A Grounded Theory Study of Communication in a Public Sector System Change Initiative

by

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Abstract

The field of organizational communication currently lacks a communication theory to inform practice in system change initiatives (SCIs; Bryson, Crosby, & Stone, 2015). The context of the present study is a SCI in Alberta, Canada, that was established to build capacity across the province for clinical research. With the aim of addressing the practical and theoretical gaps with respect to communication in SCIs, the present study uses Corbin and Strauss' (2008) grounded theory approach to develop a theory of communication in SCIs. Data were collected and analyzed from four sources: semi-structured interviews, documents, a social network survey, and field notes. The resulting ACE theory brings the communication process in the context of a SCI into focus, deepening our understanding of the underlying driver for communication and the dynamic interactions between communication and context. The driver of communication in SCIs is the creation of a space where individuals are committed to working collectively to affect change at the system level. The name of the ACE theory is derived from the three inter-related sub-processes of communication: providing **A**ccess to information, **C**onnecting stakeholders, and **E**ngaging stakeholders. These sub-processes influence, and are influenced by, three structural conditions for communication: system interdependence, power dynamics, and time management. The implications of the study findings are considered with respect to organizational communication and collaboration.

Preface

This thesis is an original work by Dorothy Pinto. While every effort has been made to accurately reflect the information provided by the study participants, any discrepancies with their actual views remain the responsibility of the researcher. The research project, of which this thesis is a part, received research ethics approval from University of Alberta Research Ethics Board 2, "Communication in Inter-organizational Collaborations within the Public Sector," Pro00036908, February 1, 2013.

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Chapter 1. Introduction

This study addresses a practical and theoretical need to understand communication in system change initiatives (SCIs). I use the term SCI in this dissertation to refer to collaborations led by the public sector with the explicit goal of addressing complex social issues at the system level or "wicked problems" (e.g., climate change). Over the past few decades, external demands (e.g., resource constraints, rising public expectations with respect to public services) have intensified on the public sector to demonstrate accountability and innovation so as to enhance the quality, cost-effectiveness, and performance of service delivery (Bason, 2017). External demands have in turn led to a number of reforms in the public sector and shifts in the role of the public sector from administering or managing public services to governing initiatives that span government organizations or that span the public, private, and non-profit sectors. Consequently, there has been an increasing trend in SCIs to address wicked problems. The context of this study is a SCI in Alberta, Canada, established to align administrative processes, develop tools to support researchers, and provide training opportunities to build capacity across the province for clinical research.

Our understanding of collaboration in the public sector has advanced through practice and research across many areas of study; however, in spite of a recent proliferation of frameworks, gaps remain in our understanding of collaboration, and we continue to lack a comprehensive theory to inform practice (Bryson, Crosby, & Stone, 2015). One area in which further research is required is communication in collaborative public sector initiatives generally and in SCIs specifically. Communication is understood to be core to collaboration by both practitioners and researchers. Organizational communication approaches provide valuable insights into how to approach the study of communication in organizations. Conceptualizations

of communication, organizing, and organizations from the field of organizational communication highlight the need to focus on processes as well as products, context, and key relations in organizations (Deetz & Eger, 2014). Communication in SCIs presents a unique and under-examined topic in the literature. There is a need for a theory of communication in SCIs to contribute to the growing literature focused on collaboration in the public sector in response to wicked problems as well as to contribute to practice in these organizations.

Practice and theory gaps with respect to communication in SCIs are also evident in the field of evaluation. SCIs have resulted in "increasingly complex political and organizational structures that pose additional challenges to evaluation design and influence" (Appleton-Dyer, Clinton, Carswell, & McNeill, 2012, p. 534). Consequently, evaluators who support public sector organizations have sought to adopt practices that are strategic, adaptive, and responsive to the sector's changing needs, including the need to support collaborations. Although evaluators recognize the importance of communication for effective evaluation practice to support organizations (Johnson et al., 2009), the field continues to lack a comprehensive formal theory applicable to communication in collaborations such as SCIs (Suárez-Herrera, Springett, & Kagan, 2009).

The purpose of this study is to bridge the existing gap between practice and theory by developing a substantive theory of communication in a SCI. Substantive theories are specific to a group and/or place (e.g., a specific SCI) and can contribute to the development of formal theories. Formal theories draw upon numerous substantive theories and are therefore more abstract and more broadly applicable as they are "less specific to a group and/or place and apply to a wider range of disciplinary concerns and problems" (Corbin & Strauss, 2008, p. 56; Glaser & Strauss, 1967). A formal theory of communication would be applicable not only to the SCI I

studied, but potentially to cross sector collaborations in general. I have considered the potential implications of the resulting substantive theory for practice in SCIs, specifically evaluation practice (see Appendix I). The following sections of this introductory chapter outline my experiences and position as an applied researcher that make me well suited to undertaking this study and describe how my study deviated in practice from its original intent.

Study Context

The specific context for this study was the Alberta Clinical Research Consortium (ACRC), a public sector initiative in the health sector established to align administrative processes for clinical research, develop tools to support researchers as well as provide training opportunities to build capacity for clinical research across institutions in Alberta, Canada. The ACRC contributes to Alberta's Health Research and Innovation Strategy (AHRIS), a multi-year strategy to improve health services delivery in Alberta (Government of Alberta, 2010) and is a collaboration of government health services providers, universities, physicians, and community research clinics from across the province. This section presents an overview of the ACRC's vision, partners, and structure to provide context for my study.

The overarching vision of the ACRC is "high quality, integrated and efficient clinical research in Alberta." The activities and intended outcomes of the ACRC with respect to achieving this vision are represented in Figure 1. The figure was generated from a document review of the ACRC's logic model, evaluation framework, and other initiative documents. In essence, the figure reflects what is called the program theory for the ACRC, i.e., how the activities undertaken by the initiative will lead to the initiative's intended outcomes to deliver on its vision (King & Stevahn, 2013). The figure reflects the expectation of the ACRC partners that the provincial clinical research system would become more efficient through the partners

working together to establish common terminology, standards, processes, and tools. Further, an efficient clinical research system was anticipated to attract highly skilled people (e.g., researchers) as well as industry investment to the province, thereby increasing the provincial capacity for clinical research. Greater research capacity was anticipated to lead to greater health impacts (e.g., early access to new and effective drugs for Albertans) and overall, to increase the health and wealth of Albertans, demonstrating that this is a province in which to work and invest.

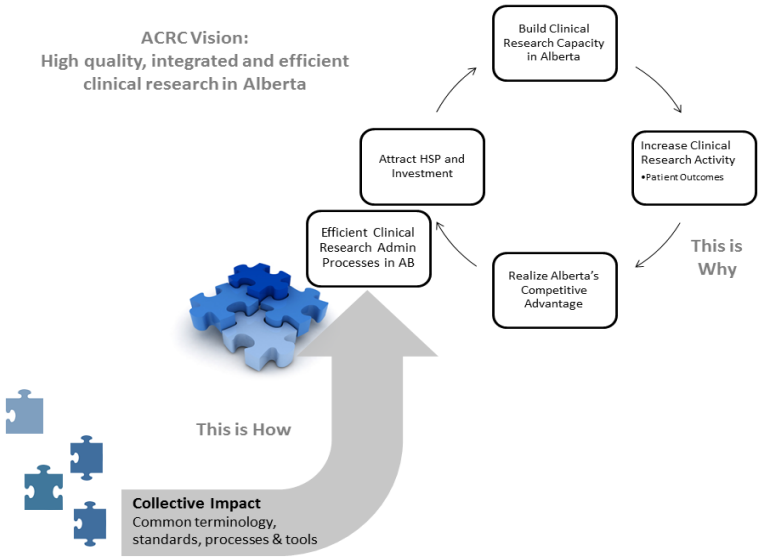


Figure 1: Key Activities and Goals to Achieving the ACRC Vision

The ACRC initiative is comprised of representatives of key stakeholders from across the clinical research system in Alberta. These representatives are actively engaged in the work of the ACRC. The partner organizations include health services providers, universities, the College of Physicians & Surgeons of Alberta, and community researchers. Each of the partner organizations committed to the ACRC by signing letters of commitment addressed to the other partners. Stakeholders who are anticipated to benefit from the ACRC include the provincial government, researchers, patients, and the public.

At the time of this study, the ACRC was comprised of approximately 35 representatives

from the partner organizations and had a hierarchical organizational structure (see Figure 2). It included an Advisory Committee (AC) responsible for setting the vision and strategic direction of the ACRC, an executive committee (EC) tasked with providing oversight for the initiative, as well as three working groups (WGs) whose members undertook specific activities aligned to the ACRC's strategic direction. All EC and WG members were provided with Terms of Reference outlining their roles with respect the initiative. An external organization, Alberta Innovates - Health Solutions (now Alberta Innovates), was assigned the role of secretariat and provided project management and facilitation support.

Evaluation and communication were identified as necessary activities to support the ACRC. A comprehensive framework for an evaluation was developed to monitor and inform the ongoing initiative. An evaluation advisory committee was established to oversee the evaluation, which was conducted by an external consultant with support from internal Alberta Innovates - Health Solutions (AI-HS) evaluators. In addition, a communications strategy was prepared by an external communications consultant with the support of an internal AI-HS communications officer in order to engage and inform the ACRC partners and stakeholders of the ACRC's progress.

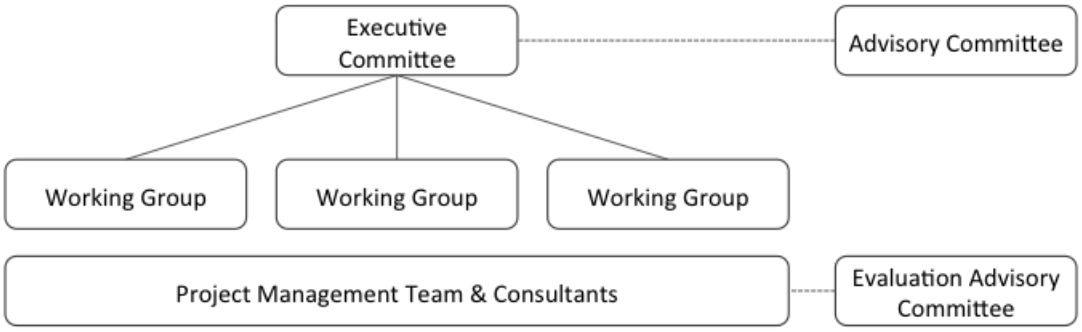


Figure 2: Hierarchical Organization of the ACRC

Position as Researcher

As an applied researcher with a practitioner focus, I have observed a need to inform practice and theory with respect to communication practice in evaluation. An evaluation internship opportunity at Alberta Innovates – Health Solutions (AI-HS) provided the impetus for this study. AI-HS (now Alberta Innovates) was a provincial government organization with a mandate to enhance the health and wellness of Albertans through research and innovation. (The recently consolidated Alberta Innovates has a broader mandate to support research and innovation beyond health.) In addition to funding health research, the organization engaged in collaborations with partners from across the provincial health system, including universities, health services providers, and professional organizations.

As an evaluation intern at AI-HS, I observed how internal evaluators involved program managers in the evaluation process to promote the use of evaluation findings. Further, I noticed how evaluation findings were used (as well as not used) by the organization to inform decisions about its programs and collaborations. My experiences at AI-HS sparked my interest in how

evaluation functions within public sector organizations and how to promote the use of evaluation findings to inform decision-making. It was evident to me that communication was at the core of our work as evaluators and that it was important to understand communication within the contexts of the organizations and initiatives we aim to support to effectively communicate about an evaluation and its findings.

My background in linguistics and community-based research has sensitized me to linguistic and cultural aspects of working with communities. My previous experiences and observations led me to consider interpersonal interactions within and between organizations and the implications of such interpersonal interactions on evaluation. I looked to evaluation practice guidelines and research on evaluation to enhance my practice in the collaborative contexts in which I was working. Although I found information on working with stakeholders, I found limited information to guide evaluation in collaborations and recognized an opportunity to conduct research to understand collaborative, public sector initiatives so as to bridge the gap between evaluation practice and theory.

As a researcher, I situate myself within the pragmatist paradigm because of my concern for the practical implications of my research (Creswell, 2013). With respect to ontology, I align with neither realist nor nominalist perspectives; I believe there is an external social reality and perceptions of this reality may differ among individuals and over time. Epistemologically, I view research as a subjective, interactive process that takes place between the researcher and the object of study. As a researcher, I am part of the research process and must therefore engage in ongoing reflection and documentation of my analysis, including my expectations and biases.

Evolution of this Study

The scope of my research question broadened over time from my original intent. I had

planned to study communication in a SCI with respect to evaluation. The SCI I studied had an evaluation framework that outlined how a developmental evaluation approach would be used to support the SCI. The evaluation framework stated that an embedded developmental evaluator would communicate ongoing evaluation findings with the project management team, executive committee members, AI-HS, and the research community to support the activities of the SCI. Changes to my study sample limited my ability to maintain the original scope of my research question: my access to executive committee members was restricted and the evaluator was excluded from my sample. Consequently, my study sample consisted of the project management team and of working group members. Of further consequence to my study, working group members were not identified in the evaluation framework as recipients of evaluation findings. Over the course of data collection, I learned that the evaluator had had limited interactions with working group members who now comprised the majority of my interview participants. As a result, working group members could not speak to communication with the evaluator.

With the executive committee members and the evaluator no longer included in my study sample, I realized I could not examine communication with respect to developmental evaluation in the SCI. However, evaluators' efforts to communicate in organizations are influenced by the same contextual factors that influence organizational members' efforts to communicate (Alkin, Christie, Rose, 2006). Preskill and Torres (1999a, p.54) describe communication as a "system of roadways" distributing cognitive and affective information in organizations. Evaluators and organizational members navigate these same roadways to disseminate information (Taylor-Powell & Boyd, 2008). My substantive theory was generated from the perspectives of organizational members on communication in general, rather than on communication specific to evaluation. Therefore, the implications of my study are still relevant to evaluators, but also

broader than I originally intended: understanding the communicative interactions of SCI members can inform individuals working in this context generally, not only evaluators. Thus, I will discuss my findings broadly, as they relate to communicative interactions in SCI. Due to the changes that occurred as the study evolved, I have included the implications of this study for evaluation in Appendix I, as that is my area of interest. Further, as discussed in Appendix I, the findings are not limited to communication with respect to developmental evaluation; they can inform evaluation practice in this context regardless of evaluation approach.

Overview

This dissertation is organized into seven chapters. Chapter 2 situates my study with respect to the literature, describes the context for my study, and articulates the need for the present study. Chapter 3 describes the grounded theory methodology and data sources for this study, as well as considerations to enhance methodological rigour and ethical practice. Chapter 4 presents the substantive theory of communication generated by this study of communication in a SCI. Chapter 5 discusses the theory and its implications for practice in SCIs. Chapter 6 presents the limitations of this study, future directions for research, and a conclusion.

Chapter 2. Literature Review

This dissertation describes the development of a substantive theory of communication in a system change initiative (SCI) in the public sector. This chapter presents literature in support of undertaking the present study. First, I describe the broad public sector context to situate my study. An overview is provided of two key drivers that have resulted in public sector reforms and also influenced the field of evaluation: accountability and innovation. These drivers have contributed to a growing trend in the public sector of promoting collaboration as a means to address wicked problems. Second, I outline the practical and theoretical need to understand communication in collaborations generally and SCIs specifically. Addressing existing practice and theory gaps can guide more effective management and evaluation of SCIs. Third, perspectives and theories from the field of organizational communication are summarized, including a meta-theory of current research in the field. The field of organizational communication offers valuable insights into how to approach the study of communication in organizations. Organizational communication researchers highlight the importance of focusing on processes as well as products, context, and key relations in organizations. Finally, this chapter outlines the need for substantive theory specific to SCIs and states my research purpose and question.

The focus of this study is a SCI in Alberta, Canada, established to build capacity in the province for clinical research. To understand this organization, it is important to understand the broader context in which it operates. The following section explores the global public sector context, focusing on two key drivers for reform that have contributed to the emergence of SCIs: accountability and innovation. The field of evaluation has historically sought to support the public sector by being responsive to the sector's changing information needs. Therefore, the

following section also describes how the field of evaluation specifically in Canada has been influenced by global public sector reforms.

The Public Sector Context

The public sector has long wrestled with how to understand and address complex social issues or "wicked problems." Some of these issues include climate change, unsustainable trends in healthcare costs, terrorism and national security, ageing populations, rising rates of opioid poisoning, poverty, and systemic barriers to women and minorities in the labour market – all in an environment where public sector organizations have constrained resources with which to deliver services (Bason, 2017). Rittel and Webber (1973) labelled such issues "wicked" to highlight their malignant, vicious, tricky, or aggressive natures. Wicked problems are ill defined with multiple causal factors and interdependencies (Martin, 2009). There are many, even competing, ways to potentially address wicked problems and likely no solutions (Bason, 2010; Briggs, 2007; Snowden & Boone, 2007). Further, attempts to address wicked problems can change the nature of the problem at hand and necessitate "more iterative, non-linear, and possibly more inclusive approaches" (Bason 2017, p. 28; Martin, 2009).

