td>
<td>≤ 5 years</td>
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<td></td>
<td>6-10 years</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td></td>
<td>11-15 years</td>
<td>0 (0.0)</td>
<td>2 (15.4)</td>
</tr>
<tr>
<td></td>
<td>&gt; 15 years</td>
<td>5 (83.3)</td>
<td>11 (84.6)</td>
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<td>0 (0.0)</td>
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<tr>
<td></td>
<td>1001-2000</td>
<td>1 (16.7)</td>
<td>6 (46.2)</td>
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<td>2001-3000</td>
<td>1 (16.7)</td>
<td>2 (15.4)</td>
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<tr>
<td></td>
<td>&gt; 3000</td>
<td>4 (66.7)</td>
<td>5 (38.5)</td>
</tr>
<tr>
<td>Patients ≥ 65 yrs*</td>
<td>&lt; 30%</td>
<td>0 (0.0)</td>
<td>4 (33.3)</td>
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<tr>
<td></td>
<td>30-50%</td>
<td>5 (83.3)</td>
<td>6 (50.0)</td>
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<tr>
<td></td>
<td>&gt; 50%</td>
<td>1 (16.7)</td>
<td>2 (16.7)</td>
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<tr>
<td>Family practice profile</td>
<td>Solo practice, university affiliated</td>
<td>4 (66.7)</td>
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<td>Solo practice, non-university affiliated</td>
<td>2 (33.3)</td>
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<td>Group practice, university affiliated</td>
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<td>Group practice, non-university affiliated</td>
<td>0 (0.0)</td>
<td>4 (30.8)</td>
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<tr>
<td>Experience in the ED (range 1-18 years)</td>
<td>5 (83.3)</td>
<td>9 (69.2)</td>
<td>1 (33.3)</td>
</tr>
</tbody>
</table>

*One PCP in the mid adopter group did not provide this information.*
4.1.1 Early Adopters
Within the ‘early adopter’ group, three PCPs were deemed “super-users” and accounted for 42% of overall SCOPE use (SCOPE, 2014). While this group had the largest proportion of PCPs over the age of 60, it also included the two youngest PCPs, one of which who had recently taken over a practice of a retired physician. The majority of the PCPs in the early adopter group had >15 years’ experience in practice. Practice sizes ranged from >1000 to >3000 patients. SCOPE use data (to week 64 of the project term) by adopter group are presented in Table 8 and Figure 5. The corresponding data for early adopter key informants appeared similar to that of the overall early adopter group, however, the cumulative total number of contacts per early adopter was higher in the sample of interviewees due to the inclusion of the “super users” in the key informant sample. Overall the key informants appeared representative, and no statistical tests were carried out to assess the significance of these comparisons.

4.1.2 Mid Adopters
The majority of PCPs in the ‘mid adopter’ group had >15 years’ experience in family practice and a couple had 11-15 years’ experience. There was a mixture of practice types within this category of SCOPE users – group or solo-based practices, either with or without university affiliation. The corresponding data for mid adopter interviewees appeared similar to that of the overall mid adopter group.

4.1.3 Later Adopters
All PCPs in the ‘later adopter’ group were male, had over 15 years’ experience in family practice and described their practice type as solo practices with no university affiliation. Practice sizes ranged from >1000 to >3000 patients. The corresponding data for later adopter interviewees appeared similar to that of the overall later adopter group.

Table 8: SCOPE contacts by adopter group and key informant (KI) adopter group (average number of contacts per week and cumulative total number of contacts up to week 64)

<table>
<thead>
<tr>
<th></th>
<th>Early Adopters</th>
<th>KI Early Adopters</th>
<th>Mid Adopters</th>
<th>KI Mid Adopters</th>
<th>Later Adopters</th>
<th>KI Later Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Weekly Average (per PCP)</strong></td>
<td>11 (1.6)</td>
<td>10 (1.7)</td>
<td>9 (0.5)</td>
<td>6 (0.5)</td>
<td>1 (0.2)</td>
<td>1 (0.3)</td>
</tr>
<tr>
<td><strong>Cumulative Total (per PCP)</strong></td>
<td>674 (96.3)</td>
<td>615 (102.5)</td>
<td>548 (30.4)</td>
<td>361 (27.8)</td>
<td>54 (10.8)</td>
<td>42 (14)</td>
</tr>
</tbody>
</table>
Figure 5: SCOPE contacts by adopter group (contacts per week and cumulative contacts up to week 64)

**Early Adopters**

**Mid Adopters**

**Later Adopters**
4.2 Decision to Participate in SCOPE

4.2.1 Factors Influencing PCPs’ Decision to Participate

Patient Related Influencing Factors

A critical factor influencing the initial participation of PCPs in the SCOPE project was their perception of the value of SCOPE to their patients. One PCP noted his reasons for participating as “primarily because I thought it was a good idea and I certainly felt it could be of value to my patients” (KI001). PCPs could see the potential benefits of the SCOPE services for “people who have complex problems”, “complicated patients”, “when you want the patient to be seen rapidly”, and “patients that we struggle with – these complex medical patients”. One PCP clearly saw the fit between the objectives of the SCOPE project and PCPs’ needs regarding improving care for their complex medical patients and noted that “the same patients that the project identified were the patients that we most struggle with. And the services that were initially part of the project were also services that we were sort of wanting, so it did very much coincide with a need” (KI019).

The primary challenges that PCPs identified in providing care to their complex patients centered around the provision of appropriate care, timely care, and urgent care. Providing care to complex patients was described as challenging, as it is often difficult to find appropriate resources, access services in a timely manner (due to long waiting lists, inadvertently making inappropriate referrals, and delays between sending the referrals and the actual booking of appointments for patients), and provide urgent care without sending patients to the ED. For many PCPs, the decision to participate in SCOPE was based on the potential to improve these facets of their patients’ care. From the outset, the Navigation Hub was perceived as potentially helpful for providing more appropriate referrals and facilitating access to “some specialties in particular that are tough to access in a timely fashion” (KI009). The potential to have access to their patients’ test results and consult notes from participating hospitals through the PRO service of SCOPE appeared to also influence PCPs’ decision to participate. One key informant noted that “...getting access to hospital reports easily online was really attractive. I think that is the biggest thing that I remember from when I first joined on” (KI017). Furthermore, the GIM specialist on-call and AACU
were viewed as being potentially helpful for improving PCPs’ patients’ care by providing mechanisms through which PCPs could obtain advice regarding patients requiring urgent care and rapid access to care for patients outside of the ED.

In one area, patient factors raised concerns. One interviewee, whose practice includes Italian, Portuguese and Caribbean patients, indicated that he had some initial concerns as to whether the SCOPE services would be culturally appropriate and meet patients’ language needs. He wondered whether his patients would feel comfortable seeing and trusting unfamiliar health care providers and worried about his patients’ potential resistance to being referred to other providers through SCOPE. However, he noted that these initial concerns did not actually materialize.

“The potential downside that I saw, which actually did not materialize, was that a lot of my patients come here because of cultural issues, namely, language barriers. I speak most of their languages. A lot of them have forged relationships, in terms of trust, over the last 15 to 20 years with me and my staff. So they come here essentially because they trust us and they feel comfortable, both from a diagnostic standpoint and a cultural standpoint. I was a little bit concerned that they might not buy into me sending them downtown to a place that potentially doesn’t speak their language, and they would feel overwhelmed and alienated...My nurse and I spoke about this at the onset of the program but it we really didn’t see it [materialize] as an issue. We thought that it might be [an issue] but as we made referrals families and patients came back extremely satisfied.” (KI009)

**Provider Related Influencing Factors**

Several PCPs noted the challenge of isolation in primary care practices. This factor influenced initial engagement, and some PCPs described it as “the main reason” for participating and a “major factor” that impacted their decision to participate. One PCP noted the importance of reducing this sense of isolation and increasing cooperation with other health care professionals as the primary reason that she decided to participate in SCOPE.

“I think it was a very good idea that we are not left outside as a GP, that we are incorporated with the hospital, that we have more connection and more cooperation with the specialists, and to have access to my patients’ results. That was the main reason. We have to cooperate. These days you cannot just be an isolated family physician practicing without being in contact with the other health professionals.” (KI005)

Improving connections with other components of the health care system influenced initial engagement for the majority of the interviewed PCPs. Eighteen of 22 key informants explicitly mentioned increasing connections and building professional networks as important considerations that...
influenced their initial participation in the SCOPE project. PCPs saw SCOPE as an avenue to increase access to hospitals, specialists, and community resources. PCPs noted that they viewed SCOPE as potentially being able to address challenges that they were facing and facilitate “getting quick access to specialists and community resources”, “better access to the hospitals”, and “increased coordination and communication between hospitals and the family physicians”. One PCP, who has considerable experience working in the ED, believed that SCOPE was a “great initiative” because “there were things that could be improved upon” with regards to the communication and coordination between the community, family physicians, and hospitals (KI002). He felt that he could uniquely contribute to the project due to his experience working on both the “community level and the hospital level”. Another interviewee, self-described as a “new doctor in general and in the community”, was eager to participate in the SCOPE study as he viewed it as “a good resource to know what services are available in the community and to provide a better link between myself and the local hospitals”. Such sentiments, regarding the value of learning about resources available in the community, were not reserved to more junior physicians. Even PCPs with over 15 years’ experience working in the area noted the opportunity to increase connections with other aspects of the health care system through SCOPE as highly desirable, especially as medical colleagues retire and new connections and referral patterns are required. One established physician noted:

“...even though I have been practicing medicine in <city> for 20 years, I didn’t go to school here so I never really had a network set up. Most of the referrals that I would send would be based on other doctors’ experiences or if I took over a practice or if a patient had seen a doctor previously I would send them back to that doctor but I never really knew any of the doctors, never knew what was going on in the hospitals, what clinics were available for the treatment of my patients...finding specialists for them to see wasn’t always easy. And I thought that [SCOPE] would help at least give me an idea of what was available in the community...the way medicine is now anyways – it’s not like the old school where everybody knew each other and would call [each other] up and talk. By joining this group, I thought I would get to know more of the physicians in this neighbourhood and become more a part of that as well.” (KI007)

The experience of this physician also highlights that the opportunity to create connections with other PCPs in the community was a factor that positively influenced SCOPE PCPs’ initial engagement in the project. It is evident that PCPs’ desire to increase linkages to other health care providers was connected
not only to the potential to improve access to high quality care but also to address PCPs’ sense of isolation in primary care practice, thereby providing benefits to the physicians as well as patients.

Aligned with their desire to foster professional connections, several physicians noted the influence of their colleagues on their decision to participate. These colleagues were influential and respected, and affected PCPs’ decisions by encouraging a ‘let’s do this together’ approach to participation, and suggesting involvement due to familiarity with one another’s practices and associated challenges. One SCOPE PCP noted that his decision to participate in the project was reinforced when he learned that other physicians who worked in his medical office building were also participating.

“I guess another factor would be that a lot of other doctors in my building were becoming a part of it too, so it kind of felt like a…part of our own medical community in our office building here. We were all doing it…it was probably something that came up with chatting, you know, ‘Oh, you’re doing SCOPE too? Oh, okay good.’ So that kind of reinforced my decision to join too.” (KI004)

Additionally, the SCOPE Primary Care Lead was familiar to many of the PCPs and viewed as a trusted medical colleague. Several PCPs recalled their interaction with her in describing why they initially decided to participate in SCOPE. These discussions shaped their views of SCOPE as a good opportunity with the potential to bring value to their patients, practices, and ultimately the health care system.

PCPs saw SCOPE as a way to improve their navigation of the system. PCPs anticipated that SCOPE could help reduce the frustration and substantial time commitment often associated with finding appropriate resources in the first place as well as the work associated with having to make multiple referrals when initial referrals were not effective. PCPs indicated that the need for multiple referrals was not infrequent, as sometimes the physicians to whom patients were initially referred were not able to provide useful consultations if a patient’s particular issue was not a part of their specialized practice. In these cases, PCPs felt as though time had been wasted waiting for consultations that ended up being of little value. Easier navigation of the system was perceived as an important benefit, as one PCP noted:

“often it is difficult to find resources for patients. Not just when you know what resource you want, but sometimes you don’t know what resource you want and what is available. And the thought of having one number to call and just dump it on someone else it was an amazing thing” (KI007)
Reducing the difficulty associated with trying to navigate the system also links back to the importance of being able to provide improved patient care by participating in SCOPE to PCPs.

“Sometimes you don’t have the time to navigate through calling this and calling that. By the time that you are calling the fourth or fifth person you just say ‘Forget it. I am just going to put this on the back burner.’ And what happens is that the patient will suffer because of that. SCOPE kind of opened up the opportunity to know what is available in the community and a good way to navigate through it…” (KI014)

When asked about whether they had any initial hesitations or concerns regarding participating in the SCOPE study, PCPs noted three provider related considerations – the potential time commitment that would be required to participate, the potential addition of administrative burden to their practices, and uncertainty regarding the potential benefits that could be realized through participation. Being largely solo-based PCPs, often with large practices and limited administrative and/or clinical support, the participating key informants were understandably protective of their time and hesitant of their capacity to take on additional work, especially if they felt uncertain of the type and amount of benefit they would reap in return for participation. However, after noting their initial hesitations, PCPs quickly added that they did not experience these barriers to participation once they engaged with SCOPE and started using the services. Reflecting on his decision to participate, one PCP touched upon each of these three potential concerns and explained how none were actually realized through his participation.

“I was probably worried about what type of time commitment it would require from my part because being a family physician, you are busy all of the time. Every minute you are busy. If you’re not seeing patients, you’re doing paperwork, so I was worried that it would add to any stress that I had outside of seeing my patients... And then in the end, there hasn’t been too much of a time obligation that I have had to devote to SCOPE...it hasn’t been too much of a time burden on me, in addition to my regular practice. But that was probably the concern that I had going into it...not knowing how it would benefit me and not knowing how easy it was going to be to access things in a timely fashion. Not knowing would it be of any help...but slowly, and with a lot of help from SCOPE, I am learning what [community services are] available and it has been great. So I went from uncertainty to being very happy with it.” (KI004)

**System Related Influencing Factors**

In addition to benefits that PCPs foresaw with regards to improving patient care and facilitating their everyday practice, key informants also spoke about the potential health system benefits of SCOPE when describing their decision to participate. PCPs saw SCOPE as a way to foster connections between...
various aspects of the health care system, improve appropriate utilization of health care resources and reduce system expenditures by attempting to decrease costly ED visits. Congruence between SCOPE’s goals and the factors that influenced PCPs’ decisions to participate can be seen, as one PCP noted in speaking about developing a more coordinated health care system that “...an opportunity to improve that connection was an interest of mine and a goal in the SCOPE project” (KI018). Also, SCOPE’s focus on reducing ED use by complex medical patients appeared to resonate with the PCPs; several interviewees noted the importance of reducing ED use when describing their initial decision to join the SCOPE project. The evaluation component of SCOPE, which would allow for the project’s impact to be measured, findings to be disseminated to other jurisdictions, and potential application to a wider group of health care professionals, was also an initial influencing factor for at least one PCP who described this aspect as “interesting and quite valuable” when discussing his decision to join the study. Additionally, one PCP noted the importance of participating in SCOPE due to a sense of responsibility to be actively engaged in transformative changes that may affect his profession in the future.

“I thought that there is some sense of responsibility in terms of helping to navigate the changes that are coming in primary care. I thought that there’s an opportunity here to get involved at the grassroots level and I thought that that was important from a professional standpoint and an ethical standpoint.” (KI009)

4.2.2 Differences Between Adopter Groups

While the desire to establish connections with other aspects of the health care system was an important factor for all adopter groups, there were some differences between groups regarding other factors that influenced the initial decision to participate. The ability to provide improved patient care and better navigate the system as a result of participation in SCOPE was noticeably mentioned less directly by both early and later adopters, compared to mid adopters, as a factor that influenced their initial decision to participate. Early adopters noted this influencing factor less frequently than mid adopters but more frequently than later adopters. Interestingly, one later adopter in particular seemed to base his participation more on his ability to contribute to the project and help effect change in the system, rather than the need or desire to derive benefits from SCOPE for his practice and patients.
The sense of isolation and influence of medical colleagues, mentioned by early and mid adopters, did not appear to be a significant factor regarding the initial engagement of later adopters. It is not known whether this was because later adopters already had networks and therefore did not feel the same sense of disconnection and desire to increase the sense of community within primary care or because these factors were merely not as important to these individuals. The later adopters also seemed more inclined to have ‘practical’ motivations for their participation (e.g. access to information, resource utilization gains, professional responsibility, etc.) than ‘relational’ motivations (e.g. collegiality with other PCPs, decreased sense of isolation, etc.) noted by early and mid adopters. For example, when discussing the initial decision to participate, a later adopter indicated his desire to have access to hospital information in the setting of his own office: “...patient information during hospitalization and after hospitalization...online access to all of this information was a great opportunity.” (KI016) Whereas, an early adopter noted that a more collaborative, supportive way of working was of particular interest to him and that he was attracted by the opportunity of “being able to share some of the problems that solo practitioners encounter, that they have to deal with on their own.” (KI010)

Early adopters appeared to be distinct with regards to a couple of factors. PCPs in this group seemed to be less inclined than other adopter groups to perceive potential barriers to participation (e.g. time commitment, administrative burden). Also, only PCPs from the early adopter group mentioned the research and evaluation aspects of SCOPE as facilitators when discussing their initial participation.

Table 9 provides a summary of the main factors that influenced PCPs’ decisions to initially participate in SCOPE by adopter group.
### Table 9: Summary of factors that influenced PCPs’ initial participation in the SCOPE project by adopter group

<table>
<thead>
<tr>
<th>Influencing Factor</th>
<th>Early Adopters</th>
<th>Mid Adopters</th>
<th>Later Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient Level Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Facilitators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ability to provide improved care to patients</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Access to patient information</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerns that services offered may not be culturally appropriate for patients (e.g. services offered in limited languages, etc.)</td>
<td>+</td>
<td></td>
<td>++</td>
</tr>
<tr>
<td>Concerns that patients would not want to access new services (patient choice)</td>
<td></td>
<td>+</td>
<td></td>
</tr>
<tr>
<td><strong>Provider Level Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Facilitators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sense of isolation as a PCP in the community</td>
<td>++</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Increased connections to other aspects of the health care system (e.g. other PCPs, specialists, hospitals, community services, etc.)</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Influence of medical colleagues, SCOPE Primary Care Lead</td>
<td>++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Easier navigation of the system to access services</td>
<td>++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential time commitment</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Potential additional administrative burden</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Uncertainty regarding benefits</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>System Level Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Facilitators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional responsibility to be involved in change in primary care</td>
<td>++</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Ability to improve utilization of resources (e.g. more ‘appropriate’ use of ED, etc.)</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Evaluation component of SCOPE</td>
<td></td>
<td></td>
<td>++</td>
</tr>
<tr>
<td>‘Relational’ motivations (e.g. patient benefits, collegiality with medical peers, collaboration, etc.)</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>‘Practical’ motivations (e.g. access to information about the system, access to patient information, etc.)</td>
<td>+</td>
<td>+</td>
<td>+++</td>
</tr>
</tbody>
</table>

### 4.3 Ongoing Engagement with SCOPE

#### 4.3.1 Factors Influencing Ongoing Engagement

**Patient Related Influencing Factors**

A host of patient factors influenced PCPs’ ongoing engagement. Aligned with its importance during the initial decision making process regarding participation, SCOPE’s value to PCPs’ patients was a critical factor influencing the ongoing engagement of PCPs. Patients’ positive experiences and the ability to provide an enhanced level of care to patients were enablers to ongoing use of the SCOPE services.

Describing his satisfaction with the care that his patients received through SCOPE, one PCP noted:

“It was excellent. It was timely, it was thorough and the follow up was great. And it seemed to... deal with the issues. You know when you have many people involved as part of a collaborative process it becomes more efficient. That’s what I liked the most about it – patients were seen quickly, they were getting the kind of care that they needed and follow up was always very good.” (KI001)
PCPs resoundingly remarked that participating in SCOPE allowed for their patients to receive an enhanced level of care. This enhanced level of care brought benefits to patients requiring urgent treatment or community supports as well as family members and other individuals involved in the provision of care to these patients. Patients benefitted from not having to wait for long periods of time in the ED and could be seen in a more timely and coordinated way through the AACU or by other specialists, as required. In describing the patient benefits with regards to the provision of urgent care through SCOPE, one key informant noted the following:

“If SCOPE wasn’t in place, the family would have taken her to the emergency department...she wasn’t extremely short of breath, so she would have been probably triaged as an intermediate need and so then she would probably have had to wait around awhile before she would have even been seen. All of the other services afterwards, in terms of bloodwork, x-rays, that type of thing, would have taken a lot longer. And then with the assessment, I don’t think that it would have been as coordinated as it had been under AACU, or as expedited and comfortable for the patient.” (KI006)

PCPs also found that SCOPE was able to provide enhanced care to patients that required increased social and community support services, including individuals that were “homebound” and had “social issues”.

Several key informants noted the usefulness of the CCAC resources that they obtained for their patients through the SCOPE Navigation Hub. The ability to set patients up with care in the home was important to PCPs as they are often not able to provide home visits themselves due the time required and their in-office demands. In describing his collaboration with the CCAC Care Coordinator and the assistance that he received regarding accessing community supports for his patients, one PCP noted:

“Well, [the work] just might not get done to the same extent, period [without SCOPE]. The alternative was that you made a referral to the CCAC. Some of [the CCAC staff] would come back and ask for more [information], other [referrals] might have just been lost and then [patients would] not have received those services. It is uncertain what could have happened. The alternatives could have been that [the patients] got worse, that they got poor medical treatment, ended up in emerg, who knows.” (KI019)

Furthermore, SCOPE enhanced PCPs’ ability to provide patient care that would, in turn, provide support and relief to caregivers and family members. This was realized in various ways, including by transferring care that was being provided by caregivers to home health care workers, establishing supportive services for patients living alone that would in turn reduce family members’ worries about
how the individual is coping on their own, as well as providing urgent care in a more timely and well-coordinated manner. As for the latter aspect, several PCPs noted that both patients and family members appreciated the care that they received through SCOPE (e.g. at the AACU) as it often resulted in them being scheduled for assessment at a certain time and having some of the arrangements for tests and procedures already in place upon their arrival at the hospital. These elements were of great value as it meant caregivers or family members could more easily arrange to accompany patients to their appointments, if required or desired, and reduced waiting time, lost productivity and anxiety for all involved. The benefits appeared to be of particular value when patients had limited ability to converse in English and relied on others to facilitate communication during health care encounters. Although not one of the initial primary goals of SCOPE, the ability of SCOPE to benefit caregivers acted as an enabler to ongoing engagement in SCOPE.

“I think probably the biggest strength of SCOPE is not only dealing with some of the complex medical needs, but it also has that infrastructure and system process that looks after the caregiver as well. And I think that that is a huge part of the process because there are certain things that we can’t do in the clinic and there are many things that can be done at home – which often ends up being very useful to the caregivers. And, so for me, I tend to refer patients where I believe not only is there is going to be a medical benefit to the patient but [where] it will provide some relief to the caregiver.” (KI001)

Increased access to patient information, which PCPs indicated they were interested in when describing why they initially participated in SCOPE, was realized and acknowledged as an enabler to ongoing engagement with the project. PCPs believed that improved access to patient results, through PRO, improved their ability to provide timely, coordinated care to their patients as they could access results at the time of a patient’s visit and discuss the results and treatment plan, if required, during one visit.