It has become apparent that new ways of delivering public services are needed because "nineteenth and twentieth-century type organization structures, processes, and competencies will not be sufficient to tackle [these] challenges" (Bason, 2010, p. 10). The public sector must, if possible, reform to address wicked problems (Ansell & Torfing, 2014; Bourgon, 2011; Carlsson, 2004; Colander & Kupers, 2014; Eggers & Singh, 2009; Hassan, 2014; Mulgan, 2009; Parsons, 2010; Seddon, 2008). The following section describes reforms in the public sector in North America over time and how the field of evaluation has been responsive to these changes.

Key drivers for reform in the public sector. Over the past few decades in North America, reforms in the public sector have been made in response to environmental pressures and to demands to address the variable outcomes and rising costs of service delivery (Mathison, 2011; Muller-Clemm & Barnes, 1997). Environmental pressures on the public sector have included resource constraints, developments in communication and information technology, globalization, changing demographics, the need for accurate and rapid government responses to media information requests, and rising public expectations for quality, cost-effective services co-created with (not for) service end users (Bason, 2010; Dunleavy, Margetts, Bastow, & Tinkler, 2005; Hartley & Rashman, 2007; Preskill & Torres, 1999b; Wallace, 2007; Wouters, 2012). Resulting reforms have included the introduction of requirements to demonstrate the quality, cost-effectiveness, and performance of government policies and programs.

Reforms in the public sector have also impacted the field of evaluation (Mathison, 2011; Muller-Clemm & Barnes, 1997). Evaluators support organizational decisions and actions through systematic inquiry and strive to be responsive so as to support the public sector in addressing environmental pressures and demands. Indeed, responsiveness is one of the standards that guide the professional practice of evaluation (Yarbrough, Shulha, Hopson, & Caruthers, 2011). According to the Program Evaluation Standards, evaluators are to "attend to and engage with the needs and characteristics of stakeholders and their contexts" (p. 113). In response to public sector reforms, evaluation approaches have been developed and adapted to assess the quality, cost-effectiveness, and performance of government policies and programs (Mathison, 2011; Muller-Clemm & Barnes, 1997). The following sections examine two key demands of the public sector, accountability and innovation, in relation to developments in the public sector and the field of evaluation.

The demand for accountability. The demand for accountability has been central to the development of the public sector as well as the field of evaluation (Mathison, 2011; Muller-Clemm & Barnes, 1997). Accountability entails "collecting data to inform the public, decision-makers, taxpayers, service users, and other stakeholders about the worth of government policies, programs, interventions, and any other measures taken to impact the state of affairs in the society" (Davies, Newcomer, & Soydan, 2006, p. 166). In Canada, the demand for accountability led to the establishment of the offices of the Treasury Board and the Auditor General in the late 19th century and has been a key driver of the continued evolution of the evaluation policy in the federal public sector (Greene, 2002; Muller-Clemm & Barnes, 1997; Segsworth, 2005).

Early accountability efforts used audit techniques; however, there was a growing demand by the 1960s for the public sector to move beyond audits to also demonstrate the effectiveness of its programs (Greene, 2002). In 1977, the Treasury Board introduced its first evaluation policy, the Policy on Evaluation, outlining expectations for the periodic and objective assessment of the effectiveness and efficiency of federal programs (Segsworth, 2005). Evaluation policy at the federal level was later revised to focus on program rationale and results as well as cost-effectiveness (Office of the Comptroller General, 1981; Segsworth, 2005).

In the 1990s, the widespread adoption of New Public Management (NPM) globally led to additional reforms in the public sector and an increased focus on evaluating performance. NPM is a management philosophy promoting competition, incentives for performance, and the disaggregation of public services and as a result, emphasizing effectiveness, accountability, capacity building, and standardization (Dunleavy et al., 2005; Meyer, 2002). Organizations adopting NPM approaches focused their efforts on achieving clear goals and objectives with quantifiable measures of progress and success so as to justify past action and permit comparison

(Brunsson & Sahlin-Andersson, 2000). There was consequently a "substantial increase in evaluation, reporting, monitoring, inspection, and audit in all public sector organizations" (Chouinard & Milley, 2015, p. 2; Norris & Kushner, 2007). Approaches such as Results-based Management and Managing for Results emerged around this time (Davies et al., 2006). The public sector focus on quantifiable measures was clearly reflected in the Treasury Board of Canada's Policy on Evaluation in 1991, which stated evaluation criteria to judge program performance be established for all Canadian federal programs (Treasury Board of Canada, 1991).

Accountability has been an important driver for the continued development of the evaluation function in the federal public sector. For example, the Treasury Board of Canada's Policy on Evaluation (2009) stated evaluation "supports accountability to Parliament and Canadians by helping the government to credibly report on the results achieved with resources invested in programs" (Section 3.2a). And the focus on accountability continues to the present day with the Treasury Board of Canada's explicitly named Policy on Results (2016), which replaced the Policy on Evaluation (2009). The Policy on Results is influenced by Deliverology, a management approach to monitor and manage performance in public-sector organizations, to deliver on government priorities (Barber, Moffit, & Kihn, 2010).

The demand for innovation. Environmental pressures on the public sector globally (e.g., resource constraints and rising public expectations) have led to a shift in how successful service delivery is defined and to external demands on the public sector to continually innovate to achieve success. Success has come to be understood as encompassing not only the achievement of intended program outcomes, but also "adaptability and sustainability in the face of environmental pressures" (Olson & Eoyang, 2001, p. 145). The 2011-12 annual report of the head of the federal public service in Canada outlines the implication of this broader view of

success for the Canadian public sector: "The public sector of tomorrow will be defined by a number of key characteristics – achieving excellence in all that we do will require our institution be collaborative, innovative, streamlined, high performing, adaptable and diverse" (Wouters, 2012, p. 8).

Innovation is defined as "a process through which organizations identify new opportunities to improve their performance by utilizing existing knowledge, seek new knowledge, make revisions, and implement necessary changes" (Choi & Meyers Chandler, 2015, p. 139). A key characteristic of innovation, as opposed to change in general, is that innovation is a distinct break from past practice. That is, innovation is not the gradual development or improvement of services, but rather the implementation of "*new elements* into a public service – in the form of new knowledge, a new organization, and/or new management or processual skills" (Brown & Osborne, 2005, p. 4).

Public sector managers acknowledge that successful service delivery despite environmental pressures will require continual innovation or changes in how public services are delivered (Austin, 2008; Bess, Perkins, & McCown, 2010; Kerman, Freundlich, Lee, & Brenner, 2012): "Without innovation, organizations do not remain adaptive and responsive to external and environmental changes" (Choi & Meyers Chandler, 2005, p. 139). Prior decision-making approaches in the public sector firmly based in analytics and evidence, such as those supported by NPM, are not well suited to address wicked problems (Parsons 2010; Snowden & Boone, 2007). Referring to the work of Parsons (2010), Bason states, "recognising that many of the challenges facing public organizations are akin to complex, wicked problems, runs counter to the notion that accumulating and applying rigorous evidence of 'what works' is the key to public service reform" (2017, p. 30). When it comes to wicked problems, solutions do not exist; in the

face of uncertainty and ambiguity, managers must instead continually discover effective courses of action, i.e., they must innovate (Bason, 2017; Michlewski, 2015; Snowden & Boone, 2007).

The public sector's recognition of the nature of wicked problems has been accompanied by a shift from viewing service delivery as being the sole responsibility of the public sector to administer or manage, to viewing service delivery as the responsibility of many organizations and agencies that often span sectors to involve governments, non-profits, and businesses (Agranoff, 2007, 2012; Alford, 2009; Bason, 2017; Goldsmith & Eggers, 2004; Greve, 2015; Hartley, 2005; McGuire & Agranoff, 2011; O'Leary & Bingham, 2009; Parsons, 2010; Ansell & Torfing, 2014). As Bryson, Crosby, and Stone (2006) state, "issues that we previously thought about in fairly narrow terms, such as health care, are now being redefined as issues of economic competitiveness, industrial policy, education policy, tax and expenditure policy, immigration policy, and more" (p. 45). Wicked problems are therefore beyond the purview of any single organization and inherently require the adoption of collaborative approaches. Consequently, a view of networked or collaborative governance in the public sector has emerged (Bason, 2017; Goldsmith & Eggers, 2004). The following section explores the increasing trend of collaboration in the public sector to address wicked problems.

Collaboration in the public sector to address wicked problems. An increasing trend of collaboration across organizations has emerged as a means to innovate so as to enhance public service delivery and to address wicked problems (Agranoff & McGuire, 2003; Appleton-Dyer et al., 2012; Brown & Osborne, 2005; Bryson, Crosby, & Bloomberg, 2014; Fitzpatrick, 2012; Hartley & Rashman, 2007, p. 279; Kettl, 2015; Leischow et al., 2008; O'Leary & Vij, 2012; Popp, Milward, MacKean, Casebeer, & Lindstrom, 2014; Rainey, 2009; Rashman, Withers, & Hartley, 2009). Previous approaches to public service delivery such as those that emerged

through NPM reforms have been inadequate to address wicked problems and have, in fact, hindered collaboration in the public sector (Dunleavy et al., 2005). For example, Dunleavy et al. (2005) observe that, "disaggregation and competition automatically increased the numbers of administrative units and created more complex and dynamic interrelationships among them" (p. 476).

Prior to further exploring collaboration in the public sector, it must be noted that multiple terms for this and similar concepts exist in the literature and in practice, including; "coordination, cooperation, coalition, collaboration, network structures, collaborative public management, collaborative governance, civic engagement, alliances, mergers, and partnership" (O'Leary & Vij, 2012, p. 517). It is not my intent to differentiate among these concepts for the purposes of this study. I have instead adopted the broad definition of collaboration proposed by Bingham, O'Leary, and Carlson (2008) and adapted from Agranoff and McGuire (2003) to encompass relationships among organizations within the public sector as well as across sectors:

> Collaborative public management is a concept that describes the process of facilitating and operating in multi-organizational arrangements to solve problems that cannot be solved or easily solved by single organizations. Collaborative means to co-labor, to achieve common goals, often working across boundaries and in multi-sector and multi-actor relationships. Collaboration is based on the value of reciprocity and can include the public. (p.3)

For the purpose of this study, I refer to collaborations led by the public sector with the explicit goal of addressing wicked problems at the system level as system change initiatives (SCIs). Wicked problems affect many stakeholders; therefore, addressing them requires collaboration among stakeholders. The term "system change initiative" highlights the importance

of viewing the multiple stakeholders involved in a SCI collectively as a system of interdependent components comprised of individuals, programs, organizations, etc. Change must therefore be considered at the level of the system. Further, as systems are hierarchical in nature, it also highlights the importance of considering the micro systems embedded within the system of study as well as the macro systems in which it is embedded (Klein & Kozlowski, 2000). The collaboration I studied aims to enact change at the level of the province of Alberta and can be viewed as a system embedded within broader national and international systems. At the same time, the organizations that comprise this collaboration could also each be viewed as systems.

The increasing trend of collaboration in the public sector has included collaborations that span government organizations within the public sector as well as collaborations that span sectors. The following subsections describe the increasing trends of within-sector and cross-sector collaborations to address wicked problems.

Collaboration within the public sector. There has been a renewed focus in the public sector on enhancing the coordination of policies and programs across government organizations to support innovation to enhance public service delivery and address wicked problems (6, 2004; Bakvis & Juillet, 2004; Davis, 1997; Jarvis & Thomas, 2012). These efforts have included "whole of government" or "horizontal management" approaches developed to counter some of the challenges resulting from NPM reforms, particularly the fragmentation of public services resulting from disaggregation (Bakvis & Juillet, 2004; Christensen & Lagrid, 2007; Humpage, 2005). Whole of Government encompasses various means by which "public services agencies [work] across portfolio boundaries to achieve a shared goal and an integrated government response to particular issues" (Christensen & Lagrid, 2007, p. 1060).

First introduced in the UK in the 1990s as "Joined-up Government," the Whole of

Government approach has been adopted in other jurisdictions including Australia and New Zealand as well as in Canada for wicked problems including poverty and climate change (Bakvis & Juillet, 2004). For example, the Whole of Government approach is evident in the Canadian government's Policy on Management, Resources and Results Structures (2010), designed to provide "a common government-wide approach to the identification of programs and to the collection, management, and reporting of financial and non-financial information relative to those programs" (Context, section 3.1). One example of a collaboration spanning public sector organizations is the Alberta Health Research and Innovation Strategy, a ten year strategy to improve health services across Alberta through the coordinated efforts of provincial health services delivery structures, postsecondary institutions, and the provincial research and innovation system (Government of Alberta, 2010).

Collaboration across sectors. In recognition of the fact multiple organizations are "involved in, affected by, or have some partial responsibility to act on public challenges," there is also an increasing trend in the public sector to collaborate across the public, private, and non-profit sectors (Agranoff & McGuire, 2003; Bryson et al., 2006, p.44; Goldsmith & Eggers, 2004; Rainey, 2009). Cross-sector collaborations entail "the linking or sharing of information, resources, activities, and capabilities by organizations in two or more sectors to achieve jointly an outcome that could not be achieved by organizations in one sector separately" (Bryson et al., 2006, p. 44). One example of a collaboration spanning sectors and led by the public sector is the initiative that serves as the focus of this study: the Alberta Clinical Research Consortium (ACRC). The ACRC aims to build capacity for clinical research in Alberta through the coordinated efforts of health services providers, universities, physicians, and community research clinics.

With the increasing trend of collaborations, the public sector is shifting "from government to governance" (O'Leary, Gazley, McGuire, & Bingham, 2009, p. 1). That is, rather than administering or managing public services, public managers are leading, facilitating, or participating in collaborations (Bason, 2010). However, it is important to note that the three perspectives on the role of the public sector (i.e., administering, managing, or governing public service delivery) are not clearly delineated (Agranoff, 2014; Bourgon, 2011; Christensen, 2012; and Waldorff, Kristensen, & Ebbesen, 2014); elements of each of these perspectives exist concurrently, "add[ing] to the growing complexity or complicatedness of the public service system itself" (Bason, 2017, p. 213).

SCIs are increasingly promoted in the public sector to address wicked problems and both practitioners and researchers recognize the importance of communication in effectively managing and evaluating SCIs. However, there exists a gap between practice and theory. The following section examines the practical and theoretical need to understand communication in collaborations generally and the need for a substantive theory of communication in SCIs specifically.

The Practical and Theoretical Need to Understand Communication in SCIs

Collaboration has been a growing area of interest in the literature over the past decade (Bryson et al., 2015). Although practitioners recognize the importance of communication with respect to collaboration, the literature lacks a comprehensive theory to guide communication in collaborations generally. SCIs constitute a particular type of collaboration, i.e., collaborations led by the public sector that aim to address wicked problems. A substantive theory is required to guide communication in the context of SCIs specifically. The following subsections describe how practitioners, including evaluators, and researchers recognize the importance of

communication in collaborations.

Communication a core competency for collaboration practice. The ability of managers to effectively communicate is recognized as an integral component of collaborative practice in the public sector. Getha-Taylor (2008) sought to empirically define the collaborative competencies of effective federal public sector managers in the US and concluded, "the most basic and critical factor of collaboration is interpersonal understanding" (p. 118). Similarly, O'Leary, Choi, and Gerard (2012) surveyed senior executives in the US public service and identified the most important skills for successful collaboration to be personal characteristics and interpersonal skills, over and above strategy and expertise. Among the collaborative competencies identified by researchers, communication emerges as a core competency for collaboration (e.g., Foster-Fishman, Berkowitz, Lounsbury, Jacobson, & Allen, 2001; Goldsmith & Eggers, 2004).

The field of evaluation also recognizes the importance of the personal and interpersonal factors to evaluation practice (Johnson et al., 2009). Positioning organizations for successful collaboration requires that effective means of communication be in place to support relationship building and the ongoing generation and sharing of information (Cousins, Goh, Clark, & Lee, 2004; Preskill & Torres, 1999b). In fact, interpersonal practice is one of the five competency areas for Canadian evaluators, encompassing skills such as the ability to effectively communicate (Canadian Evaluation Society, 2010). In spite of their recognized importance, personal and interpersonal skills are under-examined in the evaluation literature: "evaluation textbooks routinely acknowledge the challenge of situational politics but rarely provide specific strategies or skill building for responding to them" (King & Stevahn, 2013, p. 9). Therefore, a challenge for evaluators tasked with supporting collaborations is incomplete understanding of

how to optimize communication across organizational boundaries (Suárez-Herrera et al., 2009).

Communication a core aspect of collaboration frameworks. We currently lack a formal, comprehensive theory of collaboration to inform practice in the public sector although a number of collaboration frameworks have been proposed over the past decade (e.g., Agranoff, 2007, 2012; Ansell & Gash, 2008; Bryson et al., 2006, 2015; Emerson, Nabatchi, & Balogh, 2012; Koschmann, Kuhn, & Pfarrer, 2012; Provan & Kenis, 2008; Thomson & Perry, 2006). These frameworks draw upon multiple disciplines, including "organization studies, public administration, leadership, strategic management, conflict management, collective action, policy studies, planning and environmental management, network theory, and communication" (Bryson et al., 2015, p. 657). Differences among existing frameworks include the aspects of collaboration and conflicts examined, the types of collaborations considered, and how the relationship between structures and processes are viewed. Overall, however, existing frameworks highlight the complexity of collaboration in the public sector and the need for researchers and practitioners to adopt a systems perspective to understand the dynamic and inter-related components of collaboration (Berardo, Heikkila, & Gerlak, 2014; Bryson et al., 2015).

Further empirical research is needed to advance our understanding of communication with respect to collaboration. Recent empirical research has advanced our understanding of various components of collaboration in the public sector, including effective leadership (e.g., Clarke & Fuller, 2010; Morse, 2010; Ospina & Foldy, 2010), collaboration outcomes (e.g., Innes & Booher, 2010; Popp et al., 2014), and collaboration challenges (e.g., Vangen & Huxham, 2012). Although existing frameworks recognize communication as a key component of collaboration (Bingham et al., 2008; Creighton, 2005; Leach, 2006; O'Leary & Vij, 2012; Roberts, 2002), there are few empirical studies of communication in the public sector (Bryson et

al., 2015). Empirical studies of communication in collaborations would advance our understanding of this phenomenon as well as inform practice, thereby bridging the existing practice and theory gap.

A practice and theory gap with respect to communication in collaborations also exists in the field of evaluation, impeding evaluators' efforts to be responsive to the increasing trend of SCIs in the public sector (Briggs, 2007; Hargreaves, 2010; Leischow et al., 2008; Woodland & Hutton, 2012). There are few empirical studies of the influence of evaluation in collaborations (Appleton-Dyer et al., 2012; Mark & Henry, 2004). Shulha, Whitmore, Cousins, Gilbert, and al Hudib (2016) have recently introduced eight principles of collaborative evaluation (i.e., evaluation conducted collaboratively with stakeholders) that were generated and validated by practicing evaluators. Whereas the researchers do not explicitly identify communication as a key principle, the importance of effective communication is implied in their principles, including: clarify motivation for collaboration, foster meaningful relationships, and develop a shared understanding of the program. It must be noted that Shulha et al.'s collaborative approach is not specific to collaborative organizations. Empirical research and a comprehensive theory of communication in SCIs are needed to guide evaluation practice in this specific context.

Organizational Communication Approaches to the Study of Organizations

SCIs in the public sector are an emergent type of organization that remains under-examined in the literature. As communication is at the core of organizations, effectively managing and evaluating SCIs requires that we understand the communication process in this context. As discussed, we currently lack a theory of communication in SCIs to inform practice; however, the field of organizational communication provides insights into how to approach the study of communication in organizations. Adopting an organizational communication approach

entails studying communication to understand organizations and organizational processes such as social structures, knowledge, and power (Deetz & Eger, 2014). The following sub-sections describe perspectives on organizations and communication as well as key formal theories of organizational communication and a meta-theory of the field as whole.

Organizational communication perspectives. This sub-section describes major perspectives in the field of organizational communication to situate the reader to how organizations and communication have been viewed in the literature. The traditional post-positivist perspectives maintain communication is a phenomenon that occurs *within* organizations. Researchers adopting interpretive perspectives, on the other hand, maintain that communication *constitutes* organizations. Critical perspectives are also briefly introduced, although they are less relevant to the present study. These three perspectives and their implications for understanding SCIs are explored below.

Post-positivist perspectives on organizational communication. Post-positivist perspectives in the field of organizational communication developed from earlier functionalist and positivist perspectives promoting a decontextualized "container" model of organizations (Axley, 1984; Kramer & Bisel, 2017; Nicotera, 2009). These perspectives prevailed from the early to mid 20th century when bureaucracy and rationalization were popularized in Western society (Eisenberg, 2009). Weber (1947) outlined the principles of bureaucratic organization as authority, specialization, and regulation (Littlejohn, Foss, & Oetzel, 2017). Researchers from the post-positivist perspective therefore maintain an organization has delineated authority, defined membership and responsibilities, common rules to guide behaviour, distinct structure, and boundaries separating the internal from the external environment (Axley, 1984; Kramer & Bisel, 2017; Putnam & Mumby, 2014). Post-positivist researchers aim to objectively measure and

relate variables pertaining to an organization and its outcomes, typically using quantitative methods to do so (Corman, 2000; Kramer & Bisel, 2017).

Post-positivist perspectives of organizations maintain a mechanistic, conduit view of communication (Axley, 1984). Theoretical work in this area has promoted communication models where information is transmitted or exchanged between individuals within organizations (Eisenberg, 2009; Nicotera, 2009). According to such models (e.g., Berlo, 1960), a sender or "first interpreter" encodes meaning in a message that is then transmitted via a channel and decoded prior to arriving at its final destination, the receiver or "second interpreter" (Nicotera, 2009). Miscommunication is theorized to result from technical issues such as physical noise or psychological biases (Kramer & Bisel, 2017). A post-positivist perspective of communication was long promoted by practitioners supporting communication practices in organizations, such as public relations and marketing experts (Cheney, Christensen, & Dailey, 2014).

Post-positivist approaches to organizational communication become inadequate when we consider the complexity of modern organizations. The nature of work, technology, and organizations has changed significantly in the 21st century with increasing globalization, developing technologies, and changing labour movements and economic conditions (Barker, 2014; Eisenberg, 2009; Putnam & Mumby, 2014). For example, collaborations such as SCIs where membership and boundaries are less defined and may change over time present a challenge to post-positivist approaches; such collaborations defy attempts to be objectively viewed as containers. Although linear models of information transmission or exchange may be sufficient to guide day-to-day communication in organizations, new perspectives on the relationship between communication and organization have emerged in the field of organizational communication that are more appropriate for the study of organizations such as

SCIs. The following section explores the emergence of interpretive perspectives of organization communication.

Interpretive perspectives on organizational communication. In the 20th century, the humanities and social sciences experienced a marked shift referred to as the *linguistic turn*, which greatly influenced the field of organizational communication. The linguistic turn proposed that through communicative interactions, language *constitutes* cognition, behaviour, and objects in the material world (Ashcraft, Kuhn, & Cooren, 2009). This constitutive perspective presented a distinct challenge to the previously held perspective of language as representative of cognition, behaviour, and objects existing in the material world (Axley, 1984; Jameson, 1984). Further, communication came to be viewed not only as the means by which reality is constituted, but also "how we understand and explore our mediated relationship to the world and each other (Mumby, 2011, p. 1149). The linguistic turn opened new possibilities to explore the phenomenon of organizing (Deetz & Kersten, 1983; Pacanowsky & O'Donnell-Trujillo, 1982) and to reconsider Cartesian dualism with respect to the relationships between, for example, subjects and objects or individuals and organizations (Mumby, 2014).

The linguistic turn thereby contributed to an evolution in the field of organizational communication from post-positivist perspectives of communication as a phenomenon within organizations to interpretive perspectives of communication as the means of organizing (Ashcraft et al., 2009; Putnam, 1983; Sotirin, 2014). Interpretive researchers view communication as "the process of symbolic interaction that creates meaning or understanding about organizational experiences for its members" (Kramer & Bisel, 2017, p. 18). The implication of this perspective is that we need to examine language and individuals' interactions to understand how organizations and organizational phenomena are constituted and change over

time. By adopting an interpretive perspective, researchers have explored the inter-subjective interpretations of organizational experiences developed by individuals as well as explored topics such as organizational culture and workplace relationships (Kramer & Bisel, 2017; Putnam & Mumby, 2014). The interpretive perspective is amenable to the study of emergent types of organizations such as SCIs.

There has been a long held consensus among researchers, educators, and practitioners in the field of organizational communication that organizations are constituted through communication, although post-positivist research has continued in the field (Corman, 2000). An implication of interpretive perspectives is that communication in an organization is not simply the mechanistic transmission of messages within a container. Rather, the study of communication in an organization must employ methods that capture its members' inter-subjective interpretations of their communicative interactions. Further, these perspectives highlight the very centrality of communication to organizations. In short, communication must be the starting point from which to begin to understand emerging types of organizations such as SCIs. In spite of the consensus in the field around communication as a constitutive process, this process is neither conceptually nor empirically understood and is frequently overlooked (Deetz & Eger, 2014; Putnam, Nicotera, & McPhee, 2009). Deetz and Eger observe that the focus in the field has often been on organizational products (e.g., rules, boundaries, structures) rather than on processes and conditions with respect to the interactions that constitute organizational experiences and institutions. More research is therefore needed to understand communication and the constitutive process of organizing.

Critical perspectives on organizational communication. Developments in the field since the linguistic turn have also led to the emergence of critical perspectives of organizational

communication. Whereas critical perspectives are less relevant to the present study, it should be noted that they comprise an important and growing area of research in the field of organizational communication. These perspectives draw upon the traditions of critical theory and neo-Marxism as well as postmodernism and post-structuralism (Mumby, 2014). Critical perspectives consider organizations to be "systems of economic and political exploitation in which individuals in positions of power or influence use that power in ways that benefit themselves over other organizational members" (Kramer & Bisel, 2017, p. 20; Putnam, 1983). Critical researchers therefore explore issues including identity, race, gender, knowledge, change, control, and resistance with respect to organizations, contributing to the diversity and richness of theoretical work in the field.

The following section summarizes four formal theories that have influenced research and theory development in the field of organizational communication as well as a meta-theory of current research in the field. These theories are presented to highlight key conceptualizations with respect to communication, organizing, and organizations. These conceptualizations should inform studies of communication in organizations, such as the selection of methodology and methods to develop substantive theories.

Organizational communication theories and meta-theory. There are a great many organizational communication theories adopting different perspectives and methodologies and addressing diverse aspects of organizational life (Craig, 1999). The diverse aspects of organizational life considered in this field include peer communication, supervisor-subordinate communication, channels and structures, culture, leadership, decision-making, conflict, power and resistance, technology, diversity, and globalization (Kramer & Bisel, 2017). My research interest is communication specifically in the context of a SCI. The organizational communication

theories described in this section are formal theories, rather than substantive theories. Substantive theories are specific to a group and/or place (e.g., a specific SCI). A formal theory draws upon numerous substantive theories and is therefore more abstract and more broadly applicable to other groups and/or places (Corbin & Strauss, 2008; Glaser & Strauss, 1967). A formal theory of communication would be applicable not only to the SCI I studied, but potentially to cross sector collaborations in general. Formal organizational communication theories are reviewed here to identify key conceptualizations of organizations and organizing in the field and to identify considerations for the study of communication.

This section describes four formal theories that have spurred research and theory development in the field of organizational communication in order to highlight ways in which organizations are conceptualized and studied: Weick's Theory of Organizing, Structuration Theory, Systems Theory, and Network Theory. The final sub-section outlines a recently proposed meta-theory for the field of organizational communication that is inclusive of its diverse perspectives, methodologies, and aspects as well as describes the need in the field of organizational communication for substantive theories of collaborations, which is the purpose of this study.

Theory of organizing. The Theory of Organizing (Weick, 1979) has influenced many interpretive theories in the field of organizational communication (Littlejohn et al., 2017). Weick's theory emphasizes the process of *organizing*, rather than the products of *organization,* and focuses on the communicative basis for this process (Deetz & Eger, 2014; Littlejohn et al., 2017). According to Weick's theory, individuals organize in order to address equivocalities that are triggered in response to events or changes in their environments (Dunn, 2009). Equivocality refers to the "uncertainty, complication, ambiguity, and lack of predictability" that individuals

encounter daily in their environments (Littlejohn et al., 2017, p. 304). Essentially, it is through communication that individuals reduce equivocality and organize.

Weick proposes communication is comprised of the sub-processes of *enactment*, i.e., identifying and bracketing the source of equivocality so as to focus on an issue, *selection*, i.e., selecting information relevant to the issue, and *retention*, i.e., retaining information that informs ongoing organizational operation (Dunn, 2009). Individuals draw upon *assembly rules* that exist in their organizations to determine how to reduce the equivocalities they encounter. They then apply these rules to engage in *behaviour cycles* to facilitate the sub-processes of enactment, selection, and retention. These elements are inter-related and work together as a system (Littlejohn et al., 2017).

A key concept proposed by Weick with respect to organizing is *sensemaking*. Weick (1995) describes sensemaking as the ongoing social process used to reduce equivocality with respect to discrepancies in our routines so as to come to consensus on how to understand our experiences and how to then reasonably act. Sensemaking is "the ongoing retrospective development of plausible images that rationalize what people are doing" (Weick, Sutcliffe, & Obstfeld, 2005, p. 409). In addition to being retrospective, sensemaking is also constrained by the environment. Weick's theory of organizing therefore highlights the need to focus on the process of organizing through communication, particularly on how individuals make meaningful sense of their experiences and actions in their environments.

Structuration theory. Structuration theory is a highly influential theory in the broader social sciences (Giddens, 1984) and has been applied and elaborated upon in the field of organizational communication (Poole, Seibold, & McPhee, 1985). Structuration theory has been applied to empirically study a number of aspects of organizations, including identity, culture,

group decision-making, and technology use in organizations. Further, in the field of organizational communication, structuration theory has informed the development of the Four Flows model (McPhee, Poole, & Iverson, 2014). The prominence of this theory is attributable to its focus on micro level interactions (e.g., those among individuals) and its ability to relate these to the macro level of the organization (McPhee et al., 2014). In so doing, structuration theory brings together concepts that are typically viewed in opposition to one another in theoretical debates: e.g., stability and change, agency and structure, interaction and institution (McPhee et al., 2014).

Structuration Theory states that, "human action is a process of producing and reproducing various social systems through ordinary practice" (Littlejohn et al., 2017, p. 306). Two key aspects of this theory are: (1) *systems of observable behaviour among individuals* that enable and constrain their actions and (2) *structures (e.g., rules, roles, expectations, norms, communication networks)* that individuals draw upon to act and that are not directly observable (McPhee et al., 2014; Kramer & Bisel, 2017). Communicative interactions result in the continual production, reproduction, and transformation of structures, which in turn mediate communicative interactions – a phenomenon referred to as the "duality of structuration" (Eisenberg, 2009; McPhee & Poole, 2009). In essence, organizations exist as a consequence of communication: "Because the social system only exists when its members enact or participate in it, it must be continually reproduced or recreated regularly" (Kramer & Bisel, 2017, p. 156). Power and dominance dimensions are also addressed in this theory: inequalities exist among individuals with respect to their access to spatial, temporal, material, and symbolic resources (Giddens, 1984; McPhee et al., 2014, p. 87; McPhee, 1988). Structuration theory therefore highlights the need to simultaneously focus on communicative interactions at the micro level of institutions and emergent structures at the

macro level of institutions.

Network theory. Network theory has long been, and continues to be, an area of rich empirical and theoretical development in the field of organizational communication (Barker, 2014). Generally, network theory proponents maintain that the basic unit underlying organizations is the connection between two nodes (e.g., individuals). Researchers study the emergent patterns of these connections to identify clusters of relationships and to explain how networks are constituted (Littlejohn et al., 2017). Networks are therefore "social structures crafted by communication among individuals and groups" (p. 313). Networks are often visually represented as nodes linked by edges representing different types of relations.

Various aspects of communication can be explored using global network measures (e.g., network size, connectedness) and local measures of network attributes of individual nodes (e.g., centrality with respect to the network), including the strength and connectivity of communication paths, key individuals in the communication process, and divisions and clusters in the network (Bandyopadhyay, Rao, & Sinha, 2011; Hanneman & Riddle, 2011; Haythornthwaite, 1996). Empirical work using network theories has examined issues such as communication using technology (e.g., Cho, Trier, & Kim, 2005), group decision-making (e.g., Brown & Miller, 2000), employee satisfaction and performance (e.g., Marshall & Stohl, 1993), and collaboration (e.g., Cross, Dickmann, Newman-Gonchar, & Fagan, 2009; Doerfel & Taylor, 2004; Taylor & Doerfel, 2003).