Although some PCPs’ initial concerns regarding the availability of services in languages appropriate for their patient populations (e.g. Portuguese, Italian) did not materialize, language barriers were noted by PCPs who serve the Chinese and other Asian communities. Difficulties accessing services in Chinese and Vietnamese languages were noted to be barriers in some circumstances where patients may have benefited from interaction with SCOPE.
Another patient level factor, patient choice, also reduced use of the SCOPE services in some instances. PCPs noted that patients can be hesitant to see new providers, visit hospitals that they haven’t been to before and travel outside of areas of the city that they are familiar with and “identify with”. One interviewee commented:

“A lot of patients don’t want the help. We talk about all the complex care services that are available and things like that. I have discussed this with patients and a lot of people don’t want that. They find it intrusive. They say ‘Dr. X, just – you take care of me.’ That type of thing. You know it is not easy to sell it to patients.” (KI007)

However, as previously noted, although perceived patient preference initially affected PCPs’ engagement with SCOPE for some patients, they realized after a few encounters that their patients were highly satisfied with the care that they received through SCOPE and subsequently considered SCOPE for situations in which they may have initially had reservations to do so.

**Provider Related Influencing Factors**

Provider experiences with SCOPE were resoundingly positive. One PCP summed up his experience by remarking: “My experience has been very positive and I always have [SCOPE] at the back of my mind. If there is the potential to use SCOPE, I have no hesitation.” (KI003) Another noted:

“This is a good service. This is actually something that people should dream about and to have. But I don’t know how costly it is because this is like driving a Mercedes. Honest to God because this is something that you get spoiled into. It is so easy, just one phone call and you get things handled for you. It is a dream.” (KI015)

However, on a couple of occasions SCOPE was unable to provide PCPs with resources to manage difficult cases in a timely or comprehensive manner. These instances included requests for mental health resources, which were not included in the SCOPE model, and needs that arose outside of the regular hours of operation for SCOPE services.

Upon using SCOPE PCPs experienced positive interactions, however, there was a “learning curve” associated with use. PCPs noted initially feeling “kind of unsure of how or what you are supposed to use it for” and not having “the comfort level that you have now using the service.” Learning over time was also noted in reference to using the PRO system. Associated with the perceived work involved with and resistance to learning new ways of working, one PCP suggested that there is “an inherent inertia in
our profession” to change, especially when there is “a learning curve associated with it”. Another PCP speculated that “maybe [other PCPs] are very used to the way that they do things and they are used to patients going a certain direction all the time. Or some people in some medical buildings, they like to use only doctors that are in their building. Otherwise, I don’t understand why they wouldn’t use all the services.” (KI010) Speculating on his own experience, one PCP noted that the difficulty to use new services can be linked to being in a routine and forgetting about new options without possessing deliberate resistance to change.

“...and exciting things coming down the pipe were mentioned, right? We are going to have access to this, and we are going to have access to that – and I have found myself, I hope that I am not alone – that when you do things in a certain way for a period of time you tend to keep doing those things the same way. So I think that it would be good to have more creative, in your face ways of being reminded of what services are there and maybe at the point-of-care.” (KI019)

In many cases the reluctance or resistance to change was associated with the perception that such actions would require a substantial amount of time or increased workload for their practice. With regards to ongoing engagement, the importance of making sure that the amount of time and effort required to engage with SCOPE was associated with increased payoffs in terms of practice efficiency and patient care is clear in the following comment:

“What is the time commitment going to be? That’s the main concern. What is it going to take out of their own time and is it going to help them? Is whatever time and effort they put into the project, is it going to benefit them and their patients. I think that is the main concern. That is my concern anyways. And I imagine that a lot of family doctors are just as busy as I am... Time is of the utmost importance. Basically, if we invest some time into SCOPE, is it going to pay out in terms of helping our patients and maybe saving us time in the end. And it has, for me.” (KI004)

Fortunately, PCPs did not find time or increased workload to be barriers to engagement with SCOPE. Those who mentioned these factors as initial concerns went on to remark that concerns were not validated through their experiences and in fact the opposite was true – they realized time savings and reduced administrative burden through their participation. For example, when PCPs connected with SCOPE to initiate the provision of community services, they felt that the services were delivered in more efficient and coordinated manner.
“Just fax [the referral] to the nurse, the recommendation, and that’s it! They take care of it with one phone call. I don’t have to leave a message, and see if CCAC will call me back...usually it was [taking] too long. And [with SCOPE] everything is arranged very promptly.” (KI012)

However, changing the way they practiced proved difficult for many PCPs even though they believed in and had experienced the value of SCOPE. Forgetting about the services while at the point-of-care in the midst of their busy practices was a barrier to PCPs adopting the SCOPE services as a part of their regular routines. Addressing his forgetfulness and underscoring the sense of responsibility and independence inherent to solo-based practice, one PCP noted: “I mean, I have for 25 years been self-sufficient and done my own thing so it is more difficult for me to remember just pass it on to someone else.” (KI007).

Increased access to information about and connections with other aspects of the health system, noted of interest by PCPs in descriptions of their initial engagement, were also facilitating factors to ongoing engagement with the project. As a result of SCOPE, PCPs described that they were now more knowledgeable about the services available and therefore could offer an increased number of resources to their patients and were more likely to find appropriate resources for the given situation. One PCP noted his experience in this regard to be very positive: “Overall, I think that I have been really connected more to <health organization>, <hospital>, to a lot of the services. Just overall I feel much more connected and able to access and get information about their services.”(KI021). Prior to SCOPE, PCPs indicated that they “never knew [certain] specialty clinics existed” and were “relying on Google” to find out about community resources available for their patients.

The ability to build connections within primary care and participate in a more collaborative model of care through SCOPE also encouraged PCPs’ ongoing engagement. One PCP noted that SCOPE “improved our community network of primary care physicians and immensely improved the information transfer from hospital to community.”(KI004) This affinity for a sense of community within primary care is aligned with the strong positive influence that the participation of medical peers and role of the SCOPE Primary Care Lead had on PCPs’ initial engagement, as detailed earlier.
Individual physician characteristics were also suggested by PCPs, in reference to either themselves or others, as enablers or barriers to engagement. Positive inclinations towards monitoring and evaluating practice ‘quality indicators’ (e.g. screening procedures, etc.) and trying “something new” as well as the desire to actively participate in professional change and “make things better” are examples of such provider-level enablers that were noted. Facilitating engagement, one early adopter described her willingness to try new things and altruistic nature regarding system change:

“I am always a very curious person and I always want to go with progress. Because health care is so important these days and it costs so much money. Wherever we can help to reduce the health care costs and improve the care, I am really willing to participate. We have to do something. We have to decrease the costs and we have to improve the care... So if there is something that can achieve this, I am willing to participate.” (KI005)

Physician characteristics noted as potentially impeding engagement included physicians being “overworked” or “not comfortable working with hospitals and other specialists”. Older age and lack of comfort with technology were also noted as potential barriers to participation with the more technological aspects of SCOPE (e.g. PRO, video case conferencing, etc.).

**Intervention Related Influencing Factors**

From an interventional perspective, three issues served as barriers to participation for some PCPs: language limitations, technical difficulties with the PRO system, and the volume of SCOPE related information. PCPs requested that the Navigation Hub be able to provide PCPs with resources available in Chinese and Vietnamese languages and made several suggestions to improve the user interface of the PRO system. The information provided about and by the SCOPE project was very useful; however, the sheer volume of information regarding the resources available, and new services to be added, was at times overwhelming for PCPs.

The design of SCOPE also facilitated and reinforced SCOPE use. PCPs appreciated the: i) simplicity of having one number to call; ii) responsiveness of the team in terms of expedient follow up and thoughtful advice; iii) adaptive nature of the project to make revisions in response to PCPs’ feedback; and iv) personal approach of the training and support provided by SCOPE staff.

**System Related Influencing Factors**
System level factors, which influenced PCPs’ initial participation, were also noted to be important regarding PCPs’ ongoing engagement with the project. As noted previously, PCPs were often not well informed about what services were available in their community and how to best access them. One PCP with substantial hospital experience suggested that prior to SCOPE, for both urgent and non-urgent care situations, PCPs would use the ED as an entryway through which to gain access to other services because they were not aware of alternate, straightforward, less resource intense ways of doing so.

“...previously [before SCOPE] a lot of physicians just thought that the emergency department was the portal to the entire hospital and if there was any type of urgent situation, just send the patient to emerg... So, I think that the information is getting out there because [of SCOPE]...it’s just a matter of time [until] the community physicians have an awareness of what they could do rather than sending patients to emerg. And it’s a matter of time before the hospitals... and the clinics can communicate to the primary care physicians what they can do in situations where they would think of sending a patient to emerg.” (K1002)

From a systems view, reliance on the ED for all urgent care and to gain access to other services poses significant resource utilization costs. PCPs’ improved ability to find appropriate resources and access semi-urgent care alternatives for their patients in a timely manner without having to use the ED as a gateway to accessing these services was noted to be an important facilitator for ongoing engagement in SCOPE as it was aligned with PCPs’ desire to improve health system resource utilization.

4.3.2 Differences Between Adopter Groups

Aligned with findings regarding their motivations for initial participation, later adopters also seemed more inclined than other PCPs to have ‘practical’ facilitators for their ongoing engagement, such as increased access to information and improved resource utilization rather than ‘relational’ facilitators, such as collegiality and collaboration with other PCPs, the ability to provide relief to family and caregivers and receipt of support regarding the management of complex medical patients. In comparison, mid and early adopters appeared more inclined to be encouraged by such ‘relational’ facilitators.

With regards to the usefulness of SCOPE to improve patient care, PCPs across adopter groups experienced the benefits that SCOPE was designed to provide. However, the impact of SCOPE on PCPs’
ability to provide improved patient care was not articulated as strongly by the later adopter group. Differences noted between adopter groups regarding SCOPE’s ability to enhance patient care as a facilitator for PCPs’ ongoing participation were similar to differences noted amongst groups when this factor was discussed in relation to initial engagement. Furthermore, later adopters noted the helpfulness of SCOPE for patients requiring urgent care less frequently and with less emphasis than other adopter groups. This finding is interesting because the patients of later adopters continued to have a relatively high rate of ED use compared to patients of PCPs in other adopter groups throughout the project. This suggests that it is not the case that later adopters are not in need of support regarding reducing their patients’ ED use. It seems reasonable to interpret from these points that later adopters may possess less of a “system view”. However, at the same time later adopters appeared to be most influenced by ‘practical’ factors, including improving health care resource utilization, rather than other factors.

While all adopters noted that they had positive experiences with SCOPE, provider experience seemed to be most important to the mid adopter group and was mentioned less frequently and with less emphasis by early and later adopters. Similarly, while PCPs in each of the three adopter groups mentioned the realization of practice benefits as an enabling factor, later adopters mentioned this enabler to a lesser degree. The time, effort and learning curve associated with adopting a new way of working, by way of engaging with SCOPE, were potential barriers raised by all adopter groups. However, these perceived barriers were noted most strongly by later adopters and least strongly by early adopters. This is not surprising as later adopters emphasized having established practice patterns more so than other adopter groups and, given this, may have found it harder to change routine behaviours. With regards to SCOPE’s interventional characteristics, mid adopters appeared to consider these as more important as influencing factors compared to other adopter groups.

For some PCPs, demanding practices and longstanding established routines inhibited their engagement with SCOPE and integration of the SCOPE services into their daily practice patterns. All
‘later adopter’ PCPs cited in the interviews that they were knowledgeable about available resources prior to SCOPE and had both contacts in the community and established patterns of referral. These findings suggest that later adopters’ less frequent use of the SCOPE services may be linked to less perceived need in these domains compared to PCPs in other adopter groups. The tendency to forget to use the SCOPE services also impacted the ability of PCPs to change their established routines. In this regard, mid adopters reported forgetting to use the services more than other adopter groups.

While all adopter groups noted the potential for physician specific characteristics to affect engagement, there appeared to be no significant difference regarding the importance that each adopter group assigned to this factor. It is interesting to note that with regards to physician characteristics that the majority of early adopters (5/6) were in the two highest age brackets. This may be interpreted as surprising, as typically older age is not associated with early adoption of innovations or new behaviours (Choudhry et al., 2005).

Table 10 provides a summary of the main factors that influenced PCPs’ ongoing engagement in SCOPE by adopter group.
Table 10: Summary of factors that influenced ongoing engagement in the SCOPE project by adopter group

<table>
<thead>
<tr>
<th>Influencing Factor</th>
<th>Early Adopters</th>
<th>Mid Adopters</th>
<th>Later Adopters</th>
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</thead>
<tbody>
<tr>
<td><strong>Patient Level Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Facilitators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients’ positive experiences</td>
<td>+++</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Patient benefits</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
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<tr>
<td>Access to patient information</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Services not offered in some patients’ languages</td>
<td>+</td>
<td></td>
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<tr>
<td><strong>Provider Level Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Facilitators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCPs’ positive experiences</td>
<td>+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Increased connections to other aspects of the health care system (e.g. other PCPs, specialists, hospitals, community services, etc.)</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Physician characteristics (e.g. willingness to try “something new”)</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Practice efficiency benefits</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning curve</td>
<td>+</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Reluctance to change</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Established practice patterns / existing knowledge of services</td>
<td>++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td><strong>Intervention Level Factors</strong></td>
<td></td>
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<tr>
<td><strong>Facilitators</strong></td>
<td></td>
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<tr>
<td>SCOPE Project characteristics (simple, responsive, adaptive, personal)</td>
<td>+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Initial technical difficulties with PRO</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Volume of information about available services</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td><strong>System Level Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Facilitators</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved utilization of resources</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>‘Relational’ motivations (e.g. patient benefits, collegiality with medical peers, collaboration, etc.)</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>‘Practical’ motivations (e.g. access to information about the system, access to patient information, etc.)</td>
<td>+</td>
<td>+</td>
<td>+++</td>
</tr>
</tbody>
</table>

4.4 Evolution and Future of SCOPE

4.4.1 Ongoing Use of SCOPE

With regards to their ongoing engagement with SCOPE, all PCPs remarked that they would either continue to use SCOPE for appropriate patient cases or would increase their use going forward as they had become more aware of when and how to use SCOPE. Also by way of learning, one PCP foresaw his use of the SCOPE Navigation Hub as continuing to increase for a time and then decreasing. He felt that he would continue to learn about services through SCOPE for some time but then would likely not need to engage with SCOPE as much because he would interact directly with the services and specialists that had previously been unknown to him. Interestingly, one PCP noted that in addition to using SCOPE
for patients’ current issues, he had started to think of incorporating the potential use of SCOPE in the development of longer term care plans for patients. All physicians noted their desire for SCOPE to continue, with a couple of PCPs noting that they could not imagine practicing without SCOPE.

“...it’s convenient for me, it’s much better care for the patients, much faster results. I feel much safer. As I said from the beginning, I don’t feel so isolated. I just hope that it will continue, the same services. Please don’t discontinue it. What would I do then? I would retire! I would quit! No, I definitely hope that I will have access to the same services. Please don’t take it away from me. Ministry of Health, please don’t take it away, otherwise I am quitting. When you get used to something... definitely my practice [has] gained so much. I am providing better quality health care, definitely.” (KI005)

4.4.2 Vision for SCOPE

Reflecting upon their vision for SCOPE in the future, all PCPs voiced a desire for SCOPE to continue, reiterated the impact the project has had on their patients and practices, and noted the potential impact of SCOPE on the system going forward. PCPs felt that without SCOPE they would be “back at square one”, that it would be a “shame if it disappeared”, and that a stoppage of SCOPE would be “painful” for involved PCPs. That said, PCPs had concerns about the sustainability and scalability of SCOPE. Concerns included less timely access to services due to a potential increased volume of participating PCPs, increased complexity as the project staff and services grow, and the potential negative effects of reduced support beyond the MOHLTC funded term of the project.

Beyond the direct benefits it provided, the importance of SCOPE’s continuance to building trusting relationships, increasing linkages and fostering collaboration between providers within the health care system on a broader scale was apparent in one PCP’s comment. His observations may be particularly important to SCOPE and other QI initiatives interested in reshaping the interaction and integration of care between different aspects of the health care system (e.g. PCPs, specialists, hospitals, etc.).

“One concern that I would have – for myself a little bit and mostly for the group of doctors and also for the doctors morale – would be that this project suddenly gets drops now because the study is over and six months’ from now the <organization> moves on to new priorities and this is not deemed to be of priority and all of this, you know, changing the way that you practice and all this stuff, just gets dropped. That would be a real shame. So when the promise is – or not the promise, but when people have been encouraged to change the way that they work with the hope that this would be an ongoing thing and then it is dropped suddenly – that is detrimental. Particularly in this particular setting because I think that it was very useful for solo practitioners
of the demographic in this neighbourhood to have all of this assistance with their practice.” (KI019)

PCPs envisioned SCOPE as more than a pilot project and had given thought to the model’s spread and potential impact on primary care. PCPs were attuned to the fact that despite their positive experiences, SCOPE would also need to be evaluated in order to further its sustainability and scalability. One commented that SCOPE “will continue to grow and grow better. I am sure that will spread all over the province or the country, if it is sustainable moneywise.” (KI015). SCOPE was viewed as more than a mechanism through which they could access additional services and as the beginning of a transformation in primary care practice. Summarizing his vision for the future, one PCP noted that he hoped that the SCOPE model “would be sustained as an integral part of health care delivery in primary care” (KI006). Remarking on the collaborative care and coordinated system approach of SCOPE, another PCP noted that she believed that the project “will prove that this is how we have to practice medicine” (KI005).

4.4.3 Differences Between Adopter Groups

PCPs in all adopter groups noted that they foresaw themselves increasing their use of the SCOPE services. This may reflect the fact that at the time that the interviews were conducted, all participating PCPs were still learning how to best utilize SCOPE and working towards fully integrating the services into their regular practice operations. However, some differences regarding PCPs’ views of their future use of SCOPE were seen. Early adopters were more inclined to view SCOPE as an integral part of their practice and to have more intense worry about the consequences should SCOPE be discontinued. Early adopters also appeared to be more forward thinking about the use of SCOPE and had started to incorporate SCOPE in the development of longer term care plans for patients, in addition to using SCOPE for clinical scenarios at the time of presentation.

All adopter groups saw the promise of the SCOPE model as one that could bring transformative change to the primary care setting. However, some differences regarding SCOPE’s future state can be discerned between groups. Mid adopters seemed to have spent less time thinking about the vision of SCOPE, as some PCPs in this group indicated that they “have not given it any thought”. Early and later
adopters appeared to have spent more time thinking about the future of SCOPE. In comparison to the other adopter groups, early adopters articulated more positive visions for the future of SCOPE and later adopters articulated concerns regarding the sustainability and scalability of the model.

**4.5 Chapter Summary**

Several factors influencing PCPs’ engagement in SCOPE were identified. Patient, provider and system factors influenced PCPs’ initial decision to participate and their ongoing engagement. Engagement factors that were influential include: congruence between the project’s aims and PCPs’ primary day to day challenges; ability of PCPs to perceive the project as a feasible way to positively impact patient care, obtain provider benefits and increase inter-provider connections, and reduce system pressures; and involvement of medical peers to convey information about the project. PCPs described a sense of isolation or disconnection in the community and a desire to be linked with acute care and community resources. They also felt a level of professional responsibility to be a part of a broader system change which encouraged them to participate. While initially there were concerns about the time commitment and additional administrative burden associated with participation in the project, these concerns largely did not materialize.

The original approach, to further understand and unpack differences in PCPs’ initial participation and ongoing engagement in SCOPE, was based on and included analysis of groups of PCPs who adopted the services at varying rates and to different extents. Although difficult to discern major trends, due to the relatively small number of participants in the ‘later adopter’ and ‘early adopter’ groups and unique characteristics of each PCP, some differences between adopter groups were noted. The ability of SCOPE to facilitate the provision of improved patient care was mentioned less directly by later adopters as a factor that influenced their engagement. Later adopters emphasized having established practice patterns, initially perceiving potential barriers to participation (e.g. time, administrative burden), and experiencing a learning curve associated with SCOPE more so than other adopter groups. These findings provide insight into potential reasons for their limited engagement with the project. Interestingly, factors which can be interpreted as more ‘practical’ in nature (e.g. access to information, resource
utilization gains, etc.) were more common in later adopters and those that can be thought of as more ‘relational’ (e.g. collegiality with other PCPs, decreased sense of isolation, etc.) were noted as strong influencing factors for early and mid adopters. With regards to the future of SCOPE, early adopters had the most well developed and positive thoughts and ideas to share. While not sharing later adopters’ concerns about sustainability, mid adopters appeared to have spent less time thinking about the future of SCOPE despite regarding the project positively.

Analysis also revealed that there were broader contextual factors at play in the primary care setting in Ontario at the time of this study that may have influenced PCPs’ engagement in the SCOPE project in addition to, or possibly more than, their identities as early, mid or later adopters. This is not overly surprising in some respects, as PCPs’ ‘identities’ as certain types of adopters were designated by the project team based on only one measure – their use of SCOPE services over approximately the first 1.5 years of the project. An investigation based on this element alone was able to uncover relatively straightforward engagement factors that influenced PCPs’ engagement in SCOPE and some differences between adopter groups. However, it was believed that keeping the analysis at this level may not be able to unveil as much about the engagement process of PCPs in care coordination QI initiatives like SCOPE as an investigation which also included a deeper dive into the some of the higher level contextual factors. These broader contextual themes repeatedly surfaced in the PCP interviews and were at times spoken about with notable intensity and emotion. Furthermore, these insights may hold great value for better understanding the nature of PCPs’ engagement in QI initiatives during a transformative time in primary care. For these reasons, they are explored in more detail in the following chapter.
CHAPTER 5: RESULTS II

The findings outlined in the previous chapter shed light on a host of factors that influenced PCPs’ initial adoption and ongoing use of SCOPE services and demonstrated that some differences between adopter groups could be discerned. However, analysis of PCPs’ accounts of primary care practice, both pre-SCOPE and with SCOPE in place, suggested that an expanded and more nuanced approach to understanding engagement— one that sought to understand PCPs’ behaviour within the changing context and intricate system pressures at play in primary care in Ontario might provide additional insights. Thus, this chapter presents a descriptive, as well as interpretive, analysis of the higher level contextual factors that affected PCPs’ engagement with the SCOPE project. Such contextual factors are noted to be important to consider in several implementation of innovation frameworks in the literature (Greenhalgh et al., 2004; Durlak & DuPre, 2008; Damschroder et al., 2009; Carlfjord et al., 2010). Findings related to the following contextual factors are discussed in this chapter: relations between PCPs and hospital-based and specialty colleagues; PCPs’ sense of responsibility and feelings of isolation, disconnection, and burnout; the process of acknowledging the need for support and accepting receipt of such support and reassurance; and PCPs’ evolving perceptions of working collaboratively with other health care providers to coordinate care for patients. Discussion of these findings in relation to relevant literature is presented in the following chapter (Chapter 6). The potential implications of the findings for primary care and care coordination initiatives are also discussed in Chapter 6.