Network theories and methodologies continue to evolve in the field of organizational communication to study more complex types of organizations, supported by advances in computational abilities (Shumate & Contractor, 2014). An emerging focus for network researchers is the concept of a multi-dimensional network. Multi-dimensionality describes a

network that is multi-modal and multi-plex (Contractor, 2009; Contractor, Monge, & Leonardi, 2011). Multi-modal networks include more than one type of node (e.g., individuals, documents, organizations, context or content elements), whereas multi-plex networks include more than one type of relation (e.g., flow of messages, organizational affiliation). Multi-dimensional networks are therefore better suited to capture organizational complexity (e.g., new ways in which people are organizing) and to address a common criticism of network theory that it does not adequately address context and communication content (Shumate & Contractor, 2014). Network theories therefore highlight the importance of individual-level interactions and relations to the emergence of communication networks as well as the need to consider context.

Systems theory. Systems theory has been applied in many fields of study, from biology to engineering, as a way to conceptualize complexity and has been highly influential in the field of organizational communication (von Bertalanffy, 1968; Craig, 1999; Krippendorff, 1977; Monge, 1973, 1982; Poole, 2014). The term "systems theory" captures a rich diversity of theories, methodologies, assumptions, and interpretations (Poole, 2014). Core to systems theory is the understanding that a system is "a set of interdependent components that form an internally organized whole that operates as one in relation to its environment and to other systems" to attain explicit goals as well as implicit goals such as survival and adaptation (Poole, 2014, p. 50). Examples of components include individuals, programs, divisions, and organizations. A system's distinct structures (e.g., communication networks) and properties (e.g., culture) emerge through the interaction patterns of its components; therefore, systems cannot be simply reduced to their components (Burrell & Morgan, 1979). Additionally, systems are nested within systems, forming hierarchies from micro, meso, to macro (Klein & Kozlowski, 2000).

Systems monitor and self-regulate via feedback loops with their environments to

maintain stability as well as to change over time (Farace, Monge, & Russell, 1977; Kast & Rosenzweig, 1972). Inputs from the environment enter systems where they are transformed and later exported into the environment (Katz & Kahn, 1978). Systems theory therefore not only addresses how systems are constituted, but also "helps explain how changes or innovations enter organizations" (Kramer & Bisel, 2017, p. 341).

Poole (2014) reviewed existing systems literature in the field of organizational communication and observed a lack of empirical research on highly complex organizations such as SCIs. He further observed that although systems theory continues to exert a strong influence on the field, it remains an area of speciality and findings are generally ineffectively communicated with other scholars in the field. Systems theory highlights the need to reconsider the nature of environments as being nested, to examine feedback loops with the environment over time and to use methods that capture the dynamic interdependencies among components.

Politically Attentive Relational Constructionism. Meta-theories critically examine theoretical frameworks and theories from a field of study to conceptualize the field and facilitate discussions around central issues using a common vocabulary (Paterson, Thorne, Canam, & Jillings, 2001). The field of organizational communication is highly diverse, fragmented, and contested (Deetz & Eger, 2014), leading some researchers to promote the establishment of common ground among the varied perspectives in the field (Corman, 2000). Putnam and Mumby (2014) state that, "while a field does not need to privilege a specific perspective, it does need to be self-reflexive about its disciplinary identity" as well as about researchers' epistemological assumptions (p. 4). This section describes a meta-theory proposed for the field of organizational communication that is inclusive of the post-positivist, interpretive, and critical perspectives and the theories described in previous sections: Politically Attentive Relational Constructionism

(Deetz, 2009; Deetz & Eger, 2014).

Politically Attentive Relational Constructionism (PARC) maintains that organizing and organizations are the result of relational constructionism. A central characteristic of relational constructionism is that individuals are embedded in, not separate from, the material world (Deetz & Eger, 2014). The material world with which individuals engage and which, in turn, engages them is comprised of internal, social, and external elements, termed *relational constructions*. PARC uses the term *subject-engagement* to refer to individuals' "manner of acting in and attending to the world" (p. 33) and maintains that it is through subject-engagement that organizational phenomena and products are realized. That is, interactions between individuals and elements of the material world result in relationships being developed, contested, and reproduced as well as in institutionalized products (e.g., practices, technologies, organizational forms). According to PARC, language, or communication, is "core to the process of co-constituting the indeterminate and ambiguous internal, social, and external world into specific objects and events" (p. 33).

According to Deetz and Eger (2014), theories in the field of organizational communication can be reconceptualised using PARC according to the type of relational constructions the theories address. PARC outlines six types of relational constructions that comprise organizational life and that co-occur and interact dynamically with each other: "(1) the inner world, (2) the world of specific others, (3) the world of general others, (4) the external world of elements, (5) the past/future vortex, and (6) the presence of limited resources and interdependence" (p. 34). Subject-engagement occurs under conditions of inequality, needs, and historical events, adding a political dimension to the study of constitutive processes. Politics are a key consideration in PARC and can be examined in relation to each of the six relational

constructions. For example, the constitution of "the world of specific others" entails politics of identity and recognition. Table 1 below describes the research focus aligned to each relational construction and its related political issue.

Table 1: Relational Constructions According to the PARC Metatheory

Type of Relational Construction	**Focus of Empirical Research**	**Political Issue**
Inner world	Emotions and affective states (e.g., motivation, satisfaction, happiness) and organizational mood	Authenticity
World of specific others	Identities and socialization (e.g., access to specific identities, rights and responsibilities in relation to identities)	Identity and recognition
World of general others	Rules and norms (e.g., legitimacy of rules and compliance, intercultural interactions)	Order
External world of elements	Organizational knowledge (e.g., knowledge production, decision-making)	Truth
Past/future vortex	Narratives of the past, present, and future and of how they connect (e.g., organizational narratives, group-based narratives)	Life narratives
Presence of limited resources and interdependence	Resources (e.g., distribution of resources, rights and justice)	Distribution

Implications of PARC include the need for researchers studying organizational products to consider the communicative processes underlying constructions as well as the influence of context, particularly politics. PARC provides a schema for conceptualizing research in the field of organizational communication organized according to six types of relational constructions and a vocabulary with which to facilitate discussions across this diverse field: "Focusing on relational construction enables an investigator to hold these products constant, understand the processes by which such constancy can occur, and investigate the communicative co-construction of them" (Deetz & Eger, 2014, p. 36). PARC also highlights the need to adopt a comprehensive view of organizing. Action with respect to one relational construction may in turn

affect one or more other constructions. Researchers must therefore take into account co-occurring and dynamically interacting constructions (Deetz & Eger, 2014).

As discussed with respect to formal organizational communication theories and the PARC meta-theory, the organizational communication literature highlights the importance of focusing on processes over time as well as products, capturing the dynamic interactions and perspectives at the micro level that lead to emergent macro structures, taking context into consideration, and examining key relations in organizations (e.g., individuals' relations with their inner worlds, with the world of specific others, etc.). The following section outlines the need for theory focused on communication as a process within collaborations and grounded in the practices of community members. Substantive theories of communication in collaborations would contribute to bridging the existing practice and theory gap with respect to communication in SCIs in the fields of organizational communication and evaluation.

Need for Substantive Theory of Communication

Deetz and Eger (2014) draw attention to a growing focus in the field of organizational communication on collaboration as an emerging way in which individuals interact and organize in response to environmental pressures. Consequently, the researchers observe that, "the role of collaborative organizing could continue to become more consequential in organizational communication research in futures decades, given our contemporary times of rapid changes, interdependence, and pluralism" (p. 43). Concerns raised about research on collaboration include that this field of study is overly fragmented with little consensus and does not appear to have broadly influenced researchers or practitioners (Bushouse et al., 2011; Nesbit et al., 2011; O'Leary & Vij, 2012). Another observed shortcoming of the field has been its limited focus on constitutive processes and on politics in relation to these processes in favour of a focus on

phenomena and products, e.g., structures, roles (Deetz & Eger, 2014). Putnam et al. (2009) observe, "we say that communication is constitutive of organizations without fully understanding what this means, conceptually or empirically (p. 5).

Further, there is a need for theory development specific to the public sector context. Organizational research to date has mainly focused on the private, for-profit sector (Choi & Meyers Chandler, 2015; Nasi, Cucciniello, & Degara, 2018; Rashman et al., 2009; Salk & Simonin, 2003). Practice and theory informed by research conducted in the private sector is not necessarily transferrable to the public sector. The public sector differs from that the private sector in its "lack of competition, the influence of politics, and the multiplicity of stakeholder interests" (Choi & Meyers Chandler, 2015, p. 142) as well as in having "a broader scope of concern, such as for general public interest criteria" (Rainey, 2009, p. 75). Contextual factors also influence the process and consequences of evaluation and must be taken into consideration when designing and conducting evaluations (Alkin et al., 2006; Patton, 2008; Rog, 2012). As Dahler-Larsen (2009) observes, "the same evaluation model or approach would probably work differently depending on the political, strategic, cultural, and organizational conditions under which it is applied" (p. 312).

Ideally, practice and theory should inform each other and thereby mutually advance (Rog, 2015; Schwandt, 2014). Theory plays a critical role in "advancing more systematic and contextually relevant" practice (Christie, 2012, p. 1). Empirical research on practice plays an equally critical role in developing theories that are meaningful to practitioners and that avoid "overgeneralized and groundless prescriptions [that] do more harm than good" (Tsang, 1997, p. 84). A focus on practice will help target research efforts on questions of relevance to practitioners, resulting in theories that are more likely to be adopted by practitioners and a

strengthened relationship between practice and theory (Schwandt, 2014).

Research Purpose

Lewin (1945) highlighted the need for good theory to contribute to literature as well as to practice, claiming that, “nothing is as practical as a good theory" (p.129). The purpose of this study is to bridge the existing gap between practice and theory by developing a substantive theory of communication in a SCI in the public sector. The main research question of this study is: What is the communication process among individuals engaged in a SCI in the public sector? This study presents an opportunity for practice to inform theory and for the resulting theory to inform future practice by providing a substantive theory of communication in a SCI that is grounded in empirical evidence.

Chapter 3. Methodology

This chapter presents the study design used to generate a theory of communication in a SCI. The first section of this chapter introduces grounded theory (GT) methodology and presents the specific approach to GT used to inform the study design: Corbin and Strauss (2008). The characteristics of this specific GT approach that make it suitable to address the purpose of this study include its focus on processes and its emphasis on capturing context as well as individual level interactions and interpretations in order to understand the construction of organizational level processes and structures. Subsequent sections outline the study design decisions, including the selection of data sources to answer my research questions, procedures for data collection and analysis, and strategies for enhancing methodological rigour. Finally, I detail ethical considerations for this study.

Methodology

Grounded Theory (GT) is a methodology used to systematically generate theories of social processes from participant data (Corbin & Strauss, 2008; Creswell, 2013; Glaser & Strauss, 1967; Strauss & Corbin, 1998). The development of GT is credited to Barney Glaser and Anselm Strauss in the 1960s in response to what they saw as a trend in theory verification and development through deductive reasoning rather than data analysis (Bryant & Charmaz, 2007). These researchers articulated a systematic approach to data analysis and theory development in order to promote and legitimize qualitative research (Bryant & Charmaz, 2007; Glaser & Strauss, 1967). GT uses both inductive and deductive logic to ultimately generate theory and involves data collection and analysis processes that are concurrent and iterative (Bryant & Charmaz, 2007; Corbin & Strauss, 2008; Glaser & Strauss, 1967). Inductive logic is "bottom up," starting with an examination of raw data in order to identify and develop abstract concepts (Creswell,

2013, p. 45). Deductive logic is employed when a theoretical scheme of abstract concepts and their relations is applied to the raw data to validate the scheme (Corbin & Strauss, 2008). Grounded theorists have since diverged in how they interpret and implement GT across disciplines (Bryant & Charmaz, 2007).

I selected Corbin and Strauss' (2008) approach to GT as it best aligns to my position as a researcher and to the purpose of this study. In contrast to Glaser's positivist GT approach, Corbin and Strauss' (2008) GT approach is rooted in pragmatist philosophy, particularly the works of John Dewey (e.g., 1929) and George Mead (1934), and in Herbert Blumer's (1969) work in symbolic interactionism. This methodology is therefore aligned with interpretive perspectives in the field of organizational communication and is suitable to study communication in a SCI because it (a) focuses on processes; (b) recognizes that the world is complex and seeks to capture contextual complexity; and (c) takes into account individuals' interactions and interpretations to understand the construction of organizational processes and structures.

The GT approach promoted by Corbin and Strauss (2008) supports the study of communication at the individual level in order to understand organizational level processes and structures of SCIs. The symbolic interactionist perspective inherent to Corbin and Strauss' GT approach supports the idea that "society, reality, and self are constructed through interaction and thus rely on language and communication" (Charmaz, 2006, p.7). Therefore to understand how a SCI has been constructed, a researcher must attend to the communicative interactions of its members. Further, individuals are assumed to actively construct their external and internal worlds by interacting with others and choosing lines of action based on their interpretations of these interactions (Blumer, 1969; Corbin & Strauss, 2008; Dewey, 1929; Mead, 1934). Corbin and Strauss' (2008) approach highlights the need to "get inside of the defining process of the

actor in order to understand his action" (Blumer 1969, p. 16), for example, through the use of interviews with individuals. This approach is therefore aligned with interpretive organizational communication perspectives such as structuration theory (e.g., McPhee et al., 2014), which maintain that organizations are constituted via the communicative interactions of their members and which highlight the need to capture individuals' inter-subjective interpretations.

Corbin and Strauss' (2008) GT approach maintains that phenomena are "the result of multiple factors coming together and interacting in complex and often unanticipated ways" (p. 8). SCIs are inherently complex because they involve many individuals with varied perspectives and motivations from different contexts interacting to align their actions at a systems level. This GT approach guides researchers in capturing complexity in their analyses to the extent possible by seeking multiple perspectives on a phenomenon and considering contextual conditions at the individual and system levels. Seeking multiple perspectives with respect to a phenomenon serves to "add insight, richness, depth, and variation" to the emerging theory (p. 273). In addition, factors relevant to the context of the phenomenon must be considered, since context "helps define or create situations, and responses to those situations" (p. 273). Corbin and Strauss (2008) offer analytic tools to capture complexity. These tools include the conditional/consequential matrix, which facilitates exploring the dynamic relationships between a process and its contextual conditions, from the micro (individual) to the macro (system) level. This approach is therefore aligned with interpretive organizational communication perspectives such as systems theory (e.g., Poole, 2014), which maintain organizations are systems comprised of interdependent components that interact with the environment. A systems approach is also appropriate for the study of collaborations with their dynamic and inter-related components (Berardo et al., 2014; Bryson et al., 2015).

Data Sources

Multiple data sources were selected to address the study's research question: What is the communication process among individuals engaged in a SCI in the public sector? The use of multiple data sources is consistent with the Corbin and Strauss' (2008) approach to GT and its emphasis on capturing complexity with respect to a phenomenon of interest. It is also consistent with interpretive organizational communication perspectives, which promote the use of diverse designs, data sources, and methods (Putnam, 2014). This section provides a rationale for the selection of the four data sources used in this study to understand the communication process in a SCI and a description of each source.

The selection of data sources was informed by the concept of organizational routines, that is, "repetitive, recognizable patterns of interdependent actions, carried out by multiple actors" (Feldman & Pentland, 2003, p. 95). This concept was drawn from the field of organizational science where it is used to understand the processes underlying organizational stability and change, among other phenomena (Argote, 1999; Pentland & Feldman, 2005). The organizational routine provides a useful guide for selecting data sources because it identifies the aspects of individuals' interactions that must be examined to gain a comprehensive understanding of organizational processes and structures. The three aspects of interactions are outlined in Figure 3 below. The concept of organizational routines is aligned with interpretive approaches of organizational communication such as Structuration Theory (Giddens, 1984) and Weick's Theory of Organizing (1979).

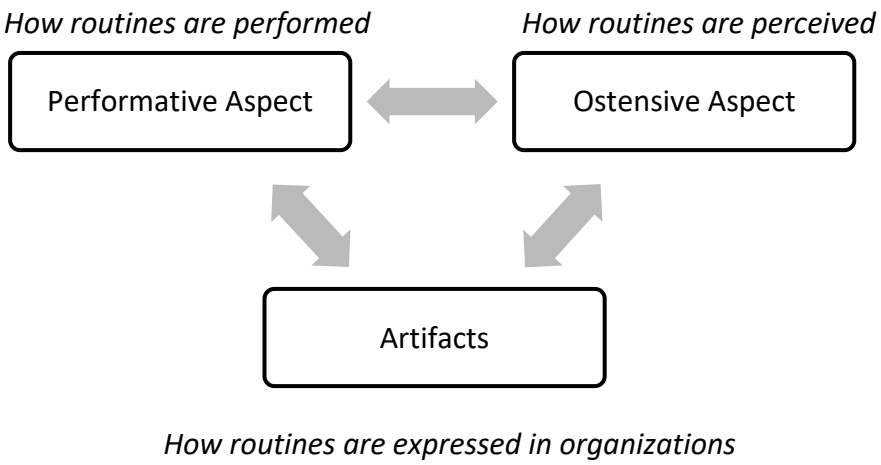


Figure 3: The Three Aspects of Organizational Routines

Organizational routines are comprised of an ostensive aspect (i.e., the "abstract or generalized pattern of the routine" as perceived by participants) and a performative aspect (i.e., performances of the abstract routine "by specific people, for specific reasons, at specific times, in specific places") (Pentland & Feldman, 2005, p. 796, 802). There may be variation with respect to the ostensive aspect because participants differ in how they view the same routine. For example, organization members in a university department, from faculty to administrative staff to graduate students, will likely have different views of the hiring process for new faculty (Pentland & Feldman, 2005). The performative aspects of a routine, on the other hand, are the performances of the abstract routine "by specific people, for specific reasons, at specific times, in specific places" (Pentland & Feldman, 2005, p. 802), highlighting the execution of a routine in context and inherent variation in performances (e.g., the actual hiring process of a specific faculty member). In addition, artifacts physically express organizational routines and may be associated with either the ostensive or performative aspects of a routine. Organizational routines therefore emerge from how individuals interact (performative aspect) and perceive their interactions (ostensive aspect); these routines may be reflected in artifacts such as organizational

documents. Continuing the department hiring example, artifacts would include the advertised job description and formal documents outlining university guidelines for hiring new staff.

The concept of an organizational routine also informed the articulation of three enabling research questions to understand communicative interactions in a SCI (Table 2). These enabling questions align to the three aspects of organizational routines: *How is information communicated among participants in practice (performative aspect)? How is the communication process understood by participants (ostensive aspect)? How is the communication process reflected in organizational documents (artifacts)?* Four data sources were selected to address the enabling questions: (a) semi-structured interviews, (b) document analysis, (c) a social network survey, and (d) field notes. Each data source is described in turn in the following sub-sections.

Table 2: Alignment of Research Questions to Organizational Routines and Data Sources

Main Research Question: What is the communication process among individuals engaged in a SCI in the public sector?		
Enabling Questions	**Organization Routine Aspect**	**Data Source**
How is information communicated among participants in practice?	Performative	Social network survey Semi-structured interview Field notes
How is the communication process understood by participants?	Ostensive	Semi-structured interview Document analysis Field notes
How is the communication process reflected in organizational artifacts?	Artifacts	Document analysis

Semi-structured interviews. Interviews are conversations between an interviewer and participant that vary in the extent to which they are structured and the researcher controls the conversation (Esterberg, 2002; Kvale, 1996). In this study, semi-structured interviews were used

to provide both consistency and flexibility when exploring participants' perspectives of communication. In a semi-structured interview, some topics for interviews are pre-determined, but there is flexibility in terms of when and how questions are asked (Corbin & Strauss, 2015). Other types of interviews include structured interviews in which all participants are consistently asked the same questions and unstructured interviews in which there are no predetermined questions or topics – participants drive the interview. Interviewing is a well-documented means to gain understanding of a participant's perspective in relation to a topic and often serves as the primary data source in GT studies (Esterberg, 2002, Kvale, 1996). Consistent with GT, interviews were used to explore participants' interpretations of communication routines. Using multiple interviews aligns with GT's underlying pragmatist viewpoint that reality results from multiple, interacting perspectives (Strübing, 2007).

Limitations of using interviews as a source of data include the self-reported nature of the data. To mitigate the limitation of self-reported data, interviews were complemented by document analysis to explore how the reported ostensive aspects of communication routines were reflected in organizational documents.

Document analysis. Documents are physical artifacts created by individuals or by collectives of individuals to represent their knowledge, experiences, and values (McMillan & Schumacher, 2010). Documents are valued as a generally stable and accessible data source and provide a non-intrusive means of data collection (Charmaz, 2006; McMillan & Schumacher, 2010; Pentland & Feldman, 2005). Organizational documents may be created for internal or external use and include minutes of meetings, organizational charts, communication plans, evaluation reports, and news releases. Documents used for internal communication can inform understanding of individuals' perspectives of the organization, whereas those for external use

(e.g., reports made available on websites, promotional materials) may inform understanding of official perspectives with respect to an issue or process (McMillan & Schumacher, 2010).

The selection of documents as a data source is consistent with the interactionist perspective inherent to GT, which maintains individuals construct lines of action based on how they have interpreted their interactions with others. In accordance with Corbin and Strauss' (2008) conditional/consequential matrix, organizational documents can be viewed as both conditions for individuals' interactions (i.e., individuals interact with documents and then act based on their interpretations of the document) and as a consequence of interactions (i.e., interactions may lead individuals to act and create documents). For example, at a meeting, individuals' interactions (e.g., discussion topics) may be guided by the meeting agenda. Afterwards, a meeting summary may be prepared to capture individuals' interactions (e.g., decisions) during the meeting.

There are limitations to using written documents to understand individuals' behaviour. For example, rules and procedures do not determine individual behaviour, but rather guide individuals' performances of organizational routines in response to contextual factors (Pentland & Feldman, 2005). To mitigate these limitations, document analysis was complemented by interviews that explored participants' perspectives on interacting with documents and the influence of these interactions on communication routines.

Social network survey. An online survey was used to capture the communicative actions of the ACRC members so as to understand the social network within the initiative. Online surveys offer a timely and low cost means to collect data using a sample from a large target population, as well as facilitate the development of databases (McMillan, 2012; McMillan & Schumacher, 2010). Specifically, I designed an online survey to gather the ACRC members'

self-reported measures of their direct interpersonal communication with other network members.

A key implication in GT is a focus on the study of action because reality is considered to be "made by and experienced only through human activity. Concisely, reality is nowhere else but in active experience, i.e., in action" (Strübing, 2007, p. 583). Therefore, I intended to use the social network survey findings to conduct a Social Network Analysis (SNA) and generate a graphical representation of the communication network that emerged in the ACRC. In this way, the ACRC network would not be defined a priori, but would emerge from the reported patterns of individuals' action or interactions, providing a snapshot of the performative aspects of individuals' communication routines (Haythornthwaite, 1996; Pentland & Feldman, 2005). SNA aligns with GT in recognizing the agency of individuals in creating social structures and the influence of social context on individual action (Bandyopadhyay et al., 2011; Hanneman & Riddle, 2011).

One limitation of this data source is the challenge of obtaining a high response rate (typically 75% or greater), which is required to conduct a SNA (De Brún & McAuliffe, 2018; McMillan & Schumacher, 2010; Mertens, 2009). Other limitations of the social network survey include the self-reported nature of the data (Mertens, 2009) and the lack of information gathered about individuals' motivations and perceptions with respect to their interactions with other network members. To address these limitations, the social network survey was complemented by the use of document analysis and semi-structured interviews with network members to develop a rich understanding of the ostensive and performative aspects of communication routines and how these were reflected in organizational documentation.

Field notes. Researchers use field notes to document their ongoing observations and some analytic reflections when collecting data in the field (Corbin & Strauss, 2008). This data

source may be confused with memos, which researchers use to write about their data and develop their analytic ideas. In writing memos, researchers engage with concepts, rather than raw data, to advance their analyses. For this reason, I describe my use of memos in the data analysis section of this chapter. Corbin and Strauss (2008) emphasize that although field notes and memos may both be conceptual and analytic, field notes are less in-depth than memos. In accordance with this GT approach, I used field notes to document observational and methodological information; I used memos to document and further my analysis process.

Whereas other data sources were primarily focused on the components of communication routines, that is, ostensive aspects (interviews), performative aspects (survey), and artifacts (documents), I used field notes to document my observations and insights into the dynamics of these components. For example, organizational documents "may provide useful statements about an organization's professed images and claimed objectives," but one cannot assume these accurately reflect organizational practices (Charmaz, 2006, p. 38). Field notes were compared with other data sources, including organizational documents, to identify areas of congruence and divergence among components.

The limitation of field notes as a data source is that they reflect my perspective and what I considered to be relevant observations at the time they were documented. Field notes served to capture aspects of processes and context, key aspects to understanding experience in GT that were not necessarily captured in other data sources. However, to address this limitation, complementary data sources were selected for this study.

Data Collection

This section presents the sampling and collection procedures for the data sources described in the previous section. As stated previously, GT involves concurrent and iterative data

collection and analysis processes (Glaser & Strauss, 1967). For clarity, however, data collection procedures and data analysis procedures will be described here in separate sections. This section begins with an explanation of theoretical sampling, which is used in GT to support ongoing theory development. The following subsections outline the sampling and data collection procedures for each data source in turn. Due to the iterative and concurrent nature of data collection in GT, data from different sources were often collected concurrently. This section therefore concludes with a description of the relative timing of these activities.

Theoretical sampling. As per GT methodology, I used theoretical sampling to select data sources that maximized theory development in terms of identifying concepts and describing their properties (i.e., defining characteristics), dimensions (i.e., the range of variation for each property), and the relations among emerging concepts (Bryant & Charmaz, 2007; Charmaz, 2006; Corbin & Strauss, 2008). This is a distinction in GT: researchers purposefully sample data that are representative of concepts rather than sample individuals, documents, or sites (Strauss & Corbin, 1998). In this way, the researcher's ongoing analysis guides their sampling decisions, which become increasingly targeted over the course of theory development (Corbin & Strauss, 2008). Sampling considerations specific to three data sources (social network survey, interviews, and document review) are outlined in the following sub-sections. Sampling procedures are not relevant to field notes, as I produced this data.

As data collection is an iterative process in GT, sampling decisions were made on an ongoing basis and documented in my field notes. There was no predetermined sample size; sampling decisions were based on the potential of the collected data to contribute to theory development (Glaser and Strauss, 1967). Over the course of the study, sampling therefore became increasingly focused and purposeful (Strauss & Corbin, 1998). For example, throughout

the study, I collected media releases from partner organizations and news articles from provincial and national new outlets documenting events that I anticipated could impact the ACRC members. In interviews and follow-up interviews, participants identified which provincial-level events were most relevant from their perspectives, allowing me to focus my data collection.

In GT, data collection is discontinued once the researcher decides that theoretical saturation has been attained. Saturation entails that categories demonstrate depth and breadth with respect to their properties, dimensions, and relations to other concepts and that additional data no longer contribute to their conceptualization (Charmaz, 2006; Corbin & Strauss, 2008; Glaser & Strauss, 1967; Guest, Bunce, & Johnson, 2006; Strauss & Corbin, 1998). Corbin and Strauss (2008) acknowledge that full saturation is not likely to be achieved; the researcher determines whether their sampling has been sufficient for theory development.

Interview sampling and collection procedures. Semi-structured interview participants were recruited from among individuals who responded to the social network survey. An invitation to participate in an interview followed the survey (see Appendix G). Criteria for inclusion in the study were intentionally broad; all individuals directly engaged in the ACRC were invited to participate. I anticipated that approximately five to ten interviews would be conducted; a similar GT study of two inter-organizational collaborations involved a total of five interviews (Weibler & Rohn-Endres, 2010).

I anticipated that theoretical sampling would be used to select individuals for interviews based on the results of the social network survey. Due to a low response rate to the survey, however, all five individuals who offered to participate in an interview were interviewed. Although not all partner organizations and working groups were represented in this sample, it did provide diverse perspectives with respect to gender, age, partner organization, and the degree to

which interview participants were engaged in the initiative. All interview participants had been engaged in the ACRC for at least one and half years and were familiar with its communication process. Theoretical sampling was utilized to identify individuals for follow-up interviews. Four of the five interview participants were identified for follow-up interviews and all agreed to participate in a second interview.

I contacted the individuals who indicated in their social network survey that they were willing to participate in an interview by email to set up a convenient time and location to meet. All initial interviews were conducted in person from May to August 2014, were 45-90 minutes in length (although one interview extended to 150 minutes), and held in a mutually convenient location for a confidential conversation. Follow-up interviews were conducted with some participants in February 2015 to fill in gaps in the data, clarify data, check assumptions, or further explore ideas to inform theory development. I audio-recorded and transcribed all interviews verbatim prior to analysis.

Prior to each interview, an interview protocol was prepared with open-ended questions that aligned with the main research question and enabling research questions. Interview protocols promoted question clarity and effective use of time. The protocols were informed by emergent findings from the analysis of other data sources (e.g., social network survey, document analysis) and shared with participants prior to their interviews. Topics for interview questions included individual roles with respect to communication, communication patterns, and factors impacting communication patterns. Questions for the initial interview are provided in Appendix H and include: *Please describe your role with respect to communication in this initiative; Describe an example of effective communication in this initiative;* and *What about this situation supported effective communication?* Semi-structured interviews were responsive to each participant, that is,

a general plan was envisioned for the interview, but this plan also allowed "the interviewee's responses [to] shape the order and structure of the interview" (Esterberg, 2002, p. 87).

Protocols for subsequent interviews and follow-up interviews were informed by ongoing data analysis of documents, social network survey data, and other interviews as well as by theory development. For example, follow-up interviews provided a means to explore in further detail participants' perspectives of the relevance and impact of provincial-level political events on their work and the work of the SCI.

Document sampling and collection procedures. The selection of documents for inclusion in the present study was guided by theoretical sampling, as well as their relevance to (a) the context (e.g., initiative description, organizational charts) and (b) communication processes (e.g., communication plan). Documents for analysis were identified through discussion with the ACRC project manager as well as through interviews with initiative members. I determined the relevance of documents to my study and documented all data collection decisions in field notes. Access to documents and permission for their use was obtained through an Alberta Innovates – Health Solutions designate and was not limited to publicly available documents (see Appendix F). The number of documents reviewed was not determined prior to the study, but through theoretical sampling with the aim of achieving theoretical saturation. Approximately 60 documents were included in the document analysis.

There were two phases of document analysis in this study, the first focused on understanding the ACRC and its context to inform ongoing data collection and analysis, and the second focused on exploring the extent to which communication routines identified through other data sources were reflected in the ACRC documents. These two phases align to the two selection criteria for the document review (i.e., relevance to context and relevance to

communication process). Documents included in the first phase of this analysis included internal documents such as the ACRC logic model and evaluation framework as well as publicly available documents (e.g., the ACRC strategic plan, website, and annual reports of Alberta Innovates – Health Solutions). This phase also included news articles from provincial and national new outlets. Documents included in the second phase of the document analysis included mainly internal documents such as the ACRC communications strategy, member terms of reference, and the commitment letter signed by the ACRC partners.

Social network survey sampling and collection procedures. The scope of the social network survey was the ACRC, therefore the potential sample included all individuals engaged in this initiative, including executive committee and working group (WG) members. Less than three weeks prior to the launch of the survey, however, I was informed by the project manager that all executive committee members would have to be excluded from the study sample due to their limited availability. For this reason, only the WG members and project management team (N=26) were surveyed to measure their interactions with other network members.

I developed the social network survey from January to March 2014. Two staff members from AI-HS who were not directly involved in the ACRC provided feedback on the survey to ensure the terminology and questions would be clear to participants. Evaluators and researchers with expertise in social network surveys also reviewed the survey. All survey drafts sent to reviewers for feedback were anonymized (i.e., all identifying information with respect to the individuals and organizations engaged in the ACRC were removed). Fluid Survey was used to develop the online survey because all collected data were stored on servers located in Canada at the time of this study.

The survey asked about respondents' gender, age, and length of time engaged in the SCI

as these factors may influence individuals' communication. Respondents were then asked to identify individuals with whom they had directly communicated over a specified six-month period from a list of all the ACRC members. For each identified individual, the respondent was prompted to indicate their frequency of communication, the proportion of their overall communication related to the ACRC, and if the member had known this individual prior to engaging in the initiative. Respondents were also asked to indicate their medium of communication with each identified individual (e.g., email, phone, in person, or other) and purpose(s) of communication. The purposes for communication were elicited using an open response field so that I did not impose pre-determined categories on participants' data. A six-month period was selected as it was anticipated that respondents would be able to recall their interactions during this period in sufficient detail and that this period of time would capture interactions throughout the network, particularly those of individuals who did not frequently communicate. Finally, the survey provided an opportunity for the respondent to provide me with their feedback (see Appendix G).