5.1 PCP – Specialist/Hospital Relations

5.1.1 Access to Information

Productive communication and efficient sharing of information between health professionals working within various health care domains (e.g. primary care, hospitals, specialty services, etc.) were noted by PCPs to be essential to care coordination between primary care and other care settings. Prior to SCOPE, these PCPs struggled to obtain information about the care that their patients were receiving outside of their practices and to remain abreast of information about services, clinics, and specialists.
available should their patients require care outside of PCPs’ scope of practice. The suboptimal state of communication between PCPs in the community and specialty and hospital-based practitioners substantially encouraged the participation of PCPs of all adopter groups in the SCOPE project. PCPs described experiencing significant frustration accessing information about their patients’ ED visits and hospital admissions. Several PCPs described the process to access such information, including the completion of required medical record release forms, as time-consuming, frustrating and often times inconsistent with regards to the amount of information that would end up being procured.

“A patient that had gone to the hospital and had tests, been through the emerg, had seen a specialist, had surgery and had been discharged – they would come to the doctor and they would say ‘I have been to the emergency, I have seen the specialist, I have had these tests, and I had an MRI…’ and you would have nothing available. Nothing at all. And so the way that we would access that information is that we would get the patient to sign a release of information, fax it to medical records, and then wait, I don’t know, weeks? Several weeks some times to get those reports. And it was a very frustrating process. Sometimes you never got it. Sometimes you forgot about it because they didn’t reply. Sometimes the patient comes back and you still don’t have the results so you have to send out another request….Now, with access to PRO, they say ‘I had an MRI, I had a test, I had a…’ and if it [was performed at] one of the hospitals affiliated with PRO, I just log on and I can see all of those results. It has taken [away] dozens of hours of work and aggravation and lost results – it is very, very, very useful.” (KI019)

In addition to strained communication with hospitals, PCPs also seemed to encounter challenges communicating and collaborating with specialists that their patients see. PCPs may not receive consult notes in a timely manner, or at all, and are often not included on the requisitions for medical procedures ordered by specialists, which prevents PCPs from receiving the test results directly. These information sharing challenges sometimes occur when patients’ PCP information is outdated in the specialists’ records or as a result of specialists referring patients directly to other specialists without touching base with the PCPs. Such disconnects in the flow of information, means that PCPs’ knowledge of what tests have been conducted and the results of such tests is heavily dependent on the flow of information controlled by the specialists’ offices.

“When patients are often seen by specialists, I will get a very beautiful summary but I will never get the results of the tests. Sometimes I do, if the physician is nice enough to include my name on the requisition but often my patients will come to me and say ‘So, how is my test result?’ and I’ll go ‘What test?’; ‘Well, I saw the specialist 2 weeks ago and he ordered a test.’, and I’ll go ‘Well why are you coming to me? Go back to the specialist. I don’t have the report.’” (KI007)
As captured in the comments above, the timeliness of the information transfer is very important and instances of delayed or absent responses and forgotten requests regarding information can have patient care and system resource implications, and frustrate PCPs. PCPs described their frustration with, and desire to prevent, delayed or inadequate information transfer that can result in lack of appropriate follow up, reordering of tests, duplication of medical procedures, extra visits for patients and additional unnecessary costs to the health care system.

It appeared that dissatisfaction with this process often centered around a sense of isolation and limited control to ensure receipt of information that PCPs believed should be provided to them without hassle due to their prominent role in the care of the patients in question. PCPs’ accounts suggested that at times there is an imbalance between their primary responsibility for patient care and their access to pertinent patient information. PCPs articulated feeling “at the whim of the [medical records] clerk” regarding what information they were provided with. One PCP was particularly exasperated at the fact that ED physicians often direct patients to follow up with their family physicians but do not consistently include such family physicians on requisitions, provide useful discharge summaries, or connect with the family physicians regarding these patients.

“It is one of the bigger frustrations in family practice – getting access to information that is there but not being communicated to us as the primary care provider. A patient will go to the hospital and get an x-ray and be told by the emergency room physician to follow up their family doctor but the emergency room physician does not copy the family doctor on the report. There are cases where that has happened and I have called the hospital and I am told to call medical records and they tell me to get the patient to sign a consent form and I have to fax it back. And that is a lot of steps to get access to information that I should be getting access to right away... on level one.” (KI017)

The lack of adequate communication between parties can also lead to PCPs feeling disconnected from patients’ care. PCPs noted that the lack of communication regarding the status of referrals to community services can cut PCPs out of the loop regarding the current state of patients’ care and access to resources. This can occur when service providers communicate directly with patients about appointments and fail to provide status updates to the PCP who originally initiated patients’ referrals to such services.
In addition to generating increased workload and feelings of isolation, trying to access information regarding patients’ health care interactions, at times, negatively impacts patient care and the patient experience – either indirectly or directly. The process of obtaining information about their patients from hospitals indirectly affects patient care by detracting from time that PCPs and their office staff can put towards seeing patients and coordinating care. Also, if information from recent acute care and/or specialist health interactions is not available at the time of follow up with patients’ PCPs, this can result in delayed interpretation of results and arrangement of follow up procedures as well as extra trips to the PCPs’ offices for patients and caregivers, if applicable.

“And the other thing is that has made life a lot easier is the availability of PRO – the patient results online – it’s really helped because there are often times when a patient comes in and says ‘I got admitted’ or ‘I had this test done at the hospital, do you have the results?’... and now we just say ‘look in PRO!’ and we usually get the result and then I can discuss it with them right there on the spot rather than say ‘come back in two weeks and we will discuss it then’.” (KI002)

The value and usefulness of PCPs, in the eyes of their patients, can be put at risk by the unavailability of information. Patients may perceive less value in their interactions with PCPs when providers cannot deliver on patients’ expectations for the visits because they do not have all the pertinent information at hand and do not appear to be up to date with patients’ recent health events.

“...often I wouldn’t know if a patient was seen in emerg or even admitted...often before it would be up to the patient telling me if they were admitted or if they were seen in emerg. I would have to rely on the little pink slip that they would bring back from the emergency department and often they didn’t bring it back so I would be in the dark as to what exactly happened.” (KI021)

It is important that PCPs are able to obtain necessary information and discuss results and next steps resulting from acute care health interactions with their patients in a timely fashion. Understandably, patients may feel more comfortable asking questions about test results and implications for their health to their family physicians who often have been treating them for years rather than the hospital physician or specialist who may have administered or arranged for the test, but has likely had limited interaction with the patient prior to that encounter. This may be especially true in instances where patients’ PCPs have an understanding of patients’ cultural values, family and social dynamics and are able to communicate in their preferred language.
It appeared that SCOPE had started to improve information transfer between primary care and other care settings. Primarily through PRO, the flow of patients’ medical information greatly improved, resulting in reduced feelings of frustration and isolation for PCPs and a sense that patient care upon discharge from the ED or hospital had improved.

“One of the propositions in SCOPE that was very attractive was the ability to access information. So part of this disconnect is not knowing what is going on with your patients if you don’t have information. So to be able to get access to PRO improves that connection and certainly improves patient care.” (KI018)

With regards to better informing PCPs of their patients’ acute care encounters, SCOPE implemented an alert system that lets PCPs know when their patients have been seen in one of the EDs affiliated with the project. This helps prevent PCPs from feeling sidelined from their patients care, allows them to be informed regarding care in almost a ‘real time’ manner, and provides PCPs the opportunity to review results/notes prior to seeing the patients in their offices for follow up.

Encouragingly, it appeared that relations between the primary care and hospital settings are improving, even outside of the SCOPE model. A couple of PCPs commented that they had noticed other non-SCOPE related improvements in the flow of information over the past 2-3 years regarding the communication of mammogram results from a prominent health organization in the area and general improvement (not only SCOPE-related) in the distribution of ED and hospital discharge summaries.

5.1.2 Feelings of Respect / PCPs Professional Identities

The process of engaging with hospitals and specialists to obtain information prior to SCOPE, appears to have threatened PCPs’ professional identities. In relation to these interactions, PCPs described feeling isolated, unimportant, and as though they were treated like “second class” medical professionals. Reflecting on her experience accessing patient information from the hospitals both before and after the introduction of SCOPE, one PCP touched upon the impact that dysfunctional communication can have on feelings of professional worth and how SCOPE, as a result of improving communication between the parties, has ameliorated this.

“Because whenever my patients would be in the hospital, even admitted to the floor and I wanted to know some information...I would call the hospital and it would just be a brickwall! You know, you have to send consent, and even when I would send consent no one would give
me any information and of course I felt frustrated and isolated. It’s my patient and the family wants to know [the information]...And I wouldn’t get any response, it was like a brickwall. Now when we need to know something, we just go online and get the patient’s results and that is it. And I can tell the family members ‘don’t worry’, I can reassure them... that’s why I felt isolated. There was no cooperation. We were treated like second class – That’s how I felt. I think that if you get to the nursing station – wow, you are like no one when you are a family physician and you ask for some feedback. And now, I see the difference.” (KI005)

Furthermore, PCPs noted that sometimes relations between PCPs and specialists were strained and resulted in an undesired loss of professional responsibility for patients. PCPs noted feeling that upon referral to a specialist they would “lose the patient” and “be in the dark as to what exactly happened” to the patient post-referral. One PCP described a situation in which she was not kept informed about a patient’s medication regime and the struggles, which sometimes present themselves as a result of shared management of patient care, that arose. She felt as though the specialist involved in the patient’s care was asserting ownership over the medications prescribed, referring to them as ‘his’ medications, and the management of the patient in general. This rather divisive approach was in contrast to the collaborative approach that she believed to be the preferred way to share patients’ care with specialists and other health care professionals. Further, this divisive type of approach may weaken patients’ perceived value of their PCPs, by undermining PCPs’ ability to be involved in and need to be informed about the more specialized aspects of patients’ care. Interestingly, she noted that she had the “courage” to ask for her patient’s information in this scenario.

“They sent a letter. Because I [made] a comment – I had the courage to tell him that and he is sending [the information] now. But patients will come in here and tell me ‘Oh the doctor said that they are his medications’. They are not his medications. We are both participating in and taking care of [the patient] – I didn’t say that to the patient obviously but I felt that way. They are not his medications. What he is doing, I understand, okay he can prescribe [medications], that is okay, I don’t care but I need to know what he is giving or not [giving]. [We are] both providing care to the same individual. [The patient] is not mine or his.” (KI012)

SCOPE provided a model for shared patient care that was well received by participating PCPs. In contrast to their previous feelings of exclusion from patient care and that specialists assume all responsibility, PCPs have felt informed and a part of a collaborative team, rather than one in which the members function as “antagonists to one another”.
“But when we go to SCOPE we don’t lose the patient. It’s still our patient and they send letters and... [Patients] go there to receive help, which is good, but they still continue to be my patient in a way. With the [specialists] it is kind of losing a little part of that care... I don’t know what medication that they are taking, and so on. That’s why I like [SCOPE] in a way. I continue to know – because the worst for a family doctor is [having to ask patients] ‘But why? What is your other medication?’ You know, we need to know that.” (KI012)

Encouragingly, PCPs have enjoyed the increased connection to colleagues in hospitals and specialty care that they have obtained through participation in SCOPE. PCPs described feelings of nostalgia related to working in a more collaborative manner with health professionals in hospital settings. An experienced PCP noted that engagement with SCOPE positively reminded him of the type of working relationships he used to have with medical colleagues outside of primary care.

“I did my post-graduate training at a time when I could call a consultant and get feedback or provide feedback without going through a formal referral route. And being able to use the general internal medicine service at <hospital> - and I am a <hospital> grad and a <hospital> doc still – so I found that very helpful to be able to – that brought me back to the old days. It was somewhat nostalgic, where I could call and speak to the internist and refer someone and then get feedback.” (KI018)

Changes regarding the interactions and relationships between PCPs and their specialty and hospital-based colleagues appear to have occurred over time. One PCP remarked upon the fact that “30, 40 years ago family physicians would have hospital privileges and take care of their patients in the hospital and we would know all the stuff that happens.” (KI007) He elaborated on this statement by explaining while he used to have hospital privileges he stopped performing hospital-based duties and no longer has “that liaison with other physicians” because of the increasingly demanding workload of his solo-based practice. Another PCP reflected on how he believes the interface and interactions between family medicine and hospitals has changed over time and resulted in the “marginalization” of PCPs.

KI018: So, I have been practicing in primary care for 25 years. Initially when I graduated it was my sense that community medicine family practitioners had more of a role to play in hospitals. More of an active role, whether it be in supporting your patients during hospital admission, whether they were better integrated in terms of inpatient beds, better integration with academic family medicine units. What I have found over the last few years is that the community family docs have almost been marginalized out of the hospital environment... which I think creates issues in terms of patient access to care, physicians’ knowing about what services are available, and also even just academic fulfillment or intellectual development.

I: So, what, in your opinion, do you think has contributed to that marginalization?
KI018: I think that it just has to do with the institutions becoming bigger and focusing more on priority programs which are often not primary care based programs. They are usually programs that bring media attention. So, you know, whether it is transplantation, sometimes women’s health initiatives. Some of these programs often don’t involve primary care givers - cancer management for instance. These programs usually leave primary care givers out of the equation.

Interestingly, another PCP found the shift of responsibility for complex patient management away from the hospitals and into primary care has been positive for relations between PCPs and those providing specialty care. He noted that in the past, complex patients with co-morbidities were treated for each one of their ailments separately by different specialists. Patients would end up with a cadre of physicians looking after distinct aspects of their care and would often spend longer periods of time receiving inpatient care. More recently, due to system cost and access pressures, he noted that the management of these patients is returning to PCPs in the community and “now [patients] bounce back to you a week later and they have got 5 new medications and a bunch of results that need to be followed up on”. In his opinion, this shift has had positive implications for the professional relationship between PCPs and other medical colleagues and the appreciation for family practice.

“So, that relationship with the consultants has changed very much. And even, I think, philosophically, psychologically, there has been a bit of a shift in that when I was training in family medicine and just after there was much less respect by specialists as to what family doctors did and now you get the sense that there is much more, better mutual respect, I would hope to say – that they realize that the doctors are doing stuff, right?” (KI019)

These reflections shed light on the nuanced relations and changing relationships that exist between medical professionals in the various health care domains and the importance of professional identity and respect to medical practitioners.

Previous relations with specialty and acute care providers appeared to be a strong contextual factor for all PCP adopter groups regarding their engagement in SCOPE. This finding may be aligned with the fact that the desire to establish connections with other aspects of the health care system was the most frequently cited reason for PCPs’ initial participation in the project. Interestingly, it appeared that strained communication and sentiments of disconnection had been experienced to varying degrees by the PCPs, as some described that they had been able to establish networks of specialist colleagues who they trust and can call for advice or refer patients to. Also, some later adopter PCPs seemed more
interested in improving relations with specialists and hospitals from primarily an informational standpoint as opposed to others who were also interested in the collegial, supportive aspects. The most divergent viewpoint came from a later adopter who had been on staff at a local hospital a number of years ago and experienced tension and broken promises associated with the amalgamation of the hospital services with another health organization in the area. While other PCPs, in addition to him, also seemed more interested in gaining access to information than fostering more collaborative relationships and coordinated models of care, he vocalized the strongest desire to remain independent from the hospitals.

5.2 Desire of PCPs to provide care to patients within their practices

It is understandable for PCPs to feel responsible for and want to provide care to their patients, as these are central tenets associated with being a physician. For some, this desire appeared to originate from their desire to remain in control in order to ensure that their patients receive appropriate care. As noted in the section above, PCPs mentioned often worrying about “losing” patients to specialists and being “in the dark” about the tests conducted, medications dispensed, and care provided. In addition to potentially long waits for patients and other reasons, PCPs were also hesitant at times to direct their patients to the ED because of the fragmented care patients may receive and limited feedback PCPs may obtain post-visit. For these reasons, access to the GIM on-call and AACU through SCOPE was attractive to PCPs.

“If I send someone down to the emergency room and the emergency room is not aware of it, sometimes they might say that it was inappropriate, they might send people away without doing what I want them to do or what they need to do. And then it comes back to me. If I have a liaison with the internist, and I can call them up and tell them exactly what I need or what I expect, they can tell me whether they are prepared to do it. I also get a follow up note, I get to know what is happening and when my patients do go to emerg...I get that beautiful SCOPE form which replaces the illegible crap that I get from the emergency department and I actually know what is going on with my patients. So, the hassle is in not knowing what is going to happen to my patients.” (KI007)

While all PCPs spoke about the value that SCOPE could bring to patient care and primary care practice, a number of mid and later adopters appeared to resist engaging with SCOPE because they
preferred to manage care for their patients without support from others and prided themselves on their ability to do so. Several physicians noted that they “like to take care of [their] own issues”, “don’t’ refer patients at the drop of a hat”, and “try to handle most of my patients in house”. This resistance to contact others for support did not appear to be limited to the SCOPE project as it extended to the networks of specialty colleagues that PCPs had built for themselves. In this regard, one PCP noted:

“I have some colleagues that I would occasionally, occasionally call upon but... I always felt like I was kind of overextending them and that they were really doing me a favour, so I would only occasionally call them if it was something that I thought was urgent and very relevant.” (KI021)

There also seemed to be an evaluative notion attached to the ability, or inability, of PCPs to care for patients independently without needing to access support from outside their practices. This evaluative, albeit self-imposed, notion appeared to be connected with how accessing services from other care settings and “having to go through SCOPE” may reflect on PCPs’ professional role identity. This was especially so for later adopters and mid adopters with lower rates of SCOPE use. In discussing his aversion to his patients frequenting the ED, one PCP noted “the hassle is in trying to explain to my patients ‘Yeah, just go to emerg. I’m useless. I don’t know what I am doing.’” (KI007) Many PCPs were aware of the amount of their SCOPE use in relation to other participating PCPs and had reviewed the reports provided by the project team. In connection to his SCOPE use, a PCP who had limited engagement with the project appeared to be pleased that he had not needed to contact SCOPE frequently and interpreted this as an indication that he and his practice staff were managing their complex medical patients well. He noted that “I have found that I didn’t use [SCOPE] as much as I thought I had” and that these results were “basically an evaluation and reaffirmation that we are doing okay” (KI009). Building upon the evaluative notion that some PCPs associated with SCOPE use, one mid adopter suggested that moderate SCOPE use may indicate that physicians are “are using [SCOPE] appropriately and are organized” and that high users of SCOPE may be seen as “relying on it because they are so disorganized” and “want to farm everything off because they don’t like to handle things in their own office” (KI007). Conversely, early adopters appeared to be motivated by the reports and proud of the fact that they were “making good use of all of the services”.
Not all PCPs would likely be comfortable participating in a QI initiative like SCOPE due to these suggested evaluative notions. In speaking about others’ potential participation, one PCP noted that some physicians would not be comfortable with “being monitored about where your patients are going, whether too many of them are going [to ED], whether you are servicing them” and “being criticized” about their practice operations (KI019). Although he understood that the SCOPE use reports were intended to be helpful, he believed that PCPs that are “already nervous about their appropriate use of services” may find the reports (and engaging in the project in general) “a little intimidating”. Another PCP indicated that he had heard “mumblings” from non-SCOPE affiliated colleagues that the project and its monitoring of PCPs’ patients’ ED use could be negatively interpreted as a “veiled way of the Ministry trying to really control primary care” (KI009).

Weaving together engagement in SCOPE with a non-SCOPE example of a hypothetical interaction between a pharmaceutical representative and a physician regarding a new medication, one PCP further demonstrated how the perception of “not knowing”, requiring support or needing to change their way of working in order to manage their patients’ care may harm PCPs’ professional pride and identity as physicians.

“Any time a physician gets involved in something like this they may be afraid that they are going to be scrutinized by the community. That they are going to be ‘outed’, if you know what I mean. There are doctors that won’t see drug reps. It’s not because they are too busy or because they don’t have time. They don’t want to see a drug rep and be told that they are behind the times or that they are ignorant to what is going on in medicine now...They are not interested in the services. Not because they can’t use them, but because they are afraid.” (KI007)

Comments made by PCPs who engaged with SCOPE to a greater degree suggest that these physicians may hold a more constructive and educative, rather than evaluative, outlook towards shared care. One mid adopter indicated he would like to receive feedback after patients’ ED visits to learn how he could better manage these patients and episodes within his scope of practice and prevent subsequent similar acute care interactions. One of the highest users of SCOPE embodied the desire to provide the highest quality of care to her patients and clearly saw the ability of SCOPE to act as a support mechanism to allow her to continue to manage her complex patients.
“I think I am willing to cooperate with everybody and take advice from everybody. Whatever helps my patients – I don’t have any ego, come on – Just tell me what I am doing wrong, what I need to improve, and I will follow whatever is best for the patient. That’s my rule... Just to do everything [that is] best for them. Whoever gives me advice, I take it, whoever helps me, I take it – and SCOPE is helping me a lot.” (K1005)

The desire to handle their own cases influenced the way that PCPs engaged with the SCOPE project. In some cases, the previously established inclination to handle patient cases on their own because of worries regarding the level of care patients will receive elsewhere, being kept adequately informed, and the negative perception of their professional abilities should they not be able to handle cases independently, appeared to challenge PCPs’ engagement in the more integrated, collaborative model of care that SCOPE presented. From the perspective of the adopter groups, mid and later adopters expressed the desire to manage patients on their own more so than early adopters who did not hesitate to engage with SCOPE and receive support caring for their complex patients. At the root of the variation of this contextual factor appeared to be self-judgment related to needing and accepting support and a desire to maintain control over patients’ care.

5.3 PCP Isolation/Disconnection

Numerous social and system factors have caused PCPs to feel isolated and disconnected – the lack of information transfer to primary care from other care settings, the way they are treated when they request information about their patients, and the “marginalization” of family doctors from the hospital environment were mentioned by interviewed PCPs. It also appears that large patient volumes and the demanding style of practice that is common to solo-based and small group offices, contribute to the isolation that some PCPs feel from the rest of the community. In many cases, PCPs’ dedication to serving their patients and focus on managing their practices administratively can leave them little time to engage in additional activities in the medical community. As a result of their limited interactions with the hospitals and other physicians, it appeared that collegial relationships between physicians working in different care settings have been diminished and PCPs’ feelings of isolation have increased.

“Doctors just practice really independently here. You know 30, 40 years ago family physicians would have hospital privileges and take care of their patients in the hospital and we would know
all the stuff that happens. That doesn’t happen – I am in my office here, inundated with 70 patients a day and I see my patients here and that is it. I stopped – I don’t have hospital privileges anymore… I don’t have that liaison with other physicians – it’s just me. I am here alone.” (KI007)

SCOPE was able to address this sense of disconnection by way of providing: i) access to information, both about patients and available resources, ii) a team of individuals to whom questions could be directed and advice sought, and iii) a forum for PCPs to liaise with medical colleagues and build their professional networks.

“The fact that we have a team that is knowledgeable about community resources that is at the touch of my fingertips, that I can just call and find out what is available for this particular patient. That’s very attractive to me, rather than relying on Google. I am a solo physician so I don’t have other physicians that have been practicing for 30 years in my office so just walking down the hall and asking somebody is not available to me. So SCOPE kind of fills in that gap that I have in my practice...” (KI017)

The importance of SCOPE to address isolation and disconnection, particularly for the project’s target population of physicians working relatively independently in solo or small group practices, was noted by one PCP.