All the ACRC members (with the exception of the executive committee) were invited to participate in the social network survey and were provided with unique survey links with which they could access the survey from April 9, 2014, to May 3, 2014. To graph the network, it was important to obtain survey responses from all network members as SNA is compromised if there are missing data (Frank, 2011; Haythornthwaite, 1996). Therefore strategies to encourage individuals to respond to the survey were used to promote a high response rate. These strategies included clearly describing the purpose of the survey, personalized emails, and sending reminders to complete the survey (Cook, Heath, & Thompson, 2000). The project manager sent an email to each of the potential study participants introducing the study and its relation to the

initiative (see Appendix A). This email included an introduction to me as the researcher and a description of my study that clearly highlighted what was expected of individuals and the voluntary nature of their participation. Two reminder emails were sent to all potential participants. The response rate for the social network survey was 31%; eight of the 26 initiative members submitted responses to the survey.

Ultimately, the response rate to the survey resulted in a non-representative sample of the ACRC members. Macro-level measures of relational data using social network analysis require near complete data on the population of interest (Scott, 2012). In the case of this study, the population of interest was comprised of all the ACRC WG members and the project management team. I obtained a response rate far below complete and therefore did not conduct a social network analysis. Instead, I used the survey data that I had collected to examine individual-level networks and used this data to inform the development of interview protocols, i.e., I asked participants to provide more information on the relational data they had reported in their survey.

Field note collection procedures. Throughout the study, I maintained detailed electronic field notes that included, but were not limited to, descriptions of participants, settings, events, and behaviours (Bogdan & Biklen, 2007). For example, following each semi-structured interview, field notes documented the participant's name and affiliation, date, setting, interview length, and additional information to inform the interpretation of the interview data (e.g., participant demeanour). Field notes were also used to document my meetings and informal interactions with study participants.

Timing of data collection. Data collection in GT continues until theoretical saturation is achieved. Data were collected from an ongoing SCI so as to ensure sufficient opportunity for communication routines to have been established. As demonstrated in the timeline provided in

Table 3 below, social network data were collected by survey upon entry to the research site. To provide a representative snapshot of the communication network prior to the study, survey participants were asked to provide their responses with respect to the same six-month period. Individuals were given three weeks to respond to the survey; two reminders to complete the survey were sent one week following initial dissemination of the survey.

As described earlier, the document analysis was conducted in two phases: the first phase sought to understand the context of the study, and the second phase focused on identifying how ostensive and performative aspects of communication routines had been documented. These phases were generally concurrent but are represented consequentially to highlight that Phase I played a greater role early in the study as I sought to understand the context of the SCI and develop interview protocols.

Semi-structured interviews and follow-up interviews were used to further explore the emergent findings from the other data sources. A challenge presented by the timing of data collection for interviews was that they were conducted within a relatively short period of time for pragmatic reasons (i.e., May to August 2014). Prior to being included in the study, each interview was first transcribed by me and then reviewed by the interview participant. As described earlier, some participants requested additional time to review their transcripts; in one case, a participant requested five weeks to review their transcript. Ideally, each interview would have been analyzed prior to the collection of subsequent interview data so as to be able to explore emergent concepts and support theory development; however, Corbin and Strauss (2008) recognize the pragmatic constraints often faced by researchers in the field (p. 58). Finally, field notes served as an ongoing data source throughout the study.

Table 3: Timing of Data Collection by Data Source

Date of Data Collection	Document Analysis I	Social Network Survey	Interviews	Document Analysis II	Field notes
March 2014					
April 2014					
May 2014					
June 2014					
July 2014					
August 2014					
September 2014					
October 2014					
November 2014					
December 2014					
January 2015					
February 2015					

Data Analysis

Data analysis was conducted within as well as across data sources following the procedures outlined in Corbin and Strauss (2008). In accordance with GT, concepts were progressively interpreted from the data into increasingly abstract and inter-related categories with respect to a central core category. The analysis process is detailed below, although it must be highlighted that this process was not linear: I engaged in data management, coding, and memoing concurrently and in an iterative manner (Corbin & Strauss, 2008). Throughout the analysis, I moved back and forth between the raw data and increasingly abstract levels of

analysis to ensure the developing theory remained grounded in the data. All data (i.e., survey results, documents, interview transcripts, and field notes) were managed using ATLAS.ti 5.0 (Muhr, 2003), a program designed to store and retrieve qualitative data, codes, code hierarchies, and memos. I maintained memos detailing the analysis process throughout theory development (Corbin & Strauss, 2008). Memos serve an invaluable role in analysis as they "stimulate and document the analytic thought processes and provide direction for theoretical sampling" (Corbin & Strauss, 2008, p 140).

Throughout the coding process, various analytic strategies were employed to sensitize me to subtleties in the data and to develop increasingly abstract and integrated concepts, or categories, with the aim of theory building (Corbin & Strauss, 2008; Strauss & Corbin, 1998). Categories became increasingly defined over the course of analysis with respect to their properties, dimensions, and relations to other categories. Figure 4 demonstrates that as the analysis progresses from the data to a theory, concepts become increasingly defined with respect to their properties and dimensions (as represented by circles that transition from dashed to solid outlines) and inter-related (as represented by the increasing number of connecting lines that transition from dashed to solid). Although the analysis process generally moves from the data towards a theory, the process is iterative and repeatedly moves from the data to more abstract analysis levels and back to ensure the emergent theory is grounded in the data.

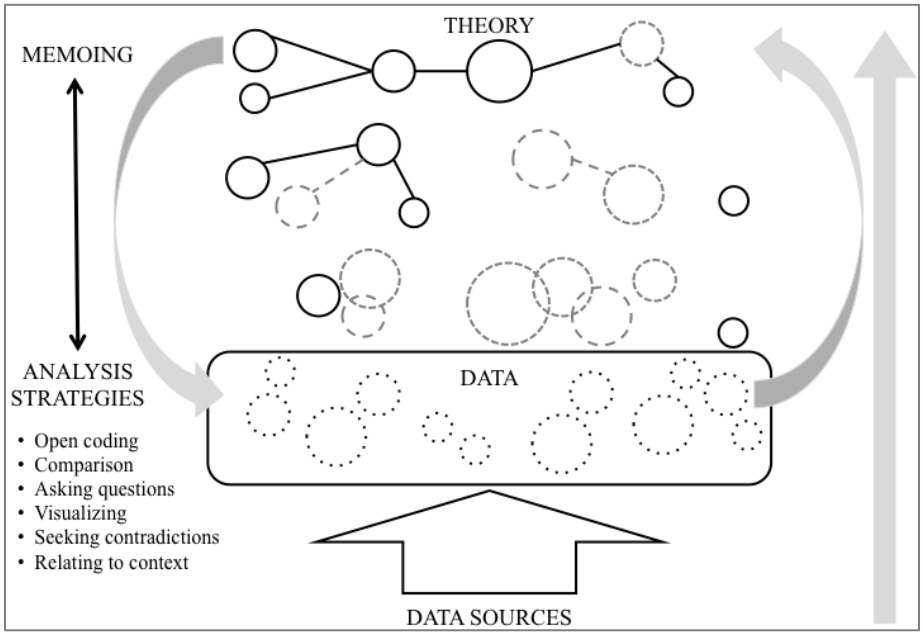


Figure 4: Analysis Process Using Grounded Theory Methodology

Analytic strategies. The analytic tools I employed in this study are described below and included open coding, comparison, asking questions of the data, visualizing data, seeking contradictions, and relating the data to the context. These strategies were used as needed to advance the analysis and not necessarily in the order presented in this section.

***Open coding*.** At the initial stage of coding, *open coding* was used to "open up the data to all potentials and possibilities contained within them" (Corbin & Strauss, 2008, p. 160). Raw data were examined for identifiable meaning units, or concepts, and coded. An example of an open code from this initial coding stage was "Project Manager Role," which was used to code all meaning units pertaining to the role of the project manager from across all data sources. The codes used at this stage were intentionally broad and imprecise; they were used to start "breaking data apart and delineating concepts to stand for blocks of raw data" (Corbin & Strauss, 2008, p. 195) with the understanding that the codes would be refined over time.

***Comparison*.** I used the constant comparative method to compare units of data (e.g.,

incidents, codes, and categories) and explore their similarities, differences, and dimensions (Charmaz, 2006; Corbin & Strauss, 2008; Glaser & Strauss, 1967; Strauss & Corbin, 1998). This method is appropriate for data units at all levels of analysis, from coding to theoretical integration (Corbin & Strauss, 2008). I used this analytic tool to develop emergent concepts with respect to their properties (i.e., characteristics that specify or define a concept), dimensions (i.e., variations of a property), and relations (Corbin & Strauss, 2008). For example, all instances of data coded "Project Manager Role" were examined to explore similarities and differences within this code. Upon closer examination, various properties of "Project Manager Role" were identified, and the data were then recoded with finer-grained codes such as "Project Manager Role_manage email listserv" and "Project Manager Role_content expert."

I also used theoretical comparisons, drawing on literature and personal experiences to derive properties and dimensions and make comparisons with my data. These comparisons provided insights and potential avenues for further analysis. For example, I reviewed field notes documenting my experiences communicating with the SCI project management team and wrote extensive memos to understand the properties and dimensions of these experiences (e.g., the need to clarify expectations of individuals upfront, emphasis on documentation, challenge of finding time to meet in person). I then went back to the interview data to determine whether participants' perspectives reflected these properties and dimensions.

Another way to think about data is through the use of "far out" comparisons with seemingly different situations (Corbin & Strauss, 2008). I drew comparisons between my data and metaphors and similes to further explore the properties and dimensions of emergent concepts in my analysis. For example, I explored the idea of a project manager as a symphony conductor. Identifying ways in which these two ideas were different and yet similar helped me advance the

analysis from the specific details of the data to consider more abstract properties such as how both project managers and conductors relay their interpretations of how work is to be performed to others. I then stepped back from the data to reconsider the properties and dimensions of the project manager's role in the ACRC.

Asking questions of the data. Another analytic strategy I employed involved asking myself questions of the data. I asked sensitizing questions to become familiar with the data and then asked theoretical questions to extend the analysis to consider the implications of the data and "to see process, variation, and so on, and to make connections between concepts" (Corbin & Strauss, p. 72). I documented my questions and my responses in memos for later retrieval. However, I also used memos to essentially dialogue with myself about the data and emerging concepts in order to advance my analysis.

To continue with the project manager example, sensitizing questions with respect to the role of the project manager included: *What do participants report the project manager does in the ACRC? What words do participants use when describing the project manager? How do documents describe the role of the project manager?* I then posed theoretical questions of the data to explore how the role of the project manager related to the ACRC as a whole and to communication in particular, for example: *Do all participants view the project manager role similarly? Do documents accurately reflect the project manager's role as described by participants? Has the project manager's role changed over time? How has the context impacted the role of the project manager?*

In this example, asking questions of the data led me to hypothesize that having many key roles within the ACRC positioned the project manager centrally within the initiative. The inter-related codes pertaining to the role of the project manager were then integrated into a more

abstract, higher level code: "Centrality of the project manager to the SCI." At this point, a key theoretical question asked of the data was: *What are the implications for communication of having a project manager who is highly centralized in the initiative?*

Visualizing data. I used the network visualization feature of Atlas.ti 5.0 to explore relations among codes, their properties, and their dimensions. Selected codes can be imported as nodes into a network view. I then colour-coded these nodes and described the relations among them. After visualizing the data, I wrote memos about the process of developing the network view to document this analysis session.

Seeking contradictions. I examined contradictory or negative cases in the data to explore alternative explanations for the data and to further explore the properties and dimensions of emerging concepts (Corbin & Strauss, 2008). For example, two participants reported that they did not get sufficient information on the ACRC as a whole; however, another participant reported that they felt informed as to the progress of the initiative and future directions. This discrepancy was then explored in the data to try and understand how such differing perspectives were simultaneously present among the ACRC members.

Relating data to context. Corbin and Strauss (2008) particularly highlight the need to relate context and processes in the data when coding – that is, to examine the data for conditions in which situations occur, responses made to these conditions by individuals, and consequences of these responses that may, in turn, impact conditions. They state this paradigm of conditions/ interactions/ consequences is a tool: "the analyst is not coding for conditions or consequences per se, but rather uses the tool to obtain an understanding of the circumstances that surround events and therefore enrich data analysis" (p. 90).

A related analytic tool specific to Corbin and Strauss' (2008) GT approach is

conditional/consequential matrix. The matrix guides analysis to consider complexity in the data. The matrix visually represents actions embedded in social arenas that are themselves embedded, extending outwards from individuals to collective individuals, to communities, and finally to the international community. In the matrix, actions are mediated by the conditions of the arenas in which they are embedded, and the consequences of these actions influence these conditions. The purpose of the matrix is "to help researchers to think beyond micro social structures and immediate interactions to larger social conditions and consequences" (Charmaz, 2006, p. 118). The matrix is meant as an orientation to analysis, not a prescribed procedure (Hildebrand, 2007).

An example of how data in this study was related to context during the analysis was the development of the category "limiting access to sensitive information." Through open coding, I had started to develop a code around the concept of confidentiality. A critical event in the analysis of this code was a phone conversation I had with an interview participant, who expressed concern about the results of this study being shared with the lead organization. I engaged this individual as well as the project manager in a series of discussions around how the data would be analysed, reported, and used.

In memos about this event, I used the paradigm of conditions/interactions/consequences to begin to understand various aspects of this event, e.g., the reason for the participant's concerns, what the participant viewed as sensitive information, what the participant anticipated could happen if their data were shared inappropriately, how the project management team reacted to this concern and why, etc. Using the conditions/interactions/consequences paradigm to reflect on the event brought to the forefront a number of concepts including: sensitive information, risks to sensitive information, and reasons for limiting access to sensitive information. Considering this event within the conditional/consequential matrix added richness

to the interpretation of the data by highlighting characteristics of the individuals involved, their respective organizations, the SCI, as well as the provincial and national arenas to understand why access to sensitive information is limited in the ACRC.

Theoretical integration. In the final stage of theory development, I brought categories together and defined the relationships existing among them through theoretical integration (Corbin & Strauss, 2008). To guide this integration, a central, explanatory category was identified, which is the category at the highest level of abstraction in the coding hierarchy that brings together all categories into a "unifying explanatory scheme" (Corbin & Strauss, 2008, p. 104; Strauss & Corbin, 1998). Corbin and Strauss (2008) explain that the central category may be one that emerged during analysis or may be an abstract concept that encompasses the categories that emerged during analysis. In my study, I identified three abstract categories that reflect communication sub-processes. I did not consider any of these to be the central, explanatory category. Instead, I used strategies to facilitate integration, including diagraming, and a review of my memos. In this way, I identified a central category that captured the categories that emerged through my analysis: "a space for collective action for mutual benefit." I then considered communication with respect to this central category and refined my emergent theory.

Strategies for Enhancing Methodological Rigour

This section first describes five strategies employed to enhance the rigour of this study, in particular its credibility, dependability, and transferability (Lincoln & Guba, 1985). The following strategies were drawn from the field of qualitative research and are not specific to grounded theory: (a) engaging stakeholders, (b) developing thick descriptions of the data, (c) documenting the research process, (d) positioning myself in the study, and (e) triangulating data

sources (Merriam, 2009). I then describe criteria for judging the quality of a GT study with respect to the present study (Corbin & Strauss, 2008).

I engaged stakeholders and sought to accurately capture their perspectives in order to enhance the credibility of the theory generated from their data. All the ACRC members who wished to engage and contribute their perspectives were presented with opportunities to participate in my study. Stakeholder engagement aligns with the aim of GT to "describe and explain the world as those in the world experience it" (Merriam, 2009, p. 220). I aimed to be inclusive by using a broad definition for participant inclusion and by offering multiple opportunities for participation. Further, I followed up with interview participants to clarify my understanding with respect to their data, fill in gaps in the data, and test my assumptions so as to inform my ongoing analysis.

I documented my ongoing analysis in detailed memos to strengthen the credibility and dependability of my findings. In fact, memos are identified as "among the most necessary of all procedures" in Corbin and Strauss' (2008) GT approach (p. 307). Memos create an auditable trail of the analysis, which can be used to evaluate the consistency of a researcher's interpretations of the data. For example, this trail can be used to determine the degree to which a researcher adhered to systematic data collection procedures, consider the influence of contextual factors on emerging findings, and assess the alignment of the methodology, research questions, and methods (Maxwell, 2005; Merriam, 2009).

Thick descriptions of the study setting were maintained to further enhance the credibility and transferability of the findings of study. Ponterotto (2006) offers a working definition of "thick descriptions," stating that these are the result of researchers accurately describing and interpreting social actions in context. These descriptions capture individuals' motivations,

intentions, and experiences. Using thick descriptions, I aimed to capture some of the complexity of the ACRC stemming from the interactions of multiple individuals and from the context. Denzin (1978) states it is through thick description that "the voices, feelings, actions, and meanings of interacting individuals are heard" (p. 83). This strategy therefore supports the reader in assessing the credibility of my interpretations of the data (Ponterotto, 2006). Thick descriptions were documented in field notes and collected from semi-structured interviews and organizational documents (Maxwell, 2005). Thick descriptions of the study setting aid readers in drawing comparisons to their own settings and thereby support the transferability of study findings (Geertz, 1973).