“In the neighbourhood of the area that SCOPE was focused – and it is not a coincidence –there is a high concentration of older physicians in solo practices. So, no disrespect to any of that group – there are a number of excellent physicians – but one who practices alone is more and more isolated, and less connected with the rapidly changing times. So the more that you can create a group type environment, I believe that it allows people to be in better touch with their colleagues, in better touch with the services that are available...The couple of SCOPE meetings that we had with the group really brought the doctors together, interested them in what was up and coming, and even physically brought them into the hospital in order to see [the environment]. And I think that there are intangible benefits to that...informing what are very isolated, independent people and trying to give them some opportunity to feel more of a part of a group. Because it is increasingly difficult to work alone, I think, as times changes and things become more complicated.” (KI019)

When asked to elaborate on the “rapidly changing” and “more complicated” times that he referred to, the interviewee went on explain that he believes that health care professionals are operating in an environment where “the pace of change is exponentially going up and the ability for a person, by themselves, to be on top of all the changes is difficult”. He noted that practice factors, in addition to system level changes, enhance the importance of reducing isolation and increasing collaborative care models. Practice factors noted include the increased complexity of patients that are now being managed
in primary care, as opposed to by specialists and in hospitals, as well as time pressures that many PCPs feel due to managing large practices, which often include a number of older patients.

Mid adopters and some early adopters commented about both the sense of isolation and disconnection that they felt as solo or small group practice PCPs and the impact that SCOPE had on their practices in this regard. A decreased sense of isolation in later adopters may be interpreted in a relatively straightforward manner – because they perceived less disconnection from the health care system, they recognized less need for support from SCOPE and therefore engaged less. Also, later adopters may have experienced feelings of isolation and disconnection to a lesser degree and perceived less need for support than other adopter groups because they possessed an enhanced desire to manage their own patients. While there were fewer comments about isolation from early adopters than mid adopters, one early adopter was one of the most vocal about the isolation that she felt and believed to be prevalent in primary care practice. Also notable is that several interviewees referenced that while their practices are located in metropolitan city, which may be assumed to be associated with access to an increased number of services, supports, and professional organizations, they still felt isolated in their practices. According to one PCP, “there is a sort of sense of isolation out here as a primary care physician. Albeit it is <city> but there is still a sense of isolation.” (KI009)

5.4 Feelings of Responsibility and PCP Experience/Burnout

PCPs feel a tremendous amount of responsibility – responsibility to their patients, responsibility to use resources appropriately, and at times, overwhelming levels of responsibility. Some PCPs felt that they themselves should bear the majority, if not the entire burden of responsibility for their patients’ care. Several PCPs spoke about the learning curve associated with sharing patients’ care with and asking for support from other health professionals, as this was not something that came naturally to them initially. Some of this challenge came from the fact that they had been operating the same way for years and it was difficult to change their practice. Additionally challenging was the fact that PCPs had “lost patients” when they had engaged specialists regarding patient care in the past, or had been dissatisfied
with the care provided to their patients from other providers, as noted earlier. Also, for some PCPs there was a learning curve associated with better understanding the roles of other health professionals (e.g. nurses, allied health practitioners, etc.) that they were not accustomed to collaborating with and the benefits that such professionals could provide to patients. PCPs appeared to need some time to become more comfortable with devolving aspects of their patients’ care to such health professionals.

PCPs’ sense of responsibility is also seen in their dedication to respect their patients’ trust and the relationships that they have built with patients over time. Several PCPs noted that in some cases the pressure to respect established relationships with patients acted as a barrier to engaging with SCOPE. In these cases patients want to “see a familiar face, hear a familiar voice”. At times, tension between PCPs’ sense of responsibility to patients’ preferences, and a recognition that they could engage more fully and effectively with SCOPE existed.

“I think we, that this practice, could probably do a better job in terms of downloading some of the stuff that perhaps out of a sense of loyalty to our patients or habit that we continue to take on. I mean, I think that is something that we need to explore internally in this clinic amongst ourselves. And I have to reconcile that against the relationship and the trust that our patients have with us. There is sort of an expectation that we do it. And that is okay.” (KI009)

PCPs also appeared to hold a fair deal of social responsibility regarding the usage of health care resources. This inclination towards appropriate resource utilization appeared to influence both their behaviour prior to SCOPE as well as their engagement in the project. One PCP noted that she interprets a trip to the ED by a patient of hers “as a failure of mine”. Another described the pressure he felt to avoid sending patients to the ED because of the resource implications.

“There are times when I know that someone needs some urgent care and while some other doctors are very happy to say ‘Go to emerg’, you know, I would always shudder every time I had to do that – the resources and the cost and I actually think about all of those things. And it would always bother me when I had to send someone down to the hospital.” (KI007)

SCOPE was able to relieve some of the burden of social responsibility from PCPs by providing them with a less costly alternative to the ED for their patients. However, this sense of responsibility to use resources appropriately may have also reduced PCPs’ engagement in another regard, as some PCPs
noted that they did not want to use SCOPE “as a dumping ground” and “didn’t want to spoil a good thing” by sending too many cases.

Given the high sense of responsibility expressed by PCPs, managing large practices at times contributed to significant feelings of overwork and burnout for these providers. One PCP described his office as “being inundated by 50 million people” and “flooded with patients”. PCPs also indicated that the volume of patients that they see daily can affect the type of care they provide and the amount of time they spend with patients. Furthermore, several PCPs noted that they struggle to provide or coordinate services for emotional and psychosocial support for patients as these activities are often time consuming. This finding is particularly noteworthy with regards to SCOPE’s target patient population because these types of services can be especially important for patients with complex medical problems. Fortunately, SCOPE appears to have been able to concurrently relieve some of the pressures related to large practices and the increased level of care required by complex patients. PCPs appreciated the ability of SCOPE to relieve the “burden” and “tension” associated with high workload and patient complexity demands.

The intense work demands and time pressures associated with providing care to a large volume of patients, who often have complicated health concerns, can also upset PCPs’ professional development and engagement in QI projects like SCOPE. PCPs who are very busy treating patients in their offices every day may be prevented from or experience feelings of reluctance towards participating in additional professional development activities, continuing education, or research pursuits. Interviewees noted that due to workload and time pressures they were at times unable to attend meetings, virtual rounds and other events organized through SCOPE. Speaking more broadly than his experience in the SCOPE project, one PCP noted that there is an “inherent inertia” towards change in primary care due to practice demands and “an exhausted kind of environment where there is no time” (KI009).
The tremendous and multi-faceted sense of responsibility that many PCPs feel can impact their personal lives as well. Several PCPs described how worry about patients and the actions that PCPs took (or did not take) with regards to patients’ care can spill over into their personal time. At times, such worries disrupted PCPs’ enjoyment of family time or leisure activities. In the passage below, a PCP contrasted a scenario where he engaged with SCOPE on the day of the interview and how it made him feel compared with how it would have been prior to SCOPE. Also evident in this account, is the tension that can exist when PCPs try to provide care that best meets clinical, provider, and patient viewpoints concurrently. This highlights again the nuanced nature of PCPs’ sense of responsibility and decision making.

“...Today, I feel good about seeing this patient, I do not have to worry. If I sent him home, I would be worrying about him on the weekend, still thinking about it. If I sent him to the emergency room, I would feel good but then again I would say ‘Well, it might not be really necessary and he is just waiting in the emergency room for the next 6 hours doing nothing.’ So I think that from that standpoint I feel good...otherwise I would feel very helpless and I would worry about him on the weekend. But now everything is clear cut and has been taking care of, and I don’t have to worry about him. So this is something that you cannot really measure. But it makes my life more enjoyable in the sense that I feel more comfortable with the decision that I made. That’s the one thing.” (KI014)

With the feelings of responsibility and isolation that appear to be prevalent in the current primary care setting, it is not surprising that PCPs also spoke about the existence of “burnout” in their work environment. One interviewee attributed burnout to the many demands that physicians practicing in primary care face:

“One of the things that is important in primary care, in speaking to a lot my colleagues in the community, is a sense of burnout. A sense of – the latest lingo right now is compassion fatigue, which really stems from doing too much.” (KI009)

SCOPE appeared to positively impact provider experience by way of reducing the sometimes overwhelming and often nuanced sense of responsibility. Through their participation, several PCPs noted that they realized that they were “trying to do too much”, experienced lower levels of worry and anxiety, and were provided with care options aligned with their patient care and social system values. In contrasting his experience before and after the introduction of SCOPE, one PCP highlighted a change in his wellbeing as an individual as well as his productivity as a physician.
“I feel happier seeing patients. Just what I was saying with the unmeasurable benefits to the physicians. I wouldn’t mind seeing an extra patient today because things are easier. Instead of saying ‘Oh, I have [had] enough already. I need to go home.’” (KI014)

While most PCPs spoke about the ability of SCOPE to decrease the burden of responsibility, one later adopter was worried about incurring an increased level of medical-legal responsibility, through interacting with SCOPE. This PCP worried that through PRO he would gain access to lab results and notes that he previously did not have access to and would be responsible for retrospectively reviewing and becoming familiar with all of these patient records. As the PCP was a later adopter, this fear of acquiring increased responsibility and potential risk may have negatively affected his engagement with SCOPE.

Early and mid adopters described feelings of responsibility most frequently and with the greatest intensity. Early adopters primarily described the feelings and consequences of bearing “too much” responsibility. Their heightened feelings of responsibility can be plausibly linked to their enhanced engagement and use of SCOPE as a mitigation strategy in this regard. While sharing similar sentiments as early adopters regarding the significant responsibility that PCPs bear with regards to providing care to their patients, mid adopters also spoke about their feelings of responsibility to respect their patients’ wishes and to use resources appropriately. These additional aspects of the responsibility that mid adopters expressed feeling may be linked to their reduced engagement with SCOPE compared to early adopters. Later adopters did not appear to be overcome by responsibility. Possibly aligned with their lower engagement status, they commented primarily on not wanting to waste resources and or take on additional responsibility through SCOPE. Along these lines, comments regarding “compassion fatigue” and physician burnout were absent in the later adopter group of PCPs. It appears that variation in the sense of PCPs’ responsibility and resultant personal effects can be linked in some regards to their level of engagement with SCOPE.

5.5 Acknowledgement of Need for Support

In general, it can be interpreted that all PCPs recognized that they could benefit from some support in caring for their complex patients. The desire for support appeared to be at the root of most of their decisions to sign up. However, it appeared that the acknowledgment of their need for support
was not a straightforward process for all PCPs. In some cases PCPs welcomed the support provided by SCOPE from its initial introduction. This was especially true for scenarios in which PCPs felt that they lacked the skills or time to appropriately manage patients’ needs (e.g. cognitive behavioural therapy, social work) or were actively looking for supports (e.g. facilitation of home based care, intensive health education). Early adopters spoke most readily about the recognition of their needs and the desire for help with patient management and relief from overbearing levels of responsibility. One early adopter experienced no difficulty acknowledging her need for support and the benefits she believed she could reap from participating in the project.

“I was the one who really embraced the program, right from the beginning… I am so busy so I need help from everybody. I realized what a great help SCOPE is for me. Right away, I started sending patients to the acute care [clinic], because I cannot manage every complicated case here and I try to avoid [using the] emergency [department]. I embraced SCOPE from day 1.” (KI005)

However, in other instances it took a little more time for PCPs to acknowledge that they, their practices, and most importantly, their patients could benefit from the SCOPE services. One PCP noted that discussions with the SCOPE Primary Care Lead helped her to recognize that PCPs did not need to bear the entire burden of responsibility for complex medical patients’ care or work in such an independent manner, and that they could derive supportive benefits from engaging with SCOPE. In reference to the SCOPE Lead she noted: “...she was encouraging us to take [away] that burden of being superwoman or superman. [Encouraging us] that we needed help in a way...” (KI012) Another PCP reflected on his revelation regarding PCPs’ needs for support: “I think it has made me realize that we [were] trying to do too much before and there are ways to share the load to make things easier for the patients and the doctor.” (KI010) These comments underscore the notion that “not having to do it all” and efficiently and respectfully collaborating with health professionals to provide more coordinated patient care were somewhat novel concepts to some participating PCPs. These physicians, mostly from solo-based offices, appeared to have grown accustomed to operating independently and bearing substantial, often all, clinical responsibility for even their most complex patients. Even after they agreed to participate in SCOPE, many PCPs appeared to need additional encouragement to initiate change.
regarding their deep seated identities as independent practitioners, desire to “do it all”, and reservations towards needing and requesting support. Interestingly, both of the PCPs quoted above had relatively high engagement with SCOPE. As suggested in their comments, this may be due to their ability to embrace the concept to a fuller extent as time went on and as they engaged with SCOPE. One later adopter described that he “reserved [SCOPE] for real dilemmas”. However, even he, as a later adopter and the individual who used SCOPE services the least of all PCPs in the study, appeared to change his view on needing or wanting support: “...because at the beginning I didn’t want to bother anybody, I didn’t think that I needed help... but then later you find out that they can help you with almost anything. And so then [I] started using it more.” (KI002)

These findings shed light on some PCPs’ feelings of responsibility for patient care and perceptions regarding needing and requesting ‘outside’ support to care for their patients. The findings suggest that in some cases PCPs’ professional identity as independent practitioners hindered them from requesting and receiving support. Further, insight is provided into the importance of PCPs’ personal recognition of their needs and the reshaping of perceptions associated with receiving support as key steps in their engagement process.

5.6 Provision of Support / Reassurance

Enabling access to patients’ medical information through PRO was the most practical and straightforward provision of support through SCOPE. Interestingly, in addition to practical support, the Navigation Hub and GIM on-call also provided PCPs with support and reassurance that was more relational and emotional in nature. When asked, PCPs indicated that they derived benefits from engaging with SCOPE when they were “stuck with a clinical situation”, “when it’s too complicated”, or “for people that I don’t know what to do with”. PCPs appreciated the ability to readily connect with medical colleagues for discussion in these types of situations and derived reassurance and confidence regarding their decision making from such conversations. In describing SCOPE’s impact on the
management of difficult cases and decisions regarding whether or not to send patients to the ED in situations that are not clear cut, one PCP noted:

“There have been a couple of times where I have spoken to the internist on call and they have felt that the patient is just too complicated. So, I just needed to hear that from them to kind of reaffirm to myself, ‘Yes, I agree, in fact. This probably needs to go to the emerg.’” (KI009)

Ready access to the GIM on-call also offered PCPs a mechanism to obtain advice and feedback and allowed them to feel more comfortable managing complex patients within their scope of practice. The provision of such support was also important as it had the potential to mitigate PCPs’ feelings of stress and burnout associated with managing a great deal of responsibility.

“Because of the internist on call we have some backup. So, I think that we are more willing to deal with more complicated cases. Just in case we don’t know how to do – if we have questions we can always call and ask, right? This back up is very important. [Without it] you would not be willing to do the more complex cases. You would refer them right away.” (KI015)

By accessing the internist on-call or the Navigation Hub, PCPs were able to discuss their difficult cases, receive reassurance regarding their proposed approach, talk through concerns and obtain advice from SCOPE team members that had become trusted clinical colleagues. The importance of providing reassurance and support to this group of PCPs is evident in their descriptions of feeling “safer”, “more comfortable” and “more confident to deal with complex cases”. PCPs also noted feeling less “anxiety” regarding their decisions, reassured of “what you have done or not done”, and provided with “peace of mind”. The essence of the importance of SCOPE in this regard is captured in an early adopter’s reflective comment:

“I cannot live without SCOPE anymore. I cannot practice without them anymore...I feel much safer. Because not everything is on only my shoulders – the responsibility. Now I get the help from the specialists, from SCOPE, from everybody. As I said from the beginning, I don’t feel so isolated. You have some difficult patients, and then you finish [for the day] and you don’t really know whether you should [have] sent them to emergency, you want to manage them on your own, but then it is so much responsibility that you come home and all night you are thinking ‘should I have sent him to emergency’. And with this, with the help of SCOPE, I [have] had more reassurance.” (KI005)

The sense of isolation and disconnection that PCPs spoke about when describing their initial decision to participate in the SCOPE study surfaced again in discussion about the support and reassurance that SCOPE provided. This suggests that both the sense of isolation in primary care and the
feelings of reassurance provided by the project were important influencing factors regarding PCPs’
engagement in SCOPE. The comment below demonstrates that SCOPE services were able to reduce
PCPs’ anxiety and stress associated with managing complex patients and making clinical decisions
independently in the community.

“...when you are stuck with a clinical situation and you don’t know who to refer to, or who to
call...the navigation hub and the internist on call – those types of things really make a big
difference. At least you had someone to turn to. Because there are sometimes when you are
sitting in your office and thinking ‘I don’t know what to do’. (KI002)

Of the adopter groups, early and mid adopters described having obtained support and
reassurance most frequently and with the greatest intensity. Later adopters commented on receiving
support much less and when they did, comments were directed more towards the practical gains of
being able to more easily obtain patients’ medical information and continue to manage patients’ care
relatively independently. These findings are aligned with observations that later adopters seemed to
have more ‘practical’ motivations for initial participation and ongoing engagement, as opposed to more
‘relational’ motivations that were seen in early and mid adopters, as presented in the previous chapter.
However, one later adopter’s experience in particular suggests that the recognition of the benefits of
support and acceptance of such support can increase over time. This suggests that later adopters may
not be altogether resistant to the supports that SCOPE, and working in an integrated fashion, can
provide – they may just take longer to modify their mindsets and engage in new, more supportive,
models of working.

5.7 Perceptions of Team-Based Care and Networks

Team-based care and the shared management of patients through networks of health
professionals are at the core of coordinated care models. However, primary care is a setting in which
shared care and practice networks have been established and adopted to varying degrees. Prior to
SCOPE, interviewees indicated that they would share information with and bounce ideas off their
medical peers primarily at “meetings and during conferences”. Also, a couple of the PCPs who serve the
Chinese community mentioned that they belong to a journal club that meets regularly to discuss content
and trends relevant to PCPs in the community. However, not all PCPs had access to formal networks or groups like this. SCOPE opened the door for PCPs to participate in a shared primary-specialty care model for patients with complex medical conditions. Positively, the majority of participating physicians increased their PCP peer networks through SCOPE and enjoyed the collaborative nature of the program. PCPs who had worked in the same community for many years but may not have known or had interaction with each other prior to SCOPE, were connected and started reaching out to one another for advice and to share information.

“...actually that is a side benefit of SCOPE. That the family doctors who...we work in the same building but don’t necessarily see each other. Now we are going to these SCOPE meetings and we get to see each other, get to know each other, we talk about things. So it has improved the sense of community amongst the primary care physicians, for sure.” (KI002)

As opposed to the negative feelings that some PCPs had about interacting with hospitals and specialists based on past experiences, PCPs found the team-oriented approach of SCOPE helpful and reassuring. Reflecting on his experience, one PCP noted: “It really felt like part of a team. I think that would be the way to describe it. When folks ended up [involved with SCOPE], I felt in the loop in terms of communication and management.” (KI009) Another PCP noted the ability of SCOPE to improve PCP-specialty care relations and decrease isolation in primary care through the provision of a virtual team.

“So, that is very, very different than you sitting in your office, very much pressed for time and trying to just deal with problems quick. I think that the more people that you have around you – either literally around you or sort of virtually around you because they are easily accessible, the more likely you can make better decisions and stay on top of the rapid changing services that are available and that sort of thing.” (KI019)

Interestingly though, it appeared that collaboration between PCPs and health professionals in other aspects of the health care system does not always come easily. One interviewee indicated that “some people are comfortable working with hospitals and other specialists – it depends on the person.” Another PCP suggested that sometimes QI project staff, including non-medical staff, have more common ground with and are better suited to collaborate with physicians in hospitals and other care settings on system improvements than PCPs.

“It’s difficult for us, you know, working in the community – you know we can just recommend the services, but the implementation, I think it is – I think you guys are more versed with the doctors
working in the hospitals, so I think that once its suggested, it is more a project for the people involved in this, rather than us outside – rather than the primary care doctors.” (KI003)

These sentiments are aligned with findings in previous sections of this chapter which depict the tensions that are sometimes present in interprofessional communication and collaboration. Further, they echo the PCPs’ feelings of being ‘second class’ physicians which were raised when some PCPs described their past interactions with hospitals.

Many SCOPE PCPs had extensively considered the future of collaborative models of health care delivery in the primary care setting. While all interviewees were solo or small group practice physicians, most were supportive of the future state of primary care as one that embraced more shared care and interprofessional connections. One PCP, who saw the value in moving towards interprofessional care models, acknowledged that PCPs and other health care workers will need to adopt changes in how they think and talk about individuals who may work outside of their profession of practice but within the shared health space.

“I think that the whole of health care [has] to be respectful of each other instead of – the worst thing that you can tell them is ‘Why are you going to the pharmacy? The pharmacist doesn’t know anything,’ kind of scenario. Instead of seeing the strength and saying ‘They can definitely explain some of the side effects of the medication better than I can or that I have time for.’ So, I think just that whole atmosphere – to make it more as a team. Everyone has to learn to be a part of a team – a team member rather than stepping on each other.’ (KI014)

This physician went on to note that a perceptual shift regarding the roles and relationships of physicians and other health professionals is also needed within patients. From his experience he believed that patients often prefer physicians, rather than other clinicians, to handle their health care because of pre-established views of the superiority of medicine compared to other health disciplines. He suggested that encouraging patients to reconsider these preconceived notions may further open the door to a true embracement of integrated, interprofessional and team oriented ways of delivering care to patients.

“For example, a lot of the physician assistants are very, very competent. There are a lot of nurses and practitioners that are very competent but still, at this point in time, there is some resistance in seeing them. So by the time that you want to bring [patients] into a bigger arena of health – community sort of health-wise – there is still a little bit of resistance to it...So I think from the general promotion standpoint if the culture would be in such a way that there is a shift towards accepting more of the ancillary help and all of the other health [practitioners] – and
look at health as really a team. It’s not just doctor – doctor is not the supreme God. I think that would make things – life much easier.” (KI014)

PCPs were intimately aware of the current demands of patient care in primary care, acknowledged the associated challenges and appeared to be developing more positive outlooks toward shared patient care models. Through positive experiences, it appeared that the SCOPE model had started to address contextual influencing factors relevant to PCPs in Ontario. This is important as such contextual factors may have previously served as barriers to PCPs regarding adopting more collaborative ways of practicing and prevented enhanced care coordination for patients. The potential high level impact of increasing connections between medical professionals is captured in one PCP’s comment:

“...I think a big part of the future of health care has to be...cooperation between all of the health professionals...better cooperation, better integration. I think that will save a lot of money as far as lessening of the duplication of services... Allow the patient to have a more organized management of care, a more efficient management of care and a better management of care overall because of the fact that many people can be working together to achieve a goal.” (KI016)

Although one later adopter commented on his positive outlook with regards to the future of health care as involving teams, early and mid adopters seemed to have more developed thoughts and visions about team-based care as the direction for the future. Comments from these two groups included thoughtful considerations of what would need to be taken into account for widespread transformative change to take place in primary care and potential barriers to achieving a more coordinated team-based model of care as the PCP practice norm. PCPs in the early and mid adopter groups were also more vocal about their personal interests in participating in a more formalized team-based model going forward. Two early adopters noted that due to their participation with SCOPE they were at the time of the interviews considering signing up to become a part of a FHT. In addition to the numerous patient care and practice benefits associated with SCOPE, through participation, PCPs appeared to develop an increased appreciation for and interest in engaging in team-based care models. Furthermore, many identified an attitudinal shift toward shared care models and increased engagement in such models, as key to developing adequate resources to both address current challenges and brace for the changing landscape of primary care and aging population.
5.8 Chapter Summary

Through PCPs’ accounts of their engagement with the SCOPE project, seven themes relating to contextual influencing factors in the primary care setting in Ontario emerged. Key findings related to those seven themes include:

i. Challenges and strained relations exist between PCPs and their medical colleagues in specialty and hospital care.

ii. For multiple reasons PCPs often possess a strong desire to manage care for their own patients.

iii. Feelings of isolation and disconnection appear to be prevalent in primary care, with PCPs often feeling cut off from their medical colleagues and hospital-based activities, and out of the loop regarding patients’ care.

iv. PCPs feel a strong, and oftentimes overwhelming, sense of responsibility in regards to caring for their patients.

v. PCPs’ recognition and acknowledgement that they are in need of and can benefit from supportive services and more collaborative care models is not a straightforward process.

vi. SCOPE has been able to provide support and reassurance to primarily solo-based PCPs serving large practices with substantial volumes of complex patients.

vii. Through participation in SCOPE, PCPs have been able to try practicing in a more collaborative manner and develop a more positive outlook toward team-based care coordination models.

There also appeared to be inherent tensions present in the key themes. PCPs seemed to want to remain responsible and independently care for their patients, but also wanted access to additional services and the reassurance provided to them by consulting others on difficult cases. They appeared to want to overcome isolation and disconnection from other aspects of the health care system but have strained relationships with medical colleagues in specialty and hospital care. Furthermore, it seemed that PCPs want support, and can recognize the benefits of such support for patient care and PCPs’ own quality of life, but are worried about how the receipt of support reflects on their professional abilities and identities. The key themes, their inter-relationships and associated key findings as well as implications for QI work focused on developing collaborative care models in the primary care setting are discussed in the next chapter.
CHAPTER 6: DISCUSSION

Drawing on the key informant interviews, the previous two chapters described key engagement and contextual factors that influenced PCPs’ participation in the SCOPE project. This chapter considers how findings regarding the influencing factors relate to previous research on the adoption of innovations, physician engagement, and participation of PCPs in QI initiatives. With regards to the engagement factors, a summary of differences noted between PCPs who engaged in SCOPE early on, those who were slower to participate and those who remained minimally engaged in the project, is also presented. This chapter also proposes contextual factors to consider when engaging solo and small group based PCPs in QI initiatives focused on improving linkages between primary, hospital, and community health care domains for the management of complex medical patients. Finally, practice implications of the study findings, proposed future research avenues and study limitations are discussed.

6.1 Main Findings

6.1.1 Engagement Factors

Decision to Participate

PCPs’ decision to participate in SCOPE was most strongly influenced by the potential of the project to improve patient care, by way of equipping PCPs with additional resources and support. This finding is consistent with the broader literature, which shows that the primary concern for many physicians is the quality of care that they personally deliver to patients (Reinertsen et al., 2007; Lee, 2010). SCOPE’s design was informed by pre-study interviews with a group of similar physicians who identified prominent challenges in current primary care practice and the type of supports that would be most useful to improve care coordination for complex medical patients. Not surprisingly, the intervention was perceived to be aligned with and potentially able to address challenges that PCPs felt were amongst the most difficult and prevalent in their work setting. Identified challenges included the ability to access appropriate and comprehensive services from various aspects of the health care system.
in a timely manner and to obtain semi-urgent care for patients outside of the ED. The congruence between the aims of the SCOPE study and the needs of PCPs was an important factor influencing both PCPs’ initial decision to participate as well as their ongoing engagement. This finding is aligned with literature in which PCPs’ ability to relate to the goals of QI initiatives has been consistently noted to facilitate their engagement and leadership in QI (Stevenson et al., 2001; Reinertsen et al., 2007; Macaulay, 2007; Becher & Chassin, 2002; Siriwardena, 2009; Dickinson & Ham, 2008).

When discussing their initial decision to participate in SCOPE, many PCPs noted their conversations with the SCOPE Primary Care Lead. This was not surprising as the SCOPE Primary Care Lead was familiar to many of the PCPs and viewed as a trusted medical colleague. This finding is aligned with the emphasis that Rogers’ framework (1995; 2003) places on the surrounding social system and nature of communication channels and what he termed ‘intermediaries’ (e.g. individuals who act as champions or opinion leaders) as well as literature which supports the importance of peer influence to medical professionals (Stokes et al., 2014; Lee, 2010; Dickinson & Ham, 2008; Siriwardena, 2009; Wolfson et al., 2009). Several physicians commented that ‘hallway’ or other informal discussions with PCPs that they knew from the area and embracing a ‘let’s do this together’ attitude with colleagues both influenced and confirmed their initial inclination to participate in the study. This approach to participation is similar to Dickinson and Ham’s (2008) description of engagement as a “social process”, in which physicians draw upon shared experiences and identities to influence each other. Further to this point, one PCP suggested that future QI initiatives in primary care should leverage professional groups and established ‘journal clubs’ during recruitment, as he believed that physicians would be more likely to participate if they were approached in settings where they could discuss the opportunity with colleagues and encourage each other. These findings underscore the importance of including an initiative lead that project participants respect and relate to when implementing QI projects as well as hosting engagement events at which PCP participants can interact, encourage, and learn from each other.
From a system standpoint, PCPs liked SCOPE’s ability to bring about resource utilization efficiencies and organizational changes to primary care practice. Some PCPs appeared to possess a sense of professional responsibility to play a role in the evaluation and refinement of models, which may be implemented on a broader scale and bring about change in primary care practice. This finding can be likened to one of the main aspects of the IHI framework for engaging physicians in a quality agenda, which emphasizes physicians’ recognition of system operations as a part of their professional responsibility as a facilitator to engagement in QI (Reinertsen et al., 2007). SCOPE PCPs’ interest in and commitment to being a part of system change is encouraging, as previous studies have indicated that Ontario family physicians have not felt included in health care reform and held skeptical and distrustful views regarding possible future system change (Cohen et al., 2001).

**Ongoing Engagement and Impact of Engagement**

For many patients, PCPs represent continuity of care by way of an established, and in some cases long standing, trusted doctor-patient relationship (Wood, 1993). Thus, patients are often more comfortable asking questions and more likely to provide a comprehensive account of their concerns to their PCPs than other health care providers because the PCPs are already aware of other related factors (e.g. family dynamics, other current or past health issues, etc.) (Wood, 1993). Goldman and colleagues (2010) found that family physicians believed that the transition to collaborative care models (e.g. FHTs) required patient education and reassurance regarding the changes for their patients. Consistent with these findings, PCPs in this study believed, and at times worried, that the transition to being seen by multiple health care providers might present a significant adjustment for their patients who are used to primarily seeing their PCPs for their health concerns. PCPs noted this concern regarding patient preference as an initial barrier to engaging with SCOPE. However, PCPs’ patients with high ED use (for whom SCOPE was hypothesized to provide the most benefit) would have interacted with health care providers other than their PCPs during ED visits and possibly a new health care provider upon each visit. These patients may actually decrease the number of different health care providers they interact with, and increase their continuity of care, through the SCOPE model. Furthermore, the literature shows that
many patients are agreeable to and recognize the value of team-based care models (Goldman et al., 2010; Gocan et al., 2014; Litaker et al., 2003). If patient satisfaction is assessed in the future as a part of ongoing SCOPE project activities, these results could be shared with enrolled PCPs to inform them of patients’ experiences with SCOPE. If feasible, such patient experience data may also be useful during the startup of expansion projects (e.g. SCOPE II) or similar projects to mitigate patient preference concerns and facilitate physician engagement from the beginning.

In many cases, when individuals have chronic complex medical issues, the impact can be shared amongst caregivers, family members, and friends in addition to the patient. Thus, the management of complex medical conditions can pose significant responsibility and stress on patients’ loved ones (Arno et al., 1999; Pinto et al., 2007; Chung et al., 2010; Sinha, 2013). In 2012, nearly half of Canadians aged 15 years or older provided care to family members or friends and the role of caregivers is expected to continue to increase as the population ages and more people are living with chronic conditions (Sinha, 2013). Also, caregiver support reduces demand on health and social care systems (Sinha, 2013). Not surprisingly, PCPs viewed SCOPE’s ability to provide support to caregivers as an important factor facilitating their engagement. This finding is interesting as relief of caregiver burden was not one of the initial objectives of the SCOPE project but was interpreted by PCPs as a significant positive result of the collaborative care model. Investigation of caregivers’ and family members’ experiences with SCOPE may be a beneficial avenue to pursue in order to understand more fully the impact that the SCOPE model can have on the management of complex medical conditions.

The SCOPE project incorporates a number of the innovation characteristics that Rogers identifies as facilitating adoption (Table 11). This is a valuable finding as PCPs’ descriptions of some physicians’ reluctance to change reinforced the importance of an innovation’s ability to provide a relative advantage over current behaviour, visible benefits (observability), and benefits that meet PCPs’ needs (compatibility) in a way that does not impose a lot of extra effort (complexity). PCPs appreciated that the SCOPE services were applicable to their current challenges, easy to engage with through the use of
one phone number and responsive staff, and adaptive to their feedback and unique needs. SCOPE also provided efficient and supportive benefits to PCPs and their patients. Many PCPs commented on how their initial concerns regarding the potential amount of time and effort required for participation were not realized and heavily outweighed by the benefits they reaped through participation. The mitigation of these potential barriers to engagement may reflect use of pre-study interviews with a comparable group of PCPs in the intervention’s design, and that the SCOPE project team included health care providers who intimately understood the practice dynamics, pressures, and environments of PCPs in the area. This finding is of great importance as removing potential barriers to use (e.g. significant amount of time, resources required), and making the target QI activity “easy to do”, have been reported as key to facilitating meaningful and sustained engagement (Reinertsen, 2007; Siriwardena, 2009; Goetz Goldberg et al., 2013; Wolfson et al., 2009).
Table 11: Characteristics of innovations and their implication for PCPs' engagement in SCOPE

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<th>Characteristics</th>
<th>SCOPE implications</th>
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<td><strong>Relative Advantage</strong>&lt;br&gt;The degree to which the innovation is seen as being better than the innovation it replaces.</td>
<td>- PCPs noted observed benefits to patient care, practice efficiency, patient and provider experience, and system resource utilization&lt;br&gt;- Care for patients through SCOPE was believed to be more efficient, comprehensive and well-coordinated as well as less costly&lt;br&gt;- PCPs wanted SCOPE to continue, had started to see it as a key component of the practice and the desired way to practice going forward</td>
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<td><strong>Compatibility</strong>&lt;br&gt;The degree to which the innovation fits with the existing values, past experiences, and needs of potential adopters.</td>
<td>- SCOPE’s initial design was informed by interviews with a comparable group of physicians&lt;br&gt;- SCOPE PCPs articulated that the services were very much in line with and well suited to mitigate their current challenges&lt;br&gt;- PCPs felt as though their challenges were understood and validated&lt;br&gt;- Compared to their past experiences, SCOPE appears to have provided PCPs with more positive interactions with other aspects of the health care system (i.e. specialists, hospitals, CCAC resources) and experiences with shared care models</td>
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<td><strong>Observability</strong>&lt;br&gt;The degree to which the innovation provides visible results to the adopters.</td>
<td>- PCPs noted observed benefits to patient care, practice efficiency, patient and provider experience, and system resource utilization&lt;br&gt;- The few instances in which SCOPE did not meet PCPs’ needs, were mostly outside the scope of the program, rather than a shortcoming of the available services to show positive results</td>
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<td><strong>Complexity</strong>&lt;br&gt;The degree of difficulty associated with the intervention.</td>
<td>- For the most part, PCPs found SCOPE was easy to use, seamless&lt;br&gt;- PCPs valued the coordination of services through one central phone number&lt;br&gt;- Minor areas of improvement were noted regarding the PRO system&lt;br&gt;- A few PCPs worried about the future of SCOPE should it get more complex</td>
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<td><strong>Trialability</strong>&lt;br&gt;The degree to which the adopters can experiment with or test the innovation before full implementation.</td>
<td>- SCOPE was quite easy to ‘try’&lt;br&gt;- SCOPE was introduced as a voluntary research study&lt;br&gt;- Long term contracts or significant changes to/investments in PCPs’ practices were not required</td>
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<td><strong>Reinvention</strong>&lt;br&gt;The degree to which the innovation can be adapted, refined, or modified to suit the adopters needs.</td>
<td>- PCPs were able to engage with SCOPE in the way that they felt suited their needs best (e.g. PCPs used the project components to varying degrees based on their perceived needs)&lt;br&gt;- PCPs perceived SCOPE to be adaptive to their feedback and expressed needs</td>
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### 6.1.2 Summary of Differences Between Adopter Groups

Appendix F provides a summary of the main engagement and contextual factors discussed by key informants, indicating the nature of the role that such factors played in the engagement process of the three adopter groups.

Regarding the initial decision to participate in the SCOPE study, some differences between groups regarding influencing factors were noted. While all PCPs are committed to providing high quality care to their patients, the ability to provide improved patient care and better navigate the system was mentioned less often and less directly by later adopters as a factor that influenced their initial decision to participate. Similarly, with regards to the usefulness of SCOPE to improve patient care as a facilitator
to ongoing engagement, PCPs across adopter groups experienced benefits from engaging with SCOPE; however, the impact of SCOPE on PCPs’ ability to provide improved patient care was not articulated as strongly by the later adopter group. Later adopters’ limited discussion regarding these facilitating factors may simply be due to the fact that they had less experience with SCOPE. Alternatively, they may have perceived fewer areas of potential improvement regarding the care that they provide to patients and their interactions with the health care system from the beginning. These perceptions regarding fewer potential benefits may have influenced them to engage less with SCOPE. And, they may have engaged less because they had accepted the current challenges in providing care to complex patients in the current system as the ‘status quo’ and as elements outside their scope of influence, even with the supportive services offered through SCOPE. Thus, they may not have felt the need for support or believed in the potential impact of SCOPE as much as PCPs in the early and mid adopter groups. Early adopters noted the ability to provide improved patient care as an influencing factor more frequently and with more emphasis than later adopters but less so than mid adopters. This may be because there were multiple types of early adopters – those that were attracted to the project primarily based on their perceived high needs for support and those whose enhanced level of engagement was more associated with their innate innovativeness, aligned with Rogers’ (1995; 2003) traditional adopter type descriptions.

Early and mid adopters frequently described intense feelings of responsibility, and, in some cases, commented on “compassion fatigue” and burnout. Such intense feelings of responsibility might have encouraged PCPs from these adopter groups to engage in SCOPE to a greater degree than later adopters. Mid adopters’ additional expressed desires to respect patient wishes and use resources appropriately may be linked to their reduced engagement with SCOPE compared to early adopters.

Rogers’ description of adopter categories suggests that individuals who take up new ideas sooner than others have a higher tolerance for uncertainty, act with less caution and spend less time thinking about potential concerns (Rogers 1995; 2003). Aligned with these characteristics, early adopter
PCPs in this study appeared to be the least inclined, and later adopter PCPs the most inclined, to perceive potential barriers to participation (e.g. time commitment, administrative burden). While all adopters noted that they had positive experiences with SCOPE, provider experiences and SCOPE’s interventional characteristics seemed to be most important to the mid adopter group. Early adopters appeared to be less discriminating regarding their experiences and SCOPE’s interventional aspects. This may be because they are more likely to engage regardless of these elements due to a higher perceived level of need compared to others or merely due to their desire to try new things and their inherent innovativeness as early adopters. For later adopters, these factors may have been reported as less important because later adopters had less SCOPE experiences to use as a reference for these types of statements. From an ongoing engagement standpoint, positive provider experience may be of most importance to the mid adopter group because these PCPs may not be inherently inclined or disinclined to participate (as they are in the middle of Rogers’ continuum of types of adopters) and may not perceive themselves as having particularly high or low needs with regards to support. Being in this ‘middle zone’ regarding inherent inclination towards innovativeness and perceived need for SCOPE support may make their actual interaction with SCOPE an especially important factor influencing their ongoing engagement.

Furthermore, with regards to the adoption stages of initial and ongoing engagement with SCOPE, factors that can be interpreted as more ‘practical’ in nature (e.g. access to information, resource utilization gains, etc.) were more common in later adopters and those that can be thought of as more ‘relational’ (e.g. collegiality with other PCPs, decreased sense of isolation, etc.) were noted as strong influencing factors for early and mid adopters. ‘Relational’ factors, by their very nature, may be felt more deeply than practical factors by PCPs and serve as stronger, psychosocial motivations to effect behaviour change in order to satisfy these interpersonal needs or desires (e.g. collaboration, reduced isolation, etc.). Following this line of thought, it would be reasonable to believe that PCPs who possessed relational needs pre-SCOPE, or identified the presence of such needs through participation with SCOPE,
would also engage to a greater degree (i.e. be early or mid adopters). More ‘practical’ factors plausibly may not be tied as strongly to PCPs’ psychosocial needs and therefore may have had less of an influence on PCPs’ engagement.

Together these findings suggest that PCPs perceive the type and extent of their needs, as well as their performance, differently. Davis et al. (2006) point toward the limited evidence regarding whether physicians can accurately self-assess their performance and learning needs. This is important to keep in mind as ineffective self-assessment may influence physicians’ motivation to change behaviour or, in the context of SCOPE, their participation in a new model of care delivery. Davis and colleagues (2006) also point out that the inaccuracy in self-assessment may be worse for the “least competent” physicians who “overestimate” their competence. While not inferring that any of the SCOPE PCPs were at all “incompetent”, this notion may be relevant to the later adopter group, as they perceived their needs and the potential benefit from SCOPE to a notably lesser extent than their early and mid adopter counterparts and yet continued to have a large proportion of their patients frequently visiting the ED. The SCOPE project team provided PCPs with data regarding their use of SCOPE services, their patients’ ED visit information, and anecdotal “success” stories through project newsletters. However, perhaps additional mechanisms (e.g. more directed feedback, case scenario learning, etc.) would be useful to encourage further self-reflection of their needs and the potential benefits that they may gain through engagement with SCOPE. Although PCPs’ willingness to participate in self-reflection activities may vary, interviewed PCPs expressed interest in case scenario learning and receiving feedback from physicians who had seen their patients in the ED regarding how such visits could have been avoided. The PCPs that overtly expressed interest in these activities were mid adopters. This is encouraging since it suggests that physicians other than those that are perceived to be inherently inclined to participate in new activities (i.e. early adopters) may be willing to engage in increased self-reflection and learning. It is unclear whether those PCPs who are more reluctant to engage in behaviour change (i.e. later adopters) would be open to participating in such activities.
Early and mid adopters appear to have integrated SCOPE more fully into their practices and have more well developed thoughts regarding the future of the initiative than later adopters. As such, project staff may want to consider engaging PCPs from these groups in additional project evaluation activities and the planning of expansion (e.g. SCOPE II) or similar projects in the future. These PCPs seem to have already taken time to think about the future role of SCOPE, for both themselves and the primary care field in general, and therefore may have very valuable, ‘grassroots’ perceptions to share. Early and mid adopters’ increased consideration of the future of SCOPE may be linked to their higher level of perceived needs, increased sense of isolation, and stronger desire for more collaborative and integrated care through a model like SCOPE compared to PCPs in the later adopter group. However, a few mid adopters seem to have spent less time thinking about the vision of SCOPE, as some PCPs in this group indicated that they “have not given it any thought” and that they “don’t have the time” to contemplate the future of SCOPE. These PCPs in the mid adopter group may feel more consumed by other, perhaps clinical, responsibilities, and therefore have spent less time thinking about the future of SCOPE. These mid adopters may experience difficulty in finding the capacity to make the effort to change their regular practice patterns and engage with SCOPE, despite viewing SCOPE as positively as early adopters do. Or, it could be that, like later adopters, some mid adopters are primarily focused on the tangible benefits of SCOPE rather than the theoretical implications for the future.

Later adopters’ concerns regarding the sustainability and scalability of SCOPE may be aligned with their slower uptake of the services and the inherent caution and skepticism regarding change, which Rogers attributed to later adopters (Rogers 1995; 2003). These PCPs may have been more hesitant to spend time and energy changing their behaviour if they had reservations that SCOPE will continue. The fact that later adopters appeared to have more concerns about the longevity and future of SCOPE raises the question as to whether additional engagement activities post-project evaluation should be conducted and tailored towards this group. PCPs in the later adopter group may benefit from hearing about the impact that the project has had and plans for the future of SCOPE and related
projects, especially since the SCOPE services are anticipated to continue. Communication of such information may encourage later adopter PCPs to view SCOPE as less risky (with regards to sustainability) and engage to a fuller, potentially more fruitful, extent. While post-project evaluation engagement activities are not always feasible, with the planned continuance of the SCOPE services, this project provides the opportunity to try out this approach. If such an approach is undertaken, ongoing study of later adopters’ engagement may provide additional insights regarding the influence of a project’s perceived permanence and sustainability on engagement.

Findings regarding engagement factors which influenced PCPs’ initial and ongoing participation with the SCOPE project were noted and may be used to inform a model of adoption for solo and small group based PCPs’ engagement in QI initiatives focused on care coordination. The research questions for this project were initially focused on individuals’ behaviour regarding engagement. Designing and conducting the analysis by adopter group presupposed that there were differences between the PCPs, with regards to individual characteristics, influencing factors, and/or user experiences, which affected how early on in the project they used the SCOPE services. The significant role of individual level factors in implementation studies and behaviour change is well documented (Damschroder et al., 2009; Greenhalgh et al., 2004; Rogers, 1995, 2003; Gotham, 2004; Choudhry et al., 2005). However, some researchers have suggested that thinking about adoption as primarily contingent on individual people, groups or organizations oversimplifies what is often a complex change process (Nutley et al., 2002). Others have proposed that all general practitioners have the capacity to be ‘early adopters’, the process of adopting innovations in the primary care setting is primarily a social process, and therefore, more consideration should be paid to the context needed to facilitate adoption in general rather than individual characteristics (Stokes et al., 2014). While some differences between adopter groups in the present study were discerned, as Stokes et al. (2014) suggest, the more interesting and potentially impactful findings emerged through a deeper look at some of the higher level contextual factors that were at play.
6.2 Contextual Factors

Seven themes relating to contextual influencing factors emerged through PCPs’ accounts of their engagement with the SCOPE project (Chapter 5). These seven themes, and suggested inter-relationships between the themes, informed the development of a framework of contextual factors that impacted PCPs’ engagement in SCOPE (Figure 6). This framework serves as a more detailed look at the ‘social system variables’ or ‘environmental factors’ proposed by Rogers and others as important in the diffusion of innovations and adoption of new ways of working. Based on the interview data, the framework suggests that a number of factors contributed to the current, somewhat dysfunctional system, limiting the coordination of care for patients with complex medical problems: i) strained relations between PCPs and their colleagues in specialty and hospital care; ii) a strong desire and sense of responsibility held by PCPs to handle the majority of patient care independently within their practice; and iii) feelings of isolation, disconnection, and burnout. It appears that SCOPE was able to help PCPs acknowledge their need for support, reframe what it means to receive support, and become more accepting of such support. SCOPE was able to make headway in addressing such factors that were contributing to ineffective shared management of patient care and in encouraging PCPs’ inclination to develop and participate in collegial networks and team-based care. The factors included in the proposed framework are discussed in more detail in the following sections of this chapter.
6.2.1 PCP – Specialist / Hospital Relations

Effective communication and timely exchange of information between health professionals working within various health care domains is essential to shared patient management between primary care and other care settings. SCOPE PCPs noted challenges to effective communication and constructive relationships with their secondary care and hospital-based colleagues. The preeminent challenges expressed by PCPs were similar to those noted in other studies: a lack of timely information exchange about consultations, test results, and follow up care plans (Wood, 1993; Mehrotra et al., 2011; Gilbert et al., 1994; Pantilat et al., 2001; Lin, 2012); limited awareness regarding available services and effective system navigation (Wood, 1993; Lepnurm et al., 2007; OCFP, 2011); and negative interactions with health professionals which resulted in harm to inter-provider relationships and professional identity (Wood, 1993; Lepnurm et al., 2007; Manca et al., 2008).