I maintained field notes and memos throughout the study to clarify my position and reflect on my influence on the research process (Corbin & Strauss, 1998). GT recognizes that the researcher is active in the interpretation of data and brings to this task their own perspective and experiences (Blumer, 1969; Maxwell, 2005; Merriam, 2009). Borrowing from Charmaz's (2006) constructivist approach to GT, Corbin and Strauss (2008) state that researchers interpret data through their own experiences, interactions, and perspectives. In doing so, researchers construct theories that are, in turn, based on participants' constructed accounts of their experiences. Documenting these reflections to assess the influence of the researcher on analysis serves to enhance the credibility of the study findings (Maxwell, 2005; Merriam, 2009).

Multiple data sources were triangulated to inform theory development and reduce biases or sources of error inherent in particular methods (Denzin, 1978; Maxwell, 2005). This was done to strengthen the credibility of the resulting theory. Different perspectives and negative cases were actively sought during theory development to explore variation within concepts and test the emergent theory against the data (Maxwell, 2005). Once a theoretical scheme was developed, I

applied the scheme back to my data to assess whether participants' perspectives were represented by this scheme (Corbin & Strauss, 2008; Lincoln & Guba, 1985; Maxwell, 2005).

Corbin and Strauss (2008) identify a number of criteria that can be used to assess the quality of a study conducted using their GT approach. The authors state that quality research findings reflect "concepts" with well-developed properties and dimensions as well as demonstrate "variation" along these dimensions. Another criterion is that of "logic," whereby findings are presented in a logical and comprehensive manner. I describe several well-developed concepts in my findings and present these concepts using the ACE theory as a logical framework for organizing this information for the reader. Yet another criterion, "contextualizing of concepts," is used to judge whether the findings are presented with sufficient context for the reader to understand them. I provide detailed information about the context with respect to my findings, including descriptions of strategies used by the ACRC members to communicate. Finally, the criterion of "applicability" refers to the usefulness of the study findings for decision-making such as policies or practices. As I will outline in subsequent chapters, my study findings are relevant to understanding why the communications strategy for the ACRC was found to not be useful.

Ethical Considerations

This study was conducted in accordance to ethics requirements of the University of Alberta Research Ethics Board 2 (Study ID: MS4_Pro00036908). Potential participants were provided with information letters outlining the study purpose, the intended use of the collected data, and their rights as participants (see Appendices B, C, and E). Written consent was obtained from individuals prior to their providing interview data and from a representative of the SCI prior to the provision of documents (see Appendices D and F). Consent to participate in the

social network survey was indicated by individuals through overt action (i.e., choosing to submit the survey data upon completion). Individuals were expected to have informed their respective organizations of their intention to participate in the study.

In addition, the Governors of the University of Alberta and AI-HS signed a Confidentiality Disclosure Agreement with respect to this study on May 1, 2013. The agreement outlines how to handle and use confidential information from the organization both during and following my study. To ensure that confidential information is not disclosed publicly in communications resulting from this study, the agreement includes a requirement that proposed publications be provided to AI-HS 30 days prior to disclosure so that the organization has the opportunity to review and identify confidential information for removal. This requirement applies to my dissertation, necessitating an organizational review prior to the document being shared with my supervisory committee. In addition, I felt it was important that a representative of AI-HS be made an ex-officio member of my candidacy and defense examining committees to contribute the organization's perspective and interest in my research.

A number of potential ethical issues were anticipated and measures were put in place to mitigate risk. Other issues emerged and were addressed while conducting this study. Three ethical issues that emerged in this study pertained to (a) anonymity and confidentiality, (b) reciprocity, and (c) influence. I discuss these issues and how they were addressed in the following sub-sections.

Anonymity and confidentiality. It was not possible to guarantee anonymity to participants in this study as all participants were known to one another and the data explored the nature of their social interactions. All reasonable measures were taken to ensure confidentiality of participant data including (a) appropriate storage and access of data, (b) opportunities for

participants to withdraw part or all of their data from the study, and (c) anonymization of data in written materials resulting from this study.

I maintained data storage and retained sole access to primary data. All consent forms and hard copy documents were stored separately from study data in a locked filing cabinet in a secured location (i.e., my home office). Interview transcripts and recordings, digital documents, as well as all survey data were stored as digital files on a password protected computer. The identities of individuals who responded to the survey and the interview invitation were only accessible to me as the researcher. I was also responsible for scheduling interviews and ongoing communication with participants. I also personally transcribed all interviews. Progress updates to the ACRC project management team included only the number of interviews conducted and which partner organizations were not represented in the data so as to inform discussions around ongoing data collection.

Interview participants were provided with the opportunity to review and make changes to their interview transcripts, including omitting or clarifying aspects of their transcript or withdrawing the transcript in its entirety from the study without penalty. This was done to address risks to confidentiality if participants were to disclose potentially harmful information such as communication protocols not being followed or relevant documentation not being distributed within the initiative. Such workarounds were expected to take place and to provide valuable insights to inform theory development. In such cases, in addition to providing participants with the opportunity to omit potentially harmful information from the study, I took care to maintain confidentiality and minimize harm to participants. For example, a participant reported not being aware of terms of reference for their position. I subsequently confirmed with the project management team that the documentation had been provided to all members and

reflected any discrepancy in the analysis.

Participants were required to confirm any changes or their wish to withdraw their data from analysis in writing to me within one week of receiving their transcript. The requirement to confirm changes within one week was established to afford sufficient time to analyze the interview prior to subsequent data collection. Following this date, the transcript could not be withdrawn from analysis. Consideration was given if individuals indicated they required additional time to review their transcript. Although such considerations impacted the timely analysis of data and delayed study progress, I decided not to proceed with analysis until participants were given the opportunity to review their transcripts and were comfortable with how their data would be used and reported. For the inclusion of internal SCI documents in the study (e.g., evaluation framework, communications strategy), written permission was obtained from a representative designated by the SCI project management team. Individuals were made aware of issues of anonymity and confidentiality prior to their participation in the study as well as throughout the study as part of the consent process.

In written materials resulting from the study, all reasonable measures were taken to anonymize data and included reporting findings in aggregate, paraphrasing rather than using direct quotations, and removing all identifiable features. In accordance with the Confidentiality Disclosure Agreement signed with the University of Alberta, AI-HS had 30 days to review my dissertation to ensure it complied with the agreement. A concern raised through this organizational review process was that although I had used non-identifying codes to refer to data provided by the WG members and that no single reference was identifying, an individual could potentially be identified if all their data were taken together. I decided to remove all codes and not differentiate the data provided by the ACRC members. Further, all pronouns were changed

from gendered pronouns (e.g., she, his) to third person plural pronouns (e.g., they, their). The organizational review process also provided an opportunity for AI-HS to confirm they agreed with the disclosure in this dissertation of the initiative, which therefore identifies the project manager. The project manager was one of three AI-HS staff who reviewed my dissertation prior to agreeing for it to be released to my supervisory committee. I also emailed all participants to inform them of how I anonymized their data and of the disclosure of the initiative. Participants did not raise any questions or concerns with respect to the use of their data.

Reciprocity. Reciprocity is an ethical consideration in this study as participants were asked to contribute their time to the research study. The concern with respect to reciprocity is related to providing value to participants for their time. The benefits to individual SCI members who participated in the study were limited to supporting a larger study of communication in the SCI that could potentially inform the ongoing evaluation and function of the SCI. Their participation also supported graduate student research; a benefit the project manager highlighted in the email introduction to the study distributed to the SCI members. Benefits to the SCI were negotiated with the SCI project management team. Initially, the negotiated benefits included sharing the anonymized results of the planned SNA as well as the theory of communication to inform the ongoing evaluation of the SCI. Methodological changes to the study due to low participant recruitment meant that a SNA could not be conducted using the survey data and interview participants were not fully representative of the initiative members. To enhance the benefit of the study to the SCI project management team, I focused on obtaining rich interview data and following up with participants to capture their perspectives as accurately, and in as much detail, as possible.

A challenge posed by the ethical obligation for reciprocity was balancing the need to

provide benefit to the ACRC with the need to maintain academic integrity. I maintained my independence when making decisions with respect to the study design (e.g., articulating research questions, selecting a methodology), data collection (e.g., sampling, developing data collection instruments), and analysis (e.g., generating and developing concepts). Throughout the study, I discussed the need to preserve my academic integrity with the project management team. These conversations were facilitated by the research expertise of the ACRC project management team. Ongoing discussions resulted in compromises on the parts of both parties. For example, I agreed to exclude the executive committee from the pool of potential study participants due to organizational pressures on these individuals' time, although this impacted the scope of my study. The project management team understood the methodological and ethical reasons why I could not conduct a SNA, although this lessened the benefit of the study to the ACRC. This balance was achieved in no small part to my relationship with the project management team that supported open discussion around these challenges.

Influence. Influence was a key ethical consideration in this study, specifically the potential influence I may have had on data collection and interpretation. I had completed two internships with AI-HS, the lead organization for the ACRC that provided the context for this study. To address the issue of influence with respect to data collection, an introduction letter with an invitation to participate in the social network survey was emailed by a third party (i.e., the project manager) to potential participants on my behalf (see Appendix A). My prior position as an intern at the managing organization was disclosed to all potential participants in the survey information letter (Appendix B). The email clearly stated that participation was voluntary and data would be confidential. The fact that the response rates to the survey and interview invitations were insufficient to conduct a social network analysis and that even members of the

project management team did not choose to participate indicates that individuals did not feel overly pressured to participate in the study. In GT, it is understood that interpretation is constructed through the interactions of the researcher and participants. My past experiences and perspective therefore influenced what questions were asked and how data were interpreted. To increase my sensitivity to my own role in these processes, detailed field notes were maintained to document data collection decisions and memos were used to create an auditable trail of the data analysis process.

Chapter 4. Findings and Theoretical Integration

The following chapter presents the ACE theory of communication generated by a grounded theory study within the context of a public sector system change initiative (SCI). The name of the ACE theory is derived from the three sub-processes that comprise the overall process of communication: access, connect, and engage. These sub-processes are intertwined with three structural conditions that constitute the context for communication: interdependence, power, and time. At the center of the visual representation of the theory (see Figure 5) is the central driver, or goal, of communication: collective action for mutual benefit, that is, fostering stakeholders' commitment to collective action so as to achieve system change for mutual benefit.

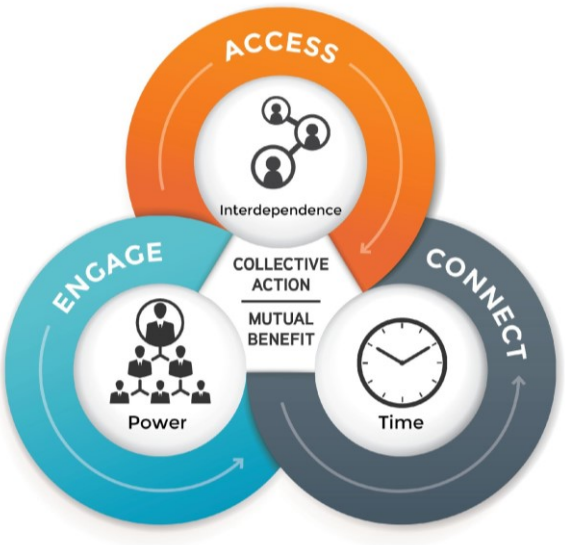


Figure 5: The ACE Theory of Communication in SCIs

Each of the components of the ACE theory represents a major category that emerged from my grounded theory analysis. The central driver of the communication process in this context emerged as the core category of my analysis, conveying the overarching "story" of my research and integrating all major categories. The three ACE sub-processes emerged in my

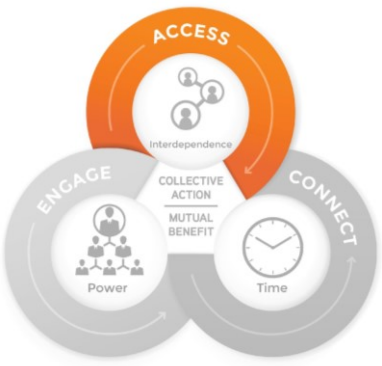
analysis as components of the communication process, and the three conditions emerged as the structure for the communication process. Each of the sub-processes and structural conditions are described in the following sections, serving as the organizing frame to describe the ACE theory in this chapter.

This chapter also describes strategies, or organizational routines, in relation to each of the sub-processes and structural conditions of the communication process. I chose to use the term "strategy" instead of "routine" to reflect that these were intentional actions taken by individuals in the Alberta Clinical Research Consortium (ACRC) to promote collective action for mutual benefit. As well, "strategy" suggests that practitioners can use this information to inform their own communication and communication planning. The strategies emerged from the analysis of the ACRC members' communicative interactions and their perspectives on these interactions. Each strategy is presented in rich detail to support practitioners in determining its transferability to support communication their own contexts.

In the final section of this chapter, the ACE theory is applied to data related to the ACRC Communications Strategy and its implementation. As the ACE theory has been abstracted from the raw data collected in this study, one means of validating the resulting theory is by applying it back to the data and assessing how well it explains the communication process.

Sub-processes of the Communication Process

Providing access to information. Members of the ACRC stated that open and transparent access to information supports the partners in creating a space for collective action. Access to information, in fact, was one of the perceived benefits of participating in the ACRC. Working group (WG)



members wanted knowledge of "what's coming down the pipe and what's being done" that they could in turn share with researchers in their own organizations. One WG member reflected that generosity with respect to information access was the way to "foster collaboration and develop a win-win situation where I'm not winning at the expense of other people" but still gaining benefits. The project manager also held this opinion, stating that they had "always operated on the concept that everything we have is open sharing, open source, [an] open forum for dialogue to happen" (Project Manager). Maintaining a space for collective action was supported through ongoing access to information as well as reciprocity. One WG member explained that reciprocity was key to information access: "I think that if I want to foster communication, collaboration, I have to be open first. And then that may trigger some other people to open up. If that doesn't happen, well, two things may happen: I may keep being open, or I may shut down."

How the ACRC members facilitated access to information varied in relation to the particular activities being undertaken within the ACRC, specifically: orienting new members to the initiative, developing processes and tools, implementing processes and tools, and demonstrating accountability. The section describes the access sub-process with respect to these four activities, as well as the mechanisms used to manage access to information. Strategies (i.e., organizational routines) used by the ACRC members to facilitate information access in the initiative are described. In addition, one particular aspect of the ACRC, an embedded evaluation designed to inform ongoing decision-making in the initiative through ongoing data collection and reporting, is considered with respect to information access.

SCI activities supported by access to information. Open and transparent information access supported four main activities of this SCI: orienting new members to the initiative, developing processes and tools, implementing processes and tools, and demonstrating

accountability. The sub-process "providing access to information" varied according to the differing purposes of each of these activities. During their orientation to the ACRC, prospective members required information about the initiative in order to decide whether to participate. When collectively developing processes and tools, WG members exchanged information about their organizations' existing tools and processes as well as relevant contextual factors. In order to support the implementation of the resulting processes and tools in the partner organizations, the ACRC members needed consistent and coordinated messaging about the ACRC products and their readiness for implementation. Finally, information access was key to demonstrating accountability for their activities and outcomes to the ACRC stakeholders.

Orienting new members. The project manager oriented new members to the ACRC at the start of the initiative and in cases of member turnover. However, the project manager admitted that orienting individuals was a process that the team initially "did not pay a lot of attention to." The project manager explained that they had learned through experience that committee decisions could not be rushed prior to an impending turnover in membership and that departing members did not necessarily share knowledge with incoming members: "It doesn't happen that way" (Project Manager). To orient new members to the ACRC, the project manager met with them (in person, if possible) to discuss the ACRC and provide them with materials on the initiative's strategic priorities, structures, processes, and current status. Included in these documents were terms of reference that outlined members' expected roles, scope of authority, and accountability. Orienting new members also involved presenting the benefits and risks of their participation in the initiative. The project manager explained that members "want[ed] clarity and transparency and to know what risk they [were] opening up to with respect to themselves and their organizations" (project management team, meeting summary, August 18,

2014).

Developing processes and tools. The ACRC members exchanged information to collectively develop tools and processes (e.g., manuals, planning templates) that could be applied across the partner organizations. To this end, WG members were expected to share information about their organizations' existing tools and processes as well as relevant contextual factors. This expectation was documented in the WG and executive committee (EC) terms of reference, which stated that members were expected to "provide necessary information and input" to support the ACRC in meeting its objectives.