Key to PCPs’ perceptions of being able to provide high quality care was timely access to patients’ medical information. However, accessing such information was also frequently noted as challenging and
a source of inter-provider friction. This is consistent with other research that indicates that such
communication amongst health care providers regarding shared patients’ information is a common
source of frustration (Wood, 1993; Mehrotra et al., 2011; Gilbert et al., 1994; Pantilat et al., 2001) but
key to providing effective, efficient and safe care (HSPRN, 2013; Foy et al., 2010; Kripalani et al., 2007;
Epstein, 1995). Wood’s (1993) work regarding family physicians’ relationships with cancer specialists
detailed a number of barriers to inter-provider communication, including “communication gaps”
between cancer centres and family physicians’ offices and intimidation by specialists. Similarly,
the present study highlighted that PCPs often feel “in the dark” about patients’ care, as though they are
treated as “second class” medical professionals, and sidelined by rather than included in patients’
treatment by other health care providers.

On a positive note, the benefits of the PRO system used in the SCOPE study were evident in
PCPs’ accounts and appeared to improve the timeliness of patient care, providers’ experience and ability
to effectively care for patients, and PCPs’ relationships with specialists and hospital-based physicians in
the area. Improved access to patient information prevented potentially negative interactions, which
may occur when PCPs request access to information, and frustration towards other health care
providers for not providing timely and complete information to facilitate PCPs’ role in patients’ care. As
a result, PCPs felt less disconnected from their patients’ care and perceived less of a threat to their
professional identity. Many benefits of information sharing through common e-health record systems,
including the ability to facilitate communication and clinical decision making, increase the efficiency of
consultations and follow up care, and support continuity care within and across organizations, have
been discussed in the literature (Mery & Wodchis, 2013; Foy et al., 2010; Kripalani et al., 2007; Mehrotra
et al., 2011; Pricewaterhouse Coopers, 2013). However, the present study suggests that in addition to
these practical gains, improving the exchange of patient information has the ability to ameliorate the
intricate and relational aspects of the primary care setting, such as tensions between PCPs and other
health providers and potentially distressing feelings of isolation and threatened professional identity.
The SCOPE project not only provided better access to information, it helped to reformulate the professional identify of primary care physicians who participated. ‘Professional identity’ has been defined as an individual’s professional self-concept based on attributes, beliefs, values, motives and experiences (Ibarra, 1999; Schein, 1978). Positive professional identity helps to ensure meaningful and successful careers (Arthur et al., 1999; Hall et al., 2002). The ability of the PRO system to reduce tensions between providers and lessen harm to PCPs’ role identity may be linked to what O’Malley et al. (2010) described as the ability of e-health records to foster a feeling among physicians that patient information is a shared asset when sharing care for patients, rather than information that one physician’s practice “owns”. These findings echo Gotlib Conn et al.’s (2012) sentiment that “optimizing interprofessional communication is important, yet complex and challenging”.

From the study findings and the literature, it can be seen that increased interoperability of shared e-health records between health care settings may further improve patient care as well as PCPs’ relations with specialists and hospitals simultaneously. However, at the current time the use of PRO is limited to a select number of hospitals in the area. Expansion of the system to include other hospitals, out-patient clinics and specialists’ offices was requested by several PCPs and represents an opportunity to further strengthen communication and relationships between health care providers. Furthermore, one can imagine the sizable potential gains, in terms of the benefits detailed in the literature and those suggested in this study, should a fully interactive and connected provincial common e-health record system be developed. However, despite these potential benefits, including improved relations between providers, a shared e-health record system should not be thought of as a catchall solution. Such systems may increase the anonymity of providers and actually detract from existing interpersonal relationships between physicians (O’Malley et al., 2010; Stoller, 2013; Ash, 2004; Dykstra, 2002; Niazkhani et al., 2009). In light of these findings, it may be useful to think of a common e-health record as a tool to facilitate communication of patient health information in addition to, rather than in replacement of, traditional interpersonal, collegial relationships.
6.2.2 Desire of PCPs to provide care to patients within their practices

From PCPs’ accounts, it is evident that they want to manage care for their own patients and maintain their position at the centre of patients’ care even when patients are being treated concurrently by other health professionals. This inclination may influence and challenge their engagement in collaborative care models. Part of this desire emanates from previous disappointing and disheartening experiences with sharing care which likely enhanced their desire to remain in control and “in the loop” about patients’ health status and care. It also is linked to PCPs’ interpretation of both their professional responsibility and their concerns should they not be able to handle cases independently.

Lee (2010) notes that professional pride and performance data may serve as levers to motivate behavior change in physicians. Lee elaborates on the need to appeal to physicians’ altruism and desire to help patients and share credible and useful data as ways to enhance physician engagement in QI processes. In the case of SCOPE, it appears that these suggested approaches may not be straightforward. While not intended to be a PCP performance metric, as noted previously, physician level data regarding use of SCOPE appeared to be interpreted in an evaluative way by some PCPs. While acknowledging the potential benefits offered by SCOPE, in some cases PCPs preferred to care exclusively for their own patients and attached feelings of pride and professional worth to the ability to do so. As a result, some PCPs interpreted the need to use SCOPE as a negative reflection on their practice and professional abilities.

The Hawthorne Effect may have also played a related role in influencing PCPs’ engagement with SCOPE. This phenomenon suggests that individuals’ behaviour is altered by their awareness that they are being studied or receiving extra attention (Roethlisberger & Dickson, 1939). PCPs who considered SCOPE use to be a negative reflection on their abilities may have engaged less because they were aware that their use of SCOPE services was being monitored. They may have worried that by using SCOPE they would appear to the project team as being less capable of caring for their patients. This worry might have limited their engagement with SCOPE. However, conversely, other PCPs, such as the ‘super users’, may have engaged frequently because they interpreted SCOPE use as a desired behaviour of the project.
It appears that for some SCOPE PCPs, professional pride and performance data acted as deterrants rather than motivators to engagement. On this topic, the IHI model for physician engagement suggests that “engrained in the physician professional culture is a fierce attachment to individual autonomy” and personal responsibility to care for patients (Reinertsen et al., 2007). Such physicians believe that those that “work hard enough” will be able to practice in an effective, independent manner and not need to ameliorate their practice through QI. Therefore, a reframing of PCPs’ views of, and the personal meaning that they may attach to, receiving support and sharing patient care may be required before appealing to their professional responsibility and using performance data (e.g. contacts to SCOPE) can be leveraged as facilitators for enhanced engagement in supportive team-based models of care.

Reframing of PCPs’ views may be possible through increased exposure to interprofessional experiences and education, the use of respected medical colleagues to champion and model ‘desired’ behaviour change (i.e. increasing consultation with colleagues regarding complex patient care issues), and the provision of performance data that is likely to inspire and encourage more collaborative practice. For this sample of PCPs, the use of performance data that clearly conveys the impact, or potential impact, of engagement on elements articulated by PCPs as important to them (e.g. patient care, time savings for providers, and health care resource utilization) may be useful. It may be interesting to provide PCPs with case comparisons that contrast a patient care scenario both with and without the use of SCOPE. Within these cases comparisons, performance metrics could be presented with regards to the impact of SCOPE use on patient care (e.g. waiting time in ED, reduction in ‘ineffective’ or lengthy referrals, etc.), administrative time savings (e.g. time saved on referral related activities, reduction in number of forms requiring completion, etc.), and health care resource utilization (e.g. number of and cost savings associated with ED visits avoided, reduction in duplicate testing procedures due to the availability of results through PRO, etc.). The use of this sort of data may encourage PCPs to reframe their views on what it means to engage with others on patient care. It may
encourage them to interpret such collaboration as a part of, rather than negative reflection on, their professional responsibility as physicians.

6.2.3 PCP Isolation

In addition to PCPs’ desire to provide total care to their patients themselves, numerous other factors have caused PCPs to feel isolated and disconnected. Ineffective information transfer between primary care and other care settings, the way PCPs are sometimes treated when they request information about their patients, and the decreasing involvement of PCPs in hospital-based care, were mentioned by interviewed PCPs. PCPs spoke about the changes that they had experienced in the primary care setting during the tenure of their practices and noted that such changes enhance the importance of reducing isolation and increasing collaborative care models. The fact that individuals are living longer, and increasingly living with complex medical conditions, combined with the financial pressures on acute and specialty care, have resulted in quicker discharge of more acutely ill patients from hospital to primary care settings (CFPC, 2004; OHC, 1999; OCFP, 2011). Increased responsibility for complex medical patients in primary care has further isolated PCPs in some cases, perhaps particularly those practicing in solo or small group practices. Many PCPs no longer have time to participate in hospital-based care of their patients and network with medical colleagues as they are too busy trying to meet significant patient volume and care demands. Further impacting PCPs capacity are the more intricate and time consuming care demands of their patients with complex medical problems. PCPs’ sentiments in this regard are very much aligned with other accounts of PCPs’ high workloads, expanding scope of practice, and time limitations found in the literature (Manca et al., 2011; Lee et al., 2009).

Furthermore, hospital restructuring and health care reforms that took place in Ontario in the mid-late 1990s appear to have contributed to the marginalization and isolation felt by these PCPs. The Health Services Restructuring Commission (HSRC), set up to implement health care reform at the time, initially focused on restructuring hospital services in major urban areas. Among the hospitals closed was the hospital that many of the SCOPE PCPs were affiliated with before its closure. These PCPs were personally affected by the provincial hospital restructuring strategy. Services from the hospital were to
be fully integrated with another large hospital in a nearby area and a new governance structure was to be developed to represent the two communities (Cawston, 2012). However, as one interviewee noted, the changes were not implemented smoothly and many felt that assurances made to the medical community were not honoured. Reflections upon the work of the HSRC have included the notion that there could have been better involvement of primary care representatives, as these providers “were largely absent from the group of stakeholders involved with restructuring” (Thorlby, 2011). These reforms were noted by several PCPs during SCOPE engagement events and the study interviews. Feelings left over from these experiences appear to have contributed to the nuanced engagement process of PCPs in the SCOPE project and their adoption of a new, more collaborative way of working.

6.2.4 Feelings of Responsibility and PCP Experience/Burnout

Feelings of isolation as well as the desire and commitment to be central to the management of all care for their patients appear to have contributed to a substantial burden of responsibility felt by PCPs. The significant volume and complexity of care demands in primary care have likely exacerbated such feelings of isolation and increased responsibility for providers. Further, providers’ sense of responsibility appears to be augmented by their commitment to provide care in a manner that respects provider-patient trust and respect and to use health system resources appropriately. The tremendous and multi-faceted sense of responsibility that many PCPs feel can impact their personal lives as well. Many PCPs spoke about worrying about clinical decisions and patients’ wellbeing during their personal time. These findings are congruent with the results of other studies that found that family physicians experience significant personal (e.g., strong sense of obligation, high self-expectations) and occupational (e.g. challenging patents, high workloads, time limitations, the ‘changing role of the family physician’) stressors and that such stress often impacts physicians’ personal, as well as professional, lives (Lee et al., 2009; Cooper et al., 1989). The findings of this dissertation and studies in the literature underscore the importance of investigating the impact of supportive team-based care interventions on provider job satisfaction and quality of life. Furthermore, there is research emerging linking more team-based, collaborative care approaches with decreased provider burnout levels (Reid et al., 2009; Reid et al.,
The results of these research studies, in conjunction with the findings of this dissertation, suggest that developing collaborative care models may be as important from a provider experience perspective as from patient care and system integration perspectives.

6.2.5 Acknowledgement of Need for Support

The desire for support appeared to be at the root of most of PCPs’ decision to participate in the SCOPE study. However, it seems that the acknowledgment of their desire or need for support is not a straightforward process for all PCPs. Upon engaging with SCOPE, PCPs had positive experiences and realized demonstrable benefits. However, a “learning curve” was noted some physicians. In some cases, the learning curve was associated with difficulty changing well-established routines and practices. This finding is similar to the work of Edmondson et al. (2000), who found that individuals who possess “well-learned routines” (e.g. managing patient care independently for SCOPE PCPs) could find adopting new innovations, especially those that require the development of new routines and behaviours challenging. In their work, the innovation of study involved the introduction of new technical and interpersonal routines. Despite recognized benefits to adopting the innovation, it posed significant behaviour change challenges to the health care professionals within the setting it was introduced. Edmondson and colleagues propose that a key barrier to timely and smooth behaviour change was the fact that team members who had previously had clearly defined roles had to ‘relearn how to work together’. It appears that adoption of the SCOPE services occurred in a similar fashion and may have been challenging in some cases because reframing of PCPs’ individual roles as well as their relationships with others were key to the engagement process.

As noted above (Section 6.2.2), many physicians placed a substantial value on their autonomy. Several scholars note that the pressure to be able to think and make decisions independently is also very much in place throughout medical education (Kennedy et al., 2009a; Kennedy et al. 2009b; Stewart, 2007). The work of Kennedy et al. (2009) demonstrates that requesting support was a complex process for medical trainees, one that involved considerations of both the preservation of their professional credibility as well as the clinical implications of the situation at hand. Similarities can be seen between
these findings and remarks made by PCPs in this study around not wanting to “bother” other physicians or “refer patients at the drop of a hat” and the fear that some physicians may associate with being “outed” about their knowledge not being up to date by project staff or other physicians. The ability to acknowledge the need for support and work collaboratively with other medical professionals is important from patient safety and quality of care perspectives as PCPs who are better integrated within the health care system may be better positioned to provide patients with timely access to comprehensive care. As requests for support were found to be perceived by trainees as “threats to their professional credibility”, the researchers suggest that requests for assistance could be explicitly included in the clinical evaluation process to dissuade this way of thinking (Kennedy et al., 2009). There is also a growing emphasis on the importance of interprofessional education and practice, in medicine and other health professions (Health Canada, 2006; IOM, 2013; Price et al., 2009; Whitehead, 2007; Herbert, 2005). Through the continually emerging interprofessional training programs and experiences being offered through medical schools, the ‘independent as ideal’ way of thinking may be disarmed early on in medical professionals’ careers and replaced by positive views of team-based care approaches. If medical students and residents learn to appreciate the benefits of and strive to embody collaborative medicine as well as the historically held ideal of the “independent practitioner” they may become more likely to ask for support, as well as more comfortable receiving such support, and participating in shared care models. However, such positive gains are not limited to individuals who are currently undergoing training or have recently graduated. Similar attitudinal and behavioural changes may also be realized in more senior physicians, through the incorporation of interprofessional elements in continuing education curricula (Owen & Schmitt, 2013) and, as this study shows, through involvement in collaborative care coordination models like SCOPE.

Since some physicians may fear being “outed” about their lack of knowledge and resist embracing practice change, explicit efforts to learn can be threatening. According to Edmondson et al. (2000), learning “involves confronting a gap between what one knows or is able to do and what one
wants to know or be able to do” and is a source of psychological threat. Further, learning in a team, rather than an independent environment, enhances the threat as it introduces fears of appearing incompetent or unknowledgeable in front of peers and risks to maintaining ones professional reputation and identity. This work also suggests that learning, which takes place within team environments or that will affect interpersonal dynamics in the future, requires overcoming “interpersonal barriers” before new concepts can be mastered. Applying this to the SCOPE context, PCPs may need to work on overcoming previous negative interactions with providers in the broader health care system and both extrinsic and intrinsic pressures to practice independently before they can truly start to engage in a collaborative patient care coordination model like SCOPE. Reflection on previous experiences, current challenges, and potential benefits associated with changing practice, as well as a personal reframing of their role in patient care and as a part of the larger health care system, appears to be required for PCPs when considering the adoption of more collaborative ways of working.

Suggestions from the SCOPE Primary Care Lead that PCPs reframe their perception that they need to “do it all” and positive interactions with the SCOPE team members about patient care encouraged PCPs to rethink their approach to engaging with others for support as well as what that means for their professional identities and worth. Fortunately, SCOPE appears to have provided PCPs with a degree of ‘psychological safety’ and an open atmosphere, which have been noted as requirements for such deep reflection (Edmondson et al., 2000; Branch & Paranjape, 2002), and an opportunity to start to reframe their role as well as consider and try out new practice behaviours.

6.2.6 Provision of Support / Reassurance
SCOPE was able to provide significant support and reassurance to PCPs. Such support appears to have provided PCPs with practical assistance, regarding access to information and services, as well as more relational support, in which PCPs have felt “part of a team” and less isolated; “more confident to deal with complex cases” and less anxious about clinical decisions; and increasingly able to enjoy both their personal and professional lives. These findings are aligned with literature, which suggests that career satisfaction for physicians is associated with the ability to access quality services, provide
appropriate care to patients, and engage in respectful interactions with professional colleagues (Lepnurm et al., 2007).

SCOPE’s commitment to deliver support in a consistent, timely, and collaborative manner was likely fundamental to building trust among participating PCPs and encouraging behaviour change. The reliable presence of SCOPE team members (e.g. Navigation Hub staff, GIM on-call) facilitated effective communication and positive relations between PCPs and hospital-based staff, decreased feelings of isolation, and facilitated the process of asking for, and receiving, support. These findings are aligned with other reports, which found that trust, continuous and dependable inter-health professional support and receptivity to collaboration were needed for effective working relationships to occur (Denis et al., 2013; Gotlib Conn et al., 2012; Baggs & Schmitt, 1997). Findings from the study interviews suggest that improvements need to be made to the working relationships and connections between PCPs and other care settings. The findings also suggest that SCOPE was able to provide support to independent practitioners in a manner that subsequently encouraged them to reconsider their professional role and ‘required’ responsibilities, start to reestablish connections to the broader health care system, and reframe their place within the system. These findings are aligned with other research on the need to enhance interactions between health care providers and engage in ‘cultural work’ to strengthen relationships between clinicians and organizations in order to achieve productive collaborations and meaningful QI work (Berwick & Nolan, 1998; Denis et al., 2013).

The aforementioned contextual factors, which influenced PCPs’ engagement in SCOPE, appear to resonate with findings in the literature as well as add to the literature by suggesting that in order to achieve enhanced engagement of PCPs in collaborative care models like SCOPE the following may be required: i) the creation of more trusting and collaborative relationships between providers in primary care and other care settings, and ii) potential identity reframing or a cultural shift within solo and small group based PCPs regarding their role in managing the care of complex medical patients as well as in the health care system in general.
6.2.7 Reframing of PCPs’ Identities and Perceptions of Team-Based Care and Networks

There has been a widespread ‘cultural shift’ towards more team-based primary care in Canada, as well as the UK, US, Australia and other countries (Lepnurm et al., 2007; Aggarwal & Hutchison, 2012; Hutchison et al., 2011; Dinh, 2012; Australian Government Department of Health and Ageing, 2009; Glazier et al., 2012). Due to the increasing complexity of patients and growing number of older patients being managed in primary care, trying to maintain the commitment to provide comprehensive, continuing care to their patients, especially those with complex chronic conditions, is increasingly challenging to PCPs (CFPC, 2004; Manca et al., 2011; Lee et al., 2009). Several scholars have identified a growing skepticism regarding the future of a comprehensive PCP who is able to treat such a broad range and complex set of health concerns independently within their own practice (Beaulieu et al., 2008; Martin et al., 2004). The accounts of interviewees resonate with these findings, as some PCPs identified a shift toward shared care models as key to developing adequate resources to both address current challenges and brace for the changing landscape of primary care and the aging population.

Along with the shift towards more collaborative care, research has recently pointed to related shifts in how PCPs perceive their professional identity. Beaulieu and colleagues (2008) propose that there is tension in the identity of family physicians in Canada. They suggest that the tension exists between the traditional view of the “full service family physician”, who has the expertise and capacity to manage patients’ health concerns in almost all clinical settings, and one of a physician whose expertise lies in their ability to both care for patients and coordinate access to additional care for patients with complex health problems, when required. The authors suggest that it is increasingly difficult to preserve the traditional and independent view of PCPs while trying to adapt to the increasing complexity of patients managed in primary care. Jones and Green (2006) also propose that a new concept of general practice is emerging in early career PCPs in the UK. The authors suggest that these physicians are rejecting the “traditional” PCP professional identity of assuming comprehensive, continuous responsibility for patient care; practicing independently; and devoting one’s life to the “vocation of medicine”. They are replacing such identity characteristics with notions of coordinating care for patients
among a network of professionals, rather than assuming responsibility for the provision of all care; practicing as a part of a multi-professional team; and striving for a satisfactory work-life balance. Lepnurm and colleagues (2007) suggest that a shift away from solo practice and towards group or team-based practice is linked to an increased need for collegial support in the care of patients and physicians’ enhanced desire to “resolve conflicts between their personal and working lives”.

However, collaborative care models can be difficult to achieve. Individuals’ roles within the informal or formal teams that they are a part of are not always clear. For example, although cancer care is widely acknowledged as a collaborative endeavor and has been described as a “team affair” by health care providers, research has indicated that family physicians are often unclear of their role on such teams (Wood, 1993). In Wood’s (1993) study, some PCPs believed that their position was neither acknowledged nor respected by specialist physicians involved in cancer follow-up care. Additionally, PCPs indicated that poor communication was the key issue that led to failure to develop and understand effective roles in shared care situations. Qualitative work conducted by Berendsen et al. (2007), suggests that PCPs value trust and mutual respect in interprofessional relationships. The authors propose that while these elements may not be easy to achieve, they are key to forming collaborative models with specialists and if such elements are in place, the models will need “relatively little maintenance” to continue to function. Similarly, Denis and colleagues (2013) noted that trust between clinicians and organizations is essential to engaging physicians in implementing and adopting change.

The findings noted above bode well for SCOPE. The SCOPE model provided an opportunity for PCPs, who have been practicing in what Jones and Green (2006) would term the “traditional” orientation to family practice, to replace previous past experiences associated with shared care interactions with hospital-based and specialty colleagues with more positive ones; interact with medical colleagues in a more supportive and respectful manner; build trusting and dependable relationships and networks with other health care providers; and renegotiate how they perceive their role within the broader health care system. Lepnurm et al.’s (2007) assertions that PCPs’ career satisfaction is closely
tied to “finding and maintaining a respected niche in the existing large health care network” and a pronounced level of collegiality further underline the potential of the SCOPE model to encourage a more collaborative way of working and provide related benefits to independent physicians. Additionally, despite reports that suggest that the physical layout of health care teams can affect interprofessional collaboration and that co-location can promote and support team-based care models (Goldman et al., 2010; Gotlib Conn et al., 2012), SCOPE has been able to cultivate a virtual team for PCPs.

In studying interprofessional dynamics, Gotlib Conn et al. (2012) drew upon the interactionist approach of sociological research – which proposes that individuals’ interaction with others construct their social world – to understand how health care providers’ everyday interactions and communication impact their perceived interprofessional relationships. Applying such an approach to the present study, helps illuminate how previous negative interactions between PCPs and their hospital and specialty care colleagues may have influenced some PCPs to withdraw and develop an enhanced desire to practice autonomously, increased feelings of isolation in primary care, caused distress to PCPs’ professional identities and personal wellbeing, and dissuaded them from engaging in more collaborative care. It is interesting to consider whether PCPs’ past interactions with other medical professionals and/or the evaluative notion that some PCPs attach to accessing additional services for patients may have been a barrier to these practitioners from joining collaborative primary care organizations (e.g. FHTs, CHCs, etc.) in the past and encouraged them to stay in solo-based or small group practices. Since participating in SCOPE, many PCPs appear to have developed more positive views towards the experience and perception of sharing patient care with other health professionals. All PCPs indicated that they intended to continue participating in the SCOPE model and some noted that they had been motivated to join more formalized primary health care teams. While other factors may also be influencing PCPs’ views in this regard, it would be interesting to continue to monitor SCOPE PCPs’ attitudes towards more formalized health team models and track their enrolment into such models.
Figure 7 presents a model of the proposed relationships, as discussed above, between PCPs' i) past educational experiences, previous interactions with other health care providers, and earlier health system reforms which resulted in changes to primary care practice; ii) framing of their professional role/identity along a spectrum from ‘independent practitioner’ to ‘part of collaborative interprofessional team’; and iii) participation in SCOPE, perceived place in the health care system, and inclination towards collaborative shared care practice.

Figure 7: Model of proposed relationships between influencing factors, professional role identity, participation in SCOPE and inclination toward collaborative care
6.3 Strategies for Implementing Care Coordination Quality Improvement Initiatives in Primary Care

The PCP engagement process of SCOPE followed a similar course as that outlined in Rogers’ (1995) five stages of innovation adoption (Figure 2, Section 2.5.1). PCPs passed through stages 1 to 3 [1) obtaining knowledge, 2) forming an attitude and 3) making a decision about participation in the SCOPE project] relatively smoothly. Many indicated that upon being informed about SCOPE, they could easily see the potential benefits and made their decision to participate without much deliberation.

Engagement factors that were influential during these stages include congruence between the project’s aims and PCPs’ primary day to day challenges; the ability of PCPs to perceive the intervention as a feasible way to positively impact patient care, provide both ‘practical’ and ‘relational’ provider benefits, and reduce system pressures; and the involvement of medical peers to convey information about the project. However, for the PCPs interviewed for this study, the latter stages of the process [4) implementing the new behaviours and 5) confirming the decision to change and continuing to practice in a new way] appear to have been more challenging and markedly complicated by contextual factors.

While it is not known whether such contextual factors may also impact stages 1 to 3 for other groups of physicians, it is evident from this study that clinical implications, potential benefits, interventional components and communication strategies, and individuals’ adopter type are not the only considerations that influence PCPs’ initial and ongoing engagement with QI projects like SCOPE. While these considerations, which map to Rogers’ elements of the innovation, communication channels, and individual characteristics, played a role in influencing PCPs’ engagement, higher level contextual factors appear to have been more influential in this setting. Contextual factors, which of the Rogers’ elements map most closely to the ‘social system’ in which the innovation is implemented and are more specifically included in several other frameworks (Greenhalgh et al., 2004; Damschroder et al., 2009; Berta et al., 2005), were important to the engagement process of PCPs in this study. PCPs’ previous negative interactions with health care providers, sense of responsibility, identification with the ‘independent physician’ ideal, as well as the increasing complexity of care in primary care and shifting discourses...
regarding the role and identity of the PCP all appear to have influenced PCPs’ adoption of SCOPE services. More generally, these factors appear to have the ability to influence a transition towards a more collaborative way of caring for patients.

Despite some challenges and variation in engagement, SCOPE was widely seen as a positive way in which care for patients with complex medical conditions can be better coordinated. Overall, the design, implementation and ongoing operational support of the SCOPE initiative were well-received by and well-suited to the target PCPs. Minor tweaks to the interventional components and suggestions for additional and enhanced services were provided by PCPs and may be used to further improve the SCOPE initiative and to inform similar projects in the future. The key findings of this study are the contextual factors, which appear to have influenced PCPs’ engagement more so than individual adopter characteristics or interventional level factors. This study shows that a greater understanding of contextual factors is still needed regardless of how well the intervention performs when analyzed according to the innovation attributes suggested as important by Rogers (1995; 2003) or the innate ‘innovativeness’ of the target adopter population. This may be especially true in the case of the present study due to the history and evolving future of the primary care setting in Ontario. Further investigation and amelioration of the contextual factors and tensions identified through this study are still required in order for coordinated care models such as SCOPE and similar QI projects to be further adapted for the primary care setting and scaled up in other jurisdictions. It may be worth considering the use of a framework that more explicitly focuses on contextual factors, such as the ones proposed by Greenhalgh et al. (2004) or Damschroder et al. (2009), for future analyses in this vein. SCOPE II and other BRIDGES projects rooted in primary care settings may present feasible mechanisms through which such investigations could occur.

6.4 Implications

A shift from solo-based practitioner to team-based models in primary care involves more than “merely pulling together a health care practice in which multiple disciplines are provided with a
mandate to work together” (Gocan et al., 2014). It can be seen from the findings of this study, as well as the literature, that the adoption of new ways of working can be complicated by a suite of engagement and contextual factors and that effective team functioning is difficult to achieve (Gocan et al., 2014; Belanger & Rodriguez, 2008; Delva et al., 2008). However, there appear to be several patient, provider and system level reasons to support the adoption of more collaborative ways of working in health care.

6.4.1 Recommendations & Study Contributions

This study provides key learnings regarding the primary care community, the challenges PCPs face in caring for complex medical patients, and the participation of PCPs in QI initiatives which propose new, more collaborative ways of working. Based on the identified key engagement and contextual factors regarding PCPs’ engagement in SCOPE, the following recommendations for future work in this area are proposed:

i. Medical leaders, members of the target implementation audience (e.g. PCPs), patients and family members should be engaged in the conception, development, implementation and evaluation of primary care reform initiatives.

ii. Interventions should offer the potential of patient, provider and system benefits, as PCPs identified all three of these as being important influencing factors for their engagement.

iii. Patient experience measures and anecdotes may be leveraged to mitigate initial hesitation regarding participation related to patient preference and to encourage ongoing engagement. Provider benefits (e.g. time savings, network building) and health care resource utilization measures (e.g. decrease in ED visits and associated costs) may also be used to encourage and reinforce engagement.

iv. Differences in perceived needs and potential benefits to be derived may exist between adopter groups. The ability to leverage knowledge about such adopter groups and tailor approaches accordingly may be beneficial for projects that use continuous QI “Plan-Do-Study-Act (PDSA)” approaches as well as for expansion and similar projects in the future.

v. Reflection on the social and system dynamics of the setting within which the QI initiative will be implemented is important in order to uncover contextual factors at play in the setting, establish an understanding of the potential implications of the unique context, and take such factors into account during project planning, implementation and evaluation. The influence of broader contextual dynamics on PCPs’ engagement outweighed that of individual or intervention level factors in this study.

vi. A need exists for a more comprehensive and consistent way of seamlessly sharing patient health information between health care providers. Continued investment in and study of shared e-
health record solutions is warranted and has the ability to significantly impact provider experience and inter-provider relationships as well as patient care.

vii. Sustained and increased emphasis on interprofessional collaboration in both medical school and continuing education forums may be beneficial to increase and further develop interprofessional relationships and the co-management of patient care.

viii. Key factors influencing the establishment of more collaborative ways of working include the development of more trusting, communicative inter-provider relations and potential reframing of solo or small group based PCPs’ professional identity. These aspects should be taken into consideration when developing interprofessional education curricula, designing and implementing QI initiatives, and initiating primary care reform efforts. Further, it should be recognized that these are elements that will likely take some time to ameliorate. However, the benefits of fostering these changes may prove to be worth the wait.

The study findings also contribute more broadly to the understanding of the dynamic relationships and contextual factors present in the primary care setting in Ontario. As previously noted, it appears that providing PCPs with practical, supportive services like those offered through SCOPE, is only one piece of the puzzle towards enhancing effective management of patients with complex medical conditions. The findings of this study shed light on the fact that work needs to be conducted to reestablish connections between providers and rebuild trusting, collaborative relationships between health care providers. These connections and relationships, in addition to PCPs’ reaffirmation of their place and worth in the system, appear to be at the core of building a more collaborative care model for the management of this population of patients. Encouragingly, this study additionally shows that such reconnections, relationship building, and role reframing are feasible. This study demonstrates that through these activities solo and small group based PCPs, who can be perceived to be difficult engage in care coordination improvement strategies and have been studied less frequently in regards to participation in QI work in general, are in fact interested and able to meaningfully engage in and contribute to such work. This study also importantly highlights the ability of SCOPE to achieve a collaborative model of care outside of the traditional primary care network models (e.g. FHTs, CHCs).

The SCOPE project and this dissertation also suggest that effective collaborative care models can be virtual in nature. These are important findings, as the demands on primary care are increasing and
becoming more complex and costly. Having models that are flexible and able to engage PCPs who have resisted team-based care reform models in the past is beneficial to ensuring that all relevant resources are utilized in effective ways. Further, virtual team models are likely less costly to implement and scale up compared to models in which health care team members are co-located at the point of care delivery. The findings of this study add unique insights regarding this population of health care providers and will be valuable to future work in the area of primary care reorganization. One such area of future work may include comparisons between other primary care collaborative models (e.g. FHTs, CHCs) and SCOPE. It would be interesting for such comparisons to investigate potential differences in the models’ effects on primary-specialty care interactions and whether the virtual nature of SCOPE presents any unique benefits and challenges or cost savings.

Given the expected growth of the elderly population and number of individuals living with complex medical conditions and the shift of increasingly complex care into primary care from other settings, a question for health system researchers and policy makers may be whether team-based care should be a requirement of primary care. Is it feasible to practice as a solo or small group based physician in an increasingly complex primary care setting? How, if at all, will it become increasingly difficult to practice independently in the future? What defines team-based care? Can virtual team-based models (like SCOPE) be as effective as other models? What, if any, impact does participating in a collaborative care model like SCOPE have on patient outcomes? However, it will take time to investigate and deliberate on the implications of such questions. The results of SCOPE and similar projects (e.g. SCOPE II, other BRIDGES initiatives, etc.) will be important in informing the discussion in these regards. Additionally, a full shift towards team-based care in Ontario will likely take time and may not be appropriate until solid evidence regarding the advantages and implications of the various models currently in place is more fully developed and thoroughly analyzed by leading health care reform experts (Petch & Tepper, 2012; Rosser et al., 2011; Dinh, 2012; Hutchison et al., 2001; Glazier, et al., 2012).
6.5 Study Strengths and Limitations

By focusing on the engagement of community-based PCPs, from solo and small group practices, in QI initiatives, this study adds to the limited literature that is currently available in this regard and complements similar work conducted in the setting of primary health care teams. The results of this study add in a complementary way to the more abundant literature on larger, more administratively complex primary care practice groups.

However, there are some limitations to the study, including the fact that the sample consisted of solo and small group based PCPs from one metropolitan city in Ontario. The practice challenges, needs, and contextual factors of this urban-based group may be different than those of rural PCPs. Such variation may mean that rural PCPs’ engagement may be influenced by different factors than their urban counterparts’ and may limit the transferability of this study’s findings to rural primary care settings.

Literature suggests that differences exist between urban and rural PCPs. Rural PCPs may have less need for an intervention like SCOPE as they may have closer relationships with nearby hospitals since they often share in hospital coverage (Brener, 2011; Lepnurm et al., 2007). They may also have more established relationships with specialists in their regions due to the relatively fewer specialty physicians and PCPs in the area. On the other hand, rural PCPs may have enhanced needs and similar feelings of isolation and significant responsibility, as rural family physicians are more likely to be in solo-based practice, spend more time on call and perform a broader range of procedures compared to urban PCPs (Baldwin, 1995; Rabinowitz, 2002; Lepnurm et al., 2007).

The transferability of findings may also be limited due to the potential impact that hospital restructuring and health care reforms that took place in Ontario in the mid-late 1990s may have had on the sample PCPs’ experiences and consequently engagement in the SCOPE project. Such reforms were noted by several PCPs during interviews and a large proportion of the sample would have been personally affected by the changes. As their past experiences in this regard may have affected the manner in which they engaged with the project, which required them to increase their interaction with hospitals, findings may be different in other jurisdictions.
The transferability of the findings to newly trained physicians may also be limited. Medical education is increasingly emphasizing the importance of interprofessionalism and incorporating interprofessional training experiences in its curricula (Price et al., 2009; Whitehead, 2007; Herbert, 2005). The 2003 Health Accord, which emphasized improving access to primary care and care delivered by multidisciplinary teams, also highlighted the need for increasing interprofessional education in health care (Health Canada, 2006). As such, more junior physicians may have been exposed to this concept to a greater degree and may resultantly be more willing and comfortable to engage in collaborative care models compared to more senior PCPs (Price et al., 2009). Thus, the relevance of the influencing factors discussed in this study to more junior physicians may be lessened.

Another limitation was experienced with regards to sample heterogeneity, as over 80% of the sample was male and over 60% were 50 years of age or older. While these characteristics were very similar to the overall SCOPE project sample, they may limit the transferability of the findings to younger and/or female PCPs. An additional sample limitation was that a high proportion of SCOPE PCPs’ practices were comprised of patients of particular ethnicities (e.g. Portuguese, Italian, Chinese). It is not known whether findings, with regards to challenges and potential benefits to be derived from SCOPE, would be similar in practices with different compositions of patients. As language and cultural considerations may have lessened PCPs’ engagement with SCOPE for patients of these ethnicities (e.g. Portuguese, Italian, Chinese) in some cases, PCPs with practices that do not primarily serve patients of minority cultural groups, or patients that do not speak English as their first language, may encounter fewer barriers to engagement, derive greater benefits and experience a slightly different engagement process.

Furthermore, as this study assessed engagement approximately 14 - 19 months into the project, the longer-term sustainability of PCPs’ engagement in SCOPE after the completion of the official ‘project phase’ and BRIDGES funding, was not addressed.
6.6 Future Research

To date, investigations related to the SCOPE project, including this study, have primarily focused on the experience of PCPs in the management of patients with complex conditions – both those enrolled in the SCOPE study and a similar group of physicians who were interviewed pre-SCOPE to inform the project’s design. These investigations facilitated the development of an initiative that was congruent with the needs of its target population and the attainment of valuable insights regarding engagement and contextual factors that influenced PCPs’ adoption of the SCOPE model. However, additional research is needed to derive a more comprehensive understanding of the model’s impact. The qualitative findings of this study suggest that a more detailed investigation of the impact of SCOPE on PCPs’ quality of life and professional satisfaction is warranted. Additionally, interviews with patients and caregivers affected by SCOPE would likely be an effective way to gain further insights into the experience and impact of SCOPE. It may also be worthwhile investigating the experiences of other key stakeholders involved in the provision and coordination of care to patients living with complex medical conditions, such as SCOPE team staff (e.g. internists who staff the GIM on-call service, CCAC staff, etc.) and specialists in the community who have been involved in the care of patients by way of SCOPE.

As noted above (Section 6.5) there are several differences between urban and rural primary care settings – some of which may be considered to lessen the need for a care coordination QI strategy like SCOPE (e.g. closer ties with local hospitals and specialists) and others which may enhance the ability to benefit from such a strategy (e.g. greater number of solo physicians bearing responsibility for an increased number of on-call duties and breadth medical procedures). Due to the differences between these settings, it may be interesting to investigate the applicability and fit of the contextual factors proposed in this thesis to a rural based sample of PCPs. Such an investigation would have the potential to contribute to a better understanding of contextual factors influencing care coordination models for complex medical patients at a provincial level.

Additionally, it may be useful to compare these study findings, to those of other initiatives, which are similarly focused on integrating care across primary care, hospitals and community services.
SCOPE II, other projects funded through the BRIDGES initiative, and previous projects with similar aims may present opportunities for comparative work. Such assessments may be useful in determining if contextual factors influencing engagement are similar and/or present in other settings.

6.7 Conclusion

Broadly, the aim of this study was to investigate factors that may influence the adoption of collaborative QI interventions focused on supporting PCPs’ coordination and management of care for complex patients. In the context of SCOPE, and in light of PCPs’ variable engagement in the project, this dissertation was undertaken to provide insights into the initial and ongoing engagement of PCPs in SCOPE, the factors that influenced adoption of the SCOPE services, and how the process and influencing factors may have varied for participating PCPs. The research examined: i) the key steps involved and factors associated with PCPs’ initial participation with the project and interventions, and ii) the key factors that facilitated or impeded PCPs’ ongoing use of the SCOPE interventions. This study addresses gaps in the literature on the engagement of solo and small group based PCPs in QI work as well as research on the process and value of developing linkages between PCPs, hospitals, and specialty care for the purpose of improving care for complex medical patients. The study findings contribute to a better understanding of individual and interventional level influencing factors and more specific contextual factors regarding engagement in this type of work by PCPs. Study results also propose a framework of contextual factors that may be used to inform future work to be conducted in the realm of PCPs’ engagement in QI work focused on the end goal of better patient care coordination.

Furthermore, this study demonstrates that the process of engaging in a shared care QI model is not straightforward. Reframing of past shared care experiences and PCPs’ identities as traditionally independent practitioners will likely be necessary for PCPs to fully adopt new ways of working and redefine their place within the health care system. Such activities will likely not be easy and will require a substantial culture shift within this group of practitioners. However, it appears that participation in the SCOPE project may have been the first step in such a culture shift for this sample of PCPs. Through the
expansion of SCOPE and similar collaborative care models, the door can be opened to a style of practice that may lead to a less isolated and overwhelmed, more well-supported population of PCPs, as well as more well-coordinated care for patients living with complex medical conditions. The high number of patients living with chronic conditions creates a compelling need for rethinking health care models to deliver more coordinated, patient-centred care and underscores the importance of this work in that regard.
APPENDIX A: Study Invitation Letter

S.C.O.P.E
Seamless Care Optimizing the Patient Experience

Date: <Date>
Name: <Physician Name>
Address: <Address>

Dear Dr. <Physician Name>,

As a part of the ongoing evaluation of the Seamless Care Optimizing the Patient Experience (S.C.O.P.E.) quality improvement project, qualitative interviews examining primary care providers’ experiences with S.C.O.P.E. will be conducted in Fall 2013. Through these interviews, focusing on community primary care providers’ enrolled in the study, we are hoping to gain a better understanding of your experience with the S.C.O.P.E. project to date, factors that have influenced your participation, and the value of S.C.O.P.E. to your practice. Your feedback will be invaluable to determining how to scale up S.C.O.P.E. interventions in order to expand their reach beyond the current user group.

Given your involvement with the S.C.O.P.E. project, we would like to invite you to participate in a key informant interview so that we can learn about your experience. The interview will last approximately 30-60 minutes and will be conducted by a University of Toronto Health Services Research Master’s student, Elizabeth Lockhart. It will involve questions regarding your participation with S.C.O.P.E. and your perceptions of the various factors that either facilitate or impede use of the S.C.O.P.E. services. We acknowledge the value of your time and would be grateful for your participation.

You will be contacted shortly regarding your interest in participating and to schedule an interview. Interviews can be scheduled at a time of your preference. Participation in this interview is voluntary and you may choose to withdraw at any time. If you choose not to participate, your access to S.C.O.P.E. services will not be impacted. If you agree to participate, you may also decline to answer any questions that you do not wish to answer during the interview. All information collected will be de-identified.

Your perceptions and insights will be invaluable to meeting the project’s objectives. If you have any questions or concerns regarding participation in the key informant interview, you can contact Dr. Gillian Hawker (Principal Investigator, S.C.O.P.E. Project) at 416-323-7722, Dr. Ross Baker (Co-Investigator, S.C.O.P.E. Project) at 416-978-7804 or Elizabeth Lockhart (MSc candidate, Institute of Health Policy, Management and Evaluation, U of T) at 416-892-9545. Finally, if you have any concerns about your rights as a research subject please contact the Chair of the University Health Network Research Ethics Board (REB) or the Research Ethics office number at 416-581-7849.

Sincerely,

<Signature>

Pauline Pariser
Lead Physician and Chair, Taddle Creek FHT
Lead, UHN Primary Care
S.C.O.P.E. Project Collaborator
APPENDIX B: Study Information Letter

S.C.O.P.E
Seamless Care Optimizing the Patient Experience

Feedback Interviews about your Experience with S.C.O.P.E.
In the past <number of weeks>, you should have received a letter from Dr. Pauline Pariser inviting you to participate in an interview about your experience with the Seamless Care Optimizing the Patient Experience (S.C.O.P.E.) project. You may remember from the letter that key informant interviews are being conducted this fall as a part of the ongoing evaluation of the S.C.O.P.E. project. Through these interviews, focusing on community primary care providers’ enrolled in the S.C.O.P.E. study, we are hoping to gain a better understanding of your experience with the project to date, factors that have influenced your participation, and your opinions about the value of S.C.O.P.E. to your practice. The interviews will involve questions regarding your participation with S.C.O.P.E. and your perceptions of the various factors that either facilitate or impede use of the S.C.O.P.E. services.

Given your involvement with the S.C.O.P.E. study, we would like to invite you to participate in a key informant interview so that we can learn about your experience. The interview will last approximately 30-60 minutes and will be conducted by a University of Toronto Health Services Research Master’s student, Elizabeth Lockhart, at a place and time of your convenience. The interviews will also be undertaken as a part of a U of T Health Services Master’s qualitative research thesis project.

Your feedback will be invaluable to meeting the S.C.O.P.E project’s objectives and determining how to scale up S.C.O.P.E. interventions in order to expand their reach beyond the current user group. We acknowledge the value of your time and would be grateful for your participation.

Consent to Participate and Confidentiality
Participation in this interview is voluntary and you may choose to withdraw at any time. If you choose not to participate, your access to S.C.O.P.E. services will not be impacted. If you agree to participate, you may also decline to answer any questions that you do not wish to answer during the interview. All information collected will be de-identified.

Contact Information
If you have any questions or concerns regarding participation in the key informant interview, you can contact Dr. Gillian Hawker (Principal Investigator, S.C.O.P.E. Project) at 416-323-7722, Dr. Ross Baker (Co-Investigator, S.C.O.P.E. Project) at 416-978-7804 or Elizabeth Lockhart (MSc candidate, Institute of Health Policy, Management and Evaluation, U of T) at 416-892-9545.

If you have any concerns about your rights as a research subject or have concerns about this study, please contact the Chair of the University Health Network Research Ethics Board (REB) or the Research Ethics office number at 416-581-7849.
APPENDIX C: Interview Guide

CONFIDENTIAL

KEY INFORMANT INTERVIEW GUIDE

SCOPE INTERIM FEEDBACK INTERVIEWS

Unique Identified Information

Key Informant Unique Identifier: ________________________________

Key Informant Name: __________________________________________

Date: __________________________ Time: _________________________

Location of Interview: _________________________________________

Interview Recorded: ☐ Yes ☐ No

Recording Folder/File Name: ________________________________

This page is to be detached from remaining pages of interview guide and added to the key informant unique identifier master list.
CONFIDENTIAL

Key Informant Unique Identifier: ________________________________

Actual Start Time of Interview: ________________________________

- **Nature of the Study**
  - As a part of the ongoing evaluation of the S.C.O.P.E. project, the team would like to conduct interviews with physicians involved with SCOPE to examine your experiences with the project, factors that have influenced your participation, and your opinions about the value of S.C.O.P.E. to your practice, and specifically the care of your complex medical patients.
  - Feedback received through these interviews will help to determine how the S.C.O.P.E. services may be improved and potentially expanded for use with other user groups.
  - The analysis of these interviews will form the basis my master’s research thesis work at the University of Toronto.

- **Voluntary Participation**
  - I would like to reiterate that participation in this study is completely voluntary and that you may choose to withdraw at any time or choose not to answer any questions.
  - Withdrawal from participation in this interview will not affect other aspects of your participation in the SCOPE study.

- ** Confidentiality**
  - All information exchanged in this interview will only be reported in an anonymized fashion (e.g. ‘a physician said...’)

- **Recording / Notetaking**
  - To improve the accuracy of my notes and to facilitate the follow-up work and analysis, I would like to record this interview. Is this acceptable to you?

- **Compensation**
  - You will not be compensated for this interview in particular as it is considered to be part of ongoing routine efforts by study personnel to continuously improve the S.C.O.P.E. services.
  - However, you will still receive the $250 stipend (HST included) for participating in the end of study interview, as communicated in the original signed consent form.

- **Questions / Concerns**
  - Do you have any questions at this time?
  - If you have any questions about the interview at a later time, you can contact me, Laura Pus, Project Manager for the SCOPE study, or any of the SCOPE team members.

- **Consent**
  - Do you agree to continue with the interview?
INTERVIEW GUIDE

[NOTE: Questions in italics are prompts. Prompts will be used as needed.]

Adoption/Initial Use of S.C.O.P.E. Services
1. Why did you decide to participate in the S.C.O.P.E. project?
2. Was there anything that influenced your decision to participate?
   a. Recruitment techniques?
   b. Involvement of colleagues?
   c. Resources offered in association with participation?
   d. Opportunities offered in association with participation?
3. Did you perceive any ‘downside’ associated with participating in S.C.O.P.E. / trying the services?
   a. Time?
   b. Resources?
4. What was it like using the S.C.O.P.E. services the first time?
   a. Was there anything that encouraged you to try the services?
   b. Was there something good or bad about what you had to do to use the S.C.O.P.E.
      services for the first time?
5. If you feel comfortable, using a sample anonymized case from your practice, could you walk me
   through a one of the first cases that you thought it would be beneficial to interact with
   S.C.O.P.E. about?

Ongoing Use of S.C.O.P.E. Services - Facilitators / Barriers
6. What types of patients and conditions do you think the S.C.O.P.E. services are most helpful for?
7. Has participating in S.C.O.P.E. changed your ability to care for your complex medical patients?
   a. If so, how?
   b. Are there other ways in which S.C.O.P.E. has affected your ability to practice? Either
      positively or negatively?
8. To what extent do the services currently meet your needs?
   a. What, if anything, about the services make them useful to you?
   b. Could they be modified at all to better meet your needs? Your patients’ needs?
9. In your opinion, how could S.C.O.P.E. be improved to reduce ED use by patients with complex
   conditions?
   a. Where do you believe the project should focus its efforts in order to provide the most
      benefit to community PCPs regarding the management of patients with complex
      conditions?
10. Do you continue to face challenges in caring for your complex patients?
   a. If yes, could you tell me about the challenges that you continue to experience?

11. To what extent do you see yourself continuing to use or increasing your use of S.C.O.P.E. services?
   a. Why is this the case?
   b. Is there anything good or bad about what you have to do to use the S.C.O.P.E. services?

12. Do you think that you could using the S.C.O.P.E. more than you currently are?

13. Have your impressions about the S.C.O.P.E. project/services changed over time?
   a. If yes, how?

14. How do you envision the S.C.O.P.E. services after the completion of the project?
   a. Do you anticipate that they will change? If yes, how?

15. In general, what do you believe are some of the considerations that PCPs think about both when adopting new services and continuing to engage in quality improvement initiatives like S.C.O.P.E.?

Recommendations / Wrap Up

16. In your opinion, do the services offered through the S.C.O.P.E. project have promise?
   a. Could you elaborate on why you believe that?

17. What are some ways that you think we could best measure the impact that SCOPE has had, if any, on your practice and/or patients?

18. Do you have any general recommendations regarding the implementation of quality improvement initiatives like S.C.O.P.E.?

19. Do you have any additional comments or questions?

Thank you very much for participating in this interview. Both your time and insights are much appreciated.

Actual Stop Time of Interview: ________________________________

NOTES:

Distractions/Interruptions:

Visual Cues:

Other Notes:
APPENDIX D: Research Ethics Board Approval Letters

University Health Network
Research Ethics Board
10th Floor, Room 1056
700 University Ave
Toronto, Ontario, M5G 1Z5
Phone: (416) 581-7849

Notification of REB Amendment Approval

Date: September 19th, 2013
To: Dr. Steven Friedman
    Rm RFE GS-434, Ground Floor, R. Fraser Elliott, Toronto General Hospital, 190 Elizabeth St., Toronto,
    Ontario, Canada, M5G 2C4
Re: 12-0510-AE
    S.C.O.P.E #3: SEAMLESS CARE OPTIMIZING THE PATIENT EXPERIENCE: An Observational Study
to Reduce Emergency Department Use by Patients of Community-Based Solo Family Doctors

REB Review Type: Expedited
REB Initial Approval Date: October 5th, 2012
REB Amendment Approval Date: September 19th, 2013
REB Expiry Date: October 5th, 2013

Documents Approved:
Amendment
Consent Form - Addendum
Interview Guide - Feedback Interviews
Participant Information Letter - Interim Interviews
Participant Invitation Letter - Interim Interviews
Protocol

Received on: September 12th, 2013
Version date: September 19th, 2013
Version date: August 12th, 2013
Version date: September 13th, 2013
Version date: August 12th, 2013
Version date: August 16th, 2013

The UHN Research Ethics Board operates in compliance with the Tri-Council Policy Statement, ICH Guideline
for Good Clinical Practice E6(R1); Ontario Personal Health Information Protection Act (2004); Part C Division 5
of the Food and Drug Regulations; Part 4 of the Natural Health Products Regulations and the Medical Devices
Regulations of Health Canada. The approval and the views of the REB have been documented in writing.

Furthermore, members of the Research Ethics Board who are named as Investigators in research studies do not
participate in discussions related to, nor vote on such studies when they are presented to the REB.

Best wishes for the successful completion of your project.

Sincerely,

Lisungu Chieza, BSc., CCRA
Research Ethics Coordinator

For: Alan Barolet, MD PhD FRCPC
Co-Chair, University Health Network Research Ethics Board
Notification of REB Amendment Approval

Date: 27 September 2013
To: Dr. Gillian Hawker
Re: 2011-0062-E
SCOPE - Part 3 An Observational Study to Reduce Emergency Department Use By Patients of Community Based Solo Family Doctors
Sponsor: University of Toronto -
Initial REB Approval Date: 21 December, 2012
REB Amendment Approval Date: 25 September, 2013
REB Expiry Date: 21 December, 2013
Documents Approved:
- Amendment and/Administrative Change Form - Amendment #1 Application Form ver: 09/24/2013
- REB Approval Letter Other Site - UHN REB Approval ver: 09/19/2013
- Protocol - Detailed Study Protocol ver: 08/16/2013
- Letter - Appendix 12: Participant Invitation Letter for Interim Interviews ver: 08/12/2013
- Letter - Appendix 14: Participant Information Letter for Interim Interims ver: 09/13/2013
- Guide - Appendix 15 interview Guide ver: 08/12/2013
- Consent Form - Addendum to ICF version October 2 2013 to participate in a research study ver: 09/19/2013

Amendment to the above protocol has been approved and approved by the Women's College Hospital Research Ethics Board (WCHREB). For the duration of the research, there are no serious adverse events, confidentiality concerns, changes in the approved project, or any new information that must be considered with respect to the project, these should be brought to the immediate attention of the REB. In the event of a privacy breach, you are responsible for reporting the breach to the WCH REB and the WCH Corporate Privacy Officer (in accordance with Ontario health privacy legislation - Personal Health Information Protection Act, 2004). Additionally, the WCH REB requires reports of unauthorized use of the information.

If the study is expected to continue beyond the expiry date, you are responsible for ensuring the study receives re-approval. The REB must be notified of the completion or termination of this study and a final report provided. As the Principal Investigator, you are responsible for the ethical conduct of this study.

The WCH Research Ethics Board operates in compliance with the Tri-Council Policy Statement, CIHI/OGP Guidelines and Part 4, Division 5 of the Food and Drug Regulations of Health Canada.

Sincerely,

[Signature]

Sue Williams RN, BNSc, MEd, Chair, Women's College Hospital Research Ethics Board
PROTOCOL REFERENCE # 29488

October 22, 2013

Dr. G. Ross Baker
DEPT OF HEALTH POLICY, MANAGEMENT & EVALUATION
FACULTY OF MEDICINE

Dear Dr. Baker,

Re: Administrative Approval of your research protocol entitled, “S.C.O.P.E. #3: Seamless care optimizing the patient experience: An observational study to reduce emergency department use by patients of community-based solo family doctors”

We are writing to advise you that the Office of Research Ethics (ORE) has granted administrative approval to the above-named research protocol. The level of approval is based on the following role(s) of the University of Toronto (University), as you have identified with your submission and administered under the terms and conditions of the affiliation agreement between the University and the associated TAHSN hospital:

- Graduate Student research - hospital-based only
- Storage or analysis of De-identified Personal Information (data)

This approval does not substitute for ethics approval, which has been obtained from your hospital Research Ethics Board (REB). Please note that you do not need to submit Annual Renewals, Study Completion Reports or Amendments to the ORE unless the involvement of the University changes so that ethics review is required. Please contact the ORE to determine whether a particular change to the University’s involvement requires ethics review.

Best wishes for the successful completion of your research.

Yours sincerely,

Daniel Gyewu
REB Manager
APPENDIX E: Informed Consent Form

S.C.O.P.E
Seamless Care Optimizing the Patient Experience

Addendum to Informed Consent Form version date October 2, 2012 to Participate In a Research Study

Study Name: A Quality Improvement Project to Reduce Emergency Department Use by Patients of Community-Based Primary Care Physicians.
Study Sponsor: Grant provided by the BRIDGES initiative - Ministry of Health and Long-Term Care
Study Doctor: Dr. Steven Friedman, Emergency Medicine, Toronto Western Hospital/University Health Network
Phone: 416-603-5405

Before beginning this research study, you signed an Informed Consent Form for the above referenced study. At that time, we said that we would tell you about any new information that might affect your health, welfare, or willingness to stay in the study. We recently learned of the information described below. Based on this new information, you need to decide whether you want to continue to be in this study. Continuing to take part in this study is voluntary. Please request a copy of the original signed consent form, if you need to review it. Take your time, read this form and reread the original signed consent form carefully. Please make sure all your questions have been answered to your satisfaction before signing this document.

NEW INFORMATION:

As you know, S.C.O.P.E. is a collaborative quality improvement project between Women's College Hospital, University Health Network, and Toronto Central Community Care Access Centre. The goal is to improve care coordination for patients with complex medical problems who are receiving care from community-based family doctors in order to reduce these patients need for hospital based care (Emergency Department visits and hospital readmissions).

As a part of the ongoing evaluation of the S.C.O.P.E. project, we would like to ask you to participate in an interview which will examine your experiences with the project, factors that have influenced your participation, and your opinions about the value of S.C.O.P.E. to your practice, and specifically the care of your complex medical patients. Feedback received through these interviews will help to determine how the S.C.O.P.E. services may be improved and potentially expanded for use with other user groups. The insights provided through your participation will inform potential modifications to the S.C.O.P.E. interventions intended to improve the ability of the interventions to support you in your clinical practice.
You will not be compensated for this interview in particular as it is considered to be part of ongoing routine efforts by study personnel to continuously improve the S.C.O.P.E. services. However, you will still receive the $250 stipend (HST included) for participating in the end of study interview, as communicated in the original signed consent form.

QUESTIONS:

If you have any questions about the changes to the study, or if you have any general questions about the study, please contact the Project Manager, Ms. Laura Pus at (416) 323-6400 ext. 4809.

If you have any questions about your rights as a research participant or have concerns about this study, call Chair of the University Health Network Research Ethics Board (REB) or the Research Ethics office number at 416-581-7849. The REB is a group of people who oversee the ethical conduct of research studies. These people are not part of the study team. Everything that you discuss will be kept confidential.

You will receive a signed and dated copy of this addendum.

**Study title:** A Quality Improvement Project to Reduce Emergency Department Use by Patients of Community-Based Primary Care Physicians.

**STATEMENT OF CONSENT**

- I have read this addendum.
- I have had the chance to ask questions and they have been answered to my satisfaction.
- I agree to continue in this study.

________________________  ________________  ________________
Printed Name of Study Participant  Signature  Date  (MM/DD/YYYY)

**Statement of Person Obtaining Consent:**

*I confirm that I have explained the nature and purpose of the study to the subject named above. I have answered all questions.*

________________________  ________________  ________________
Printed Name of Person Obtaining Consent  Signature  Date  (MM/DD/YYYY)

**If the Consent has been verbally translated:**

*I confirm that I have verbally translated this consent form for the study subject noted above, and in my opinion the study subject has understood what I have explained to them.*
<table>
<thead>
<tr>
<th>Printed Name of Translator</th>
<th>Signature</th>
<th>Date (MM/DD/YYYY)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Language of Translation</th>
<th>Relationship to Subject (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
## APPENDIX F: Summary of Key Influencing Factors and Differences Between Adopter Groups

<table>
<thead>
<tr>
<th>Influencing Factor</th>
<th>Early Adopters</th>
<th>Mid Adopters</th>
<th>Later Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Decision to Participate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desire to establish connections with other aspects of health care system &amp; build connections</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Need/desire for support to provide improved patient care</td>
<td>++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Need/desire for support to and navigate the system</td>
<td>++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>Sense of isolation</td>
<td>++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Influence of SCOPE Primary Care Lead and medical colleagues</td>
<td>++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Evaluation component of SCOPE</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential barriers to participation (e.g. time, administrative burden, etc.)</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>‘Relational’ motivations (e.g. collegiality with medical peers, decreased sense of isolation, etc.)</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>‘Practical’ motivations (e.g. access to patient information, improved resource utilization, etc.)</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td><strong>Ongoing Engagement with SCOPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facilitators</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patients’ positive experiences</td>
<td>+++</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Patient benefits</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>Access to patient information</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Practice benefits</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>Providers’ positive experiences</td>
<td>+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Interventional characteristics</td>
<td>+</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>‘Relational’ motivations (e.g. patient benefits, collegiality with medical peers, collaboration, etc.)</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>‘Practical’ motivations (e.g. access to information about the system, access to patient information, etc.)</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Barriers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forgetting to use SCOPE</td>
<td>+</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Potential time and learning required to engage (although not realized by any adopter group)</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Established practice patterns / existing knowledge</td>
<td>+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td><strong>Impact of Engagement with SCOPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived impact on patient care</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>‘Relational’ impact on patient care (e.g. receipt of support, increased confidence to manage difficult cases, relief to caregivers, etc.)</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>‘Practical’ impact on patient care (e.g. improved use of resources, access to patient information, etc.)</td>
<td>+</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td><strong>Evolution and Future of SCOPE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desire for continued SCOPE service</td>
<td>+++</td>
<td>+++</td>
<td>++</td>
</tr>
<tr>
<td>Positive vision of the future of the SCOPE model</td>
<td>+++</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Enhanced integration of SCOPE into their practice style</td>
<td>+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concerns regarding the sustainability and scalability of the SCOPE model</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Decision to Participate</td>
<td>Early Adopters</td>
<td>Mid Adopters</td>
<td>Later Adopters</td>
</tr>
<tr>
<td>-------------------------</td>
<td>----------------</td>
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<td>----------------</td>
</tr>
</tbody>
</table>
|                         | • More likely to have ‘relational’ motivations for participation  
|                         | • Less inclined to perceive potential barriers to participation | • More likely to have ‘relational’ motivations for participation  
|                         | • Less inclined to perceive potential barriers to participation | • More described need for support and feelings of isolation  
|                         | • More inclined to perceive potential barriers to participation | • More inclined to perceive potential barriers to participation |

| Ongoing Engagement Facilitators |  |  |  |
|---------------------------------|  |  |  |
| • Greater description of patients’ positive experiences and patient benefits |  |  |  |
| • Lesser emphasis on access to patient information |  |  |  |
| • Greater emphasis on practice benefits |  |  |  |
| • More ‘relational’ motivations for ongoing engagement (e.g. patient benefits, collegiality with medical peers, collaboration, etc.) |  |  |  |
| **Barriers** |  |  |  |
| • Minor references to forgetting to use SCOPE |  |  |  |
| • Lesser emphasis on potential barriers of time and learning required to engage (although not realized barriers in any adopter group) |  |  |  |

| Ongoing Engagement Facilitators |  |  |  |
|---------------------------------|  |  |  |
| • Moderate description of patients’ positive experiences and patient benefits |  |  |  |
| • Moderate emphasis on access to patient information |  |  |  |
| • Emphasis on both practice benefits and provider experiences |  |  |  |
| • Emphasis on interventional characteristics as a facilitator |  |  |  |
| • More ‘relational’ motivations for ongoing engagement (e.g. patient benefits, collegiality with medical peers, collaboration, etc.) |  |  |  |
| **Barriers** |  |  |  |
| • Moderate references to forgetting to use SCOPE |  |  |  |
| • Greater emphasis on potential barriers of time and learning required to engage (although not realized barriers in any adopter group) |  |  |  |
| • Greater level of established practice patterns /existing knowledge |  |  |  |

<p>| Impact of Engagement |  |  |  |
|----------------------|  |  |  |
| • Greater perceived helpfulness for difficult/complex cases |  |  |  |
| • Stronger perceived impact on patient care |  |  |  |
| • Lesser perceived ‘practical’ impacts, greater perceived ‘relational’ impacts |  |  |  |
| <strong>Facilitators</strong> |  |  |  |
| • Stronger perceived impact on patient care |  |  |  |
| • Stronger indication that SCOPE is meeting their needs |  |  |  |
| • Stronger desire for additional SCOPE services |  |  |  |
| <strong>Barriers</strong> |  |  |  |
| • Lesser perceived impact on patient care |  |  |  |
| • Greater perceived ‘practical’ impacts, lesser perceived ‘relational’ impacts |  |  |  |</p>
<table>
<thead>
<tr>
<th>Category</th>
<th>Early Adopters</th>
<th>Mid Adopters</th>
<th>Later Adopters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Evolution and Future</strong></td>
<td>• Stronger articulated desire for continued SCOPE service</td>
<td>• Stronger articulated desire for continued SCOPE service</td>
<td>• Less articulated desire for continued SCOPE service</td>
</tr>
<tr>
<td></td>
<td>• Enhanced integration of SCOPE into their practice style</td>
<td>• Some have not yet developed a vision for the SCOPE model</td>
<td>• More concerns regarding the future of the SCOPE model</td>
</tr>
<tr>
<td></td>
<td>• More positive visions for the SCOPE model</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>PCP-Hospital/Specialist Relations</strong></td>
<td>• Interest in improving relations primarily from a communicative/collaborative perspective</td>
<td>• Interest in improving relations primarily from a communicative/collaborative perspective</td>
<td>• Interest in improving relations primarily from an informational perspective</td>
</tr>
<tr>
<td><strong>Desire to care for own patients</strong></td>
<td>• Constructive / educative outlook towards shared care</td>
<td>• Constructive / educative and evaluative outlooks towards shared care</td>
<td>• Evaluative outlook towards shared care</td>
</tr>
<tr>
<td><strong>PCP Isolation</strong></td>
<td>• Stronger articulated feelings of isolation</td>
<td>• Stronger articulated feelings of isolation</td>
<td>• Feelings of isolation articulated to a lesser degree</td>
</tr>
<tr>
<td><strong>Feelings of Responsibility / Burnout</strong></td>
<td>• Stronger articulated feelings of overwhelming responsibility</td>
<td>• Stronger articulated feelings of overwhelming responsibility</td>
<td>• Minimal references to feelings of significant responsibility</td>
</tr>
<tr>
<td></td>
<td>• Articulated feelings of burnout/compassion fatigue</td>
<td>• Feelings of responsibility to respect patients’ wishes</td>
<td>• Social responsibility</td>
</tr>
<tr>
<td><strong>Reassurance / Support</strong></td>
<td>• Strongest articulated need for support</td>
<td>• Moderate articulated need for support</td>
<td>• Least articulated need for support</td>
</tr>
<tr>
<td></td>
<td>• Value ‘relational’ support and reassurance</td>
<td>• Value ‘relational’ support and reassurance</td>
<td>• Value ‘practical’ information gains to support practices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Most pronounced feelings of receiving support/reassurance</td>
<td></td>
</tr>
<tr>
<td><strong>Team-Based Care</strong></td>
<td>• Positive view of team-based care</td>
<td>• Positive view of team-based care</td>
<td>• Positive view of team-based care</td>
</tr>
<tr>
<td></td>
<td>• More developed vision for future of shared care models</td>
<td>• More developed vision for future of shared care models</td>
<td>• Lesser developed vision for future of shared care models</td>
</tr>
<tr>
<td></td>
<td>• Personal interest in participating in a more formalized team model</td>
<td>• Personal interest in participating in a more formalized team model</td>
<td></td>
</tr>
</tbody>
</table>
REFERENCES


Hutchison B, Glazier R. (2013). Ontario’s primary care reforms have transformed the local care landscape, but a plan is needed for ongoing improvement. *Health Affairs*. 32(4):695-703.


SCOPE. Meeting of the SCOPE Evaluation Committee: Meeting Minutes. 8 April 2013.


Toronto Central Community Care Access Centre. (2012). Making the Case for Primary Care as the Foundation for Health Care. Accessed online, [http://www.torontocentrallhin.on.ca/uploadedfiles/Case%20for%20Primary%20Care.pdf](http://www.torontocentrallhin.on.ca/uploadedfiles/Case%20for%20Primary%20Care.pdf)