The ACRC was strategically structured to support openness and transparency among its members. Specifically, each partner organization delegated an individual in a senior leadership position to act as its representative on the EC. WG members viewed the participation of their senior leadership on the EC as confirming their organization's support for the objectives of the initiative. As one WG member explained, although members were "a little nervous" to share information within the ACRC at first, "having our VPs on the executive committee – that commitment gave us permission to move forward. That was what we needed to be able to get past that." Members reported that they felt they could openly share what was happening in their organizations, including any issues that they were experiencing.

Keeping WG members informed about ongoing progress and strategic changes to the initiative was important in supporting development activities. The project management team provided WGs with agendas, relevant materials, meeting summaries, and initiative updates. ACRC WG members agreed that they had timely access to information pertaining to the activities within their groups, but that they were less informed about progress being made by other WGs and the initiative as a whole. Lack of access to this information from other ACRC

groups did not appear to affect the development of processes and tools within the WGs, but it had implications for implementation activities and the overall engagement of members because it limited their understanding of the progress being made by the ACRC as a whole towards its stated vision.

Implementing processes and tools. The implementation stage needed "to inform, involve, and be clear and transparent to key stakeholders" as well as convey consistent and coordinated messages (First Annual Meeting Proceedings June 6, 2012). Consistent and coordinated messaging was achieved by having the project management team prepare all communication materials and manage their dissemination. At the time of data collection, the ACRC members were transitioning from developing standardized processes and tools to starting to implement these in the partner organizations. Members needed to be informed when specific processes or tools were ready for implementation so they could disseminate this information within their organizations (WG terms of reference).

Two potential issues emerged from the data with respect to access and implementation, one from the perspective of the project manager and the other from the perspective of WG members. The project manager observed that the process by which new ACRC processes and tools were announced to members and stakeholders could have been improved. Whereas "the executive committee [was] never caught off guard," the WG members "[knew] we [were] moving towards something but they [did] not know when it [was] going to be released." In particular, the project manager recognized that early announcements needed to be made to administrators in the partner organizations who would be responsible for their implementation. In one case, only a day's notice of an announcement for a new ACRC tool was given to administrators. However, the timing of the ACRC announcements was not raised as an issue in

the data, even though at least one of the interviewees was an administrator in their organization. One way in which members did report that they needed further support for dissemination was through access to information about all the ACRC activities. One interviewee explained that individuals in their organization asked questions about the initiative, but the interviewee was not always able to answer these questions. Implementation required that not only end users be informed about the ACRC, but also that those disseminating information be informed so as to address questions about the initiative from their colleagues.

Demonstrating accountability. The ACRC partners, including the external project management team, recognized the need for openness and transparency to demonstrate accountability for their activities and outcomes to their stakeholders (i.e., government, the research community, and the public). For example, the partners' commitment letters stated that they would make information accessible to the ACRC for the purposes of collective reporting on outcomes at the provincial level through "data sharing, privacy, and confidentiality arrangements and agreements." These arrangements and agreements were not yet in place when I interviewed the project manager in August 2014. Because I did not have the opportunity to interview EC members, my data provided limited opportunity to examine how the ACRC demonstrated accountability to its external stakeholders.

The terms of reference provided to individuals upon joining the WGs or EC addressed various aspects of membership, including accountability. However, little detail was provided in these documents as to how members would fulfill their responsibilities. For example, under the heading "accountability," the WG members' terms of reference stated only that: "the WG is accountable to the ACRC EC" (p. 2). Elsewhere under "objectives," the document stated that the WG members would periodically provide updates on progress and issues to the EC. The EC's

terms of reference stated that its members would "be accountable for agreed strategies to achieve the shared vision" for the ACRC (p. 1) and that the committee chair would be responsible for "[providing] updates on progress on planning and implementation activities to the appropriate channels" (p. 2). The "appropriate channels," however, were not defined. Overall, it was unclear from the terms of reference who specifically reported to whom, and how, for the purpose of accountability. As mentioned, I could not pursue these questions with the EC members. The project manager assumed the responsibility for reporting between the WG and EC levels. As will be discussed in more detailed in the following sections, centralizing communication management within the project management team enhanced the consistency of reporting, as well as introduced a certain degree of risk to the sustainability of the initiative.

Mechanisms that provided access to information. The mechanisms the ACRC members used to share information varied by SCI activity as activities had different purposes for communication as well as different intended audiences (see Table 4).

Table 4: Mechanisms of Information Access by Activity and Audience Type

Activity	**Audience**	**Mechanism of Information Access**
Orientation	New ACRC members	In person, phone
Development	ACRC members	In person; phone/teleconference; email; annual meeting; website
Implementation	Partner organizations Research Community	Website, email/listserv, newsletter, champions, invited events
Accountability	Government Public	Reports

Access to information within the ACRC to both orient new members and develop

processes and tools was managed mainly by email, phone, and in person (terms of reference). These mechanisms were commonly used for communication in this context. Meetings were arranged by email and held in person or by teleconference. Documents were shared by email. When dialogue was required, phone and in-person meetings were arranged. For example, an in-person meeting was held in early 2011 with the ACRC partners to develop a vision for the initiative and identify strategic priorities. The project manager also reported that members often phoned for updates, and it was easier to provide them with updates through dialogue than through a written document. Dialogue provided real-time feedback on the information being discussed; relevant information was thereby shared with individuals. The ACRC members were also brought together annually, in the words of one WG member, to share "what we've accomplished to date, … the timelines and … the goals we met and … how everything fits in." The ACRC website initially included progress updates on the various ACRC activities to support the development work of the WG members, but this was not included on the website after it was revised. The website was not a mechanism for information access during the development stage; two WG members reported they seldom accessed the site.

The implementation stage of the initiative required additional communication mechanisms to make information accessible to the partner organizations and research community. These mechanisms included champions (i.e., those ACRC members advocating for the initiative), listservs (both those of the partner organizations and an ACRC-specific one), a website, newsletter, and in-person events. Champions (i.e., the ACRC members) were expected to leverage their expertise and positions in their organizations to support the implementation of the ACRC processes and tools (terms of reference). Members were limited in their ability to champion the initiative in their organizations; this is further explored in the section "Connecting

Stakeholders." Email listservs were an efficient means of reaching large numbers of stakeholders. An ACRC-specific listserv was developed to give the project management team control over the dissemination of information, that is, the team was less reliant on individuals in the partner organizations to disseminate information for them (Project Manager, meeting summary May 9, 2013, and February 27, 2014). A website, hosted by Alberta Innovates-Health Solutions (AI-HS), was also used to post descriptions of the initiative and its partners, the status of tools and processes, and the ACRC activities (e.g., event proceedings documents), as well as information on research events and opportunities in the province (ACRC website, January and May 2014). A newsletter targeted specifically at the research community was produced by the ACRC and made accessible on its website. Over time, the newsletter focused less on the initiative and more on the research community (e.g., promoting collaboration). Finally, in person events also supported the ACRC implementation activities. A forum was hosted by the ACRC with invited participation from industry and government stakeholders to discuss perspectives on the provincial research environment and to learn about the ACRC.

The project management team arrived at the conclusion that multiple mechanisms were required to reach the ACRC stakeholders to support the implementation of the ACRC processes and tools: "there's not one single medium that you will expect to see full engagement on" (Project Manager). For example, the project manager explained that many attempts were made to tailor information to increase the readership rates of the ACRC listserv. The Communication Officer informed the team that readership rates for listservs are typically low, so the team adjusted their expectations with respect to this communication mechanism and focused on using multiple mechanisms to reach their target audience (Project Manager).

Strategies for providing access to information. Supporting the ACRC's members'

access to information was a key activity for this SCI. Access or lack of access to information had direct implications for the implementation of the ACRC outputs as well as the sustainability of the initiative. Three strategies by which members aimed to promoting access to information were (a) managing access to sensitive information, (b) centralizing responsibility for information access, and (c) providing sufficient and appropriate resources to support access.

***Strategy 1: Manage access to sensitive information*.** The ACRC members acknowledged that openness and transparency were integral to the vision of collective action. However, access to information needed to be balanced against the need to protect sensitive information. Sensitive information included organizational information (e.g., internal documents) or information that was personally identifying, either directly (e.g., name, contact information) or indirectly (e.g., contextual details that could lead one to identify an individual). Information was particularly sensitive if interpreted by others as critical or unflattering of a person or organization. Openness and transparency could therefore be counter-productive if they exposed individuals or organizations, including the ACRC, to risk by exposing sensitive information. For example, one individual reportedly expressed during a WG meeting the opinion that not all members should have equal voice in the ACRC. The choice to openly express this opinion to other representatives was detrimental to the collaborative environment that the ACRC leadership wished to encourage.

Information on ongoing discussions internal to the WGs or EC when decisions had not yet been made was particularly sensitive in nature. The project manager explained that some information was intentionally excluded from EC updates to the WG members because "the EC members need to be in agreement about what is being communicated" (meeting summary, March 28, 2014). Likewise, the project manager expected that information would be kept confidential within the WGs until the group was in agreement about what to communicate. On two occasions,

this expectation was violated when drafts of processes and tools in development were shared externally, purportedly to obtain input from others with relevant expertise. These events "tainted the waters" and "changed how we looked at things" (Project Manager). The issue from the project manager's perspective was that such actions put the ACRC's reputation at risk because the draft documents did not necessarily reflect the consensus of the partners.

Working together required that the partners come to agreement on the nature of collective intellectual property: who could share information, when, and with whom. The previous example of members prematurely sharing sensitive information outside of their WG does not necessarily reflect a lack of commitment to collaboration, but may reflect that this was a learning process for some members. The ACRC members were sensitive to data privacy and confidentiality concerns due to the nature of their work, which involved the administration of health data. Access to information was carefully controlled in this context and individuals were highly attuned to privacy concerns with respect to their own information. Individuals understood that information that put individuals or their organizations at risk was not to be shared with other members of the ACRC, limiting openness to a certain extent. For example, two WG members raised concerns about the privacy of their interview data. The project management team and I responded to these concerns promptly and all interviewees consented to their data being used for this study. Particularly for members who had not previously participated in a collaboration such as the ACRC, the nature of collective intellectual property and related sensitivities and risks may have required clarification. To address the previous issue of WG members pre-emptively sharing draft documents, the project manager met with all WGs to clarify that information from the committees would be shared at agreed upon times.

Confidentiality in one sense limited access to information. However, demonstrating an

awareness of the need to protect sensitive information and putting in place effective mechanisms to do so established trust among members. In short, limiting access to sensitive information supported access to information.

Strategy 2: Centralize responsibility for information access. The ACRC members' terms of reference stated that they were expected to share information both within the ACRC during the development stage and within their respective organizations during the implementation stage. In practice, however, members shared information about the ACRC to a limited extent both internally and externally. The EC asked the project management team to assume the responsibility of managing information access internally and externally to the ACRC, resulting in a centralized structure with respect to information access. The project management team mediated communication in the ACRC between the WGs as well as between these groups and the EC. The team also established an ACRC listserv and developed communication materials, including communications briefs, to support the members in "championing" the ACRC in their organizations (Project Manager). The anticipated role of the project management team, as defined in the terms of reference, was to provide project management and logistical support as well as to maintain records related to the work of the ACRC committees. Therefore, it appears to have been a natural extension to extend this role to include communication management. The advantage of centralizing communication was that information was efficiently and reliably disseminated, there was "consistent messaging," and the team ensured that all the partners were "equally represented" (Project Manager).

The centralized ACRC structure also introduced a certain amount of risk to the ACRC (Project Manager, meeting summary, Feb. 27, 2014). The project manager was concerned about the sustainability of the ACRC were AI-HS to no longer be the "driver." In a follow-up

interview, the project manager reflected that the centralized structure meant that she, not the members, had the most complete picture of the ACRC's activities and progress: "the only person who knows all the pieces and how potentially all the pieces may fit together, is me." The project manager recognized the need to pull all the pieces together for the ACRC members, particularly as the initiative moved into its implementation stage. A WG member echoed this observation that the project manager held all the ACRC "pieces," saying, "you have all these people working together, but we really don't know as a whole what's going on within the organization."

WG members confirmed that the communication process was not fully transparent to them in terms of what information was being shared with others. For example, the project manager summarized information on the progress of each WG for the EC and then relayed information on EC decisions back to the WGs (project management team, meeting summary, June 19, 2013). WG members reported that they did not know what was shared with the EC, what was discussed by the EC, or what was conveyed to the senior leadership in their own organizations. One interviewee assumed the project manager "probably" provided the executive members with updates, but concluded: "I don't know what they get."

Strategy 3: Ensure resources are in place for communication. Communication expertise was required to manage information access for the ACRC stakeholders. Recognizing the need for such expertise, a communications strategy was developed for the ACRC and included the role of a communications officer who would liaise with one to two ACRC members from each of the partner organizations to "facilitate transparent communications … and streamline the flow of information" (Communications Strategy, pg. 3). These individuals were to be provided with briefing notes that they would then develop into communication materials and disseminate within their organizations. However, the project manager observed that these individuals did not

disseminate information within their organizations: “The reality [was] that none of us [knew] communications” and that the communications strategy was developed without a thorough understanding of the role of communication and the capacity for communication within the partner organizations. Consequently, the ACRC members relied on the project management team to manage information access with respect to the initiative.

Communication expertise was not sufficient on its own to facilitate access: context expertise was also needed to navigate issues with respect to sensitive information. The project manager explained that they assumed the management of internal ACRC communication with the EC and WGs because they had an in depth understanding of the ACRC context: “There’s particular messaging when you’re doing this type of work that you need to be aware of just in terms of sensitivities.” The need for extensive context expertise therefore contributed to the further centralization of communication management in the ACRC.

The scale and developing nature of the ACRC placed a high demand on the project management team’s resources to facilitate ongoing information access for its stakeholders. The available communication resources, however, were “strapped” and largely limited to the project manager (Project Manager). It was challenging to provide timely information access to the ACRC stakeholders due to the large size of the initiative. At one time, there were approximately 15-20 projects being conducted by the WGs (Project Manager). Resources were further strained by the developing nature of the ACRC. The project manager explained that they had “a problem getting information out because oftentimes the conversations [were] just so evolving, so much in movement.” They acknowledged that the team “[could not] keep up with the communication needed and wanted by the ACRC members.” One member stated that more updates were needed internally about the progress being made by the ACRC members and observed that “when the

ACRC was first going, you'd get newsletters and you'd get updates: 'this is now available' or 'that is now available.' I get those less often now."

Limited resources meant that decisions needed to be made with respect to communication priorities, potentially limiting access to information. For example, a proceedings document was prepared following the first annual meeting of the ACRC members, and a similar document was prepared following the second annual meeting. The second proceedings document, however, was never finalized and disseminated to stakeholders: "It's now a year and a half since [the event] that it's been written" (Project Manager). The project manager explained this was a "capacity" issue: "Where do I spend my time? Do I spend my time on a meeting that's happened … or do I spend my time on moving things forward?" The need to prioritize information access meant that the project management team functioned as a gatekeeper for information, deciding what information would be shared with whom, when, and how.

Integrating evaluation to enhance information access. A unique aspect of the ACRC with respect to information access was the fact that an evaluator was embedded within the initiative from the start to support the ACRC activities. Having an embedded evaluator enabled a "continuous evaluation approach rather than an episodic one" (Evaluation Framework, p. 10). An episodic approach is typical of traditional evaluation approaches. AI-HS played a leadership role with respect to the ACRC evaluation and contributed both resources and the expertise of its own Performance Management and Evaluation unit to support the embedded evaluator and co-develop an evaluation framework (Evaluation Framework, p. 4; Request for Expression of Interest for ACRC Evaluation, June 29, 2011). In addition, an advisory committee composed of experts provided ongoing "feedback and advice" on the evaluation (Evaluation Framework, p. 10). Although the WG members did not refer to the evaluator or the evaluation in their

interviews, the project manager discussed at length the influence of the evaluation on their own role in the ACRC. This section describes the evaluation framework developed for the ACRC, the intended recipients of the evaluation findings, and how the evaluation supported the role of the project manager.

The ACRC evaluation was designed to be "innovative, responsive and flexible" to the needs of the initiative (Evaluation Framework, p. 10). In the early development and implementation stages, evaluation activities were designed to identify "what works, for whom, and under what circumstances" using a developmental evaluation approach. In this approach, the evaluator is "a member of the team" who helps to "shape the course of the innovation by helping to inform decision-making and facilitating learning and reflection" (p. 48). As the initiative matured, the evaluation was designed to transition to have an accountability focus, adopting a goals-based approach and assessing "the wise use of resources and achievement of intended outcomes" (p.11, 18, and 40). The overall evaluation design was described in the framework document as "a multi-level, mixed methods system evaluation that [integrated] goals-based and developmental evaluation, and data collection strategies and methods" (p. 4). The framework also recognized the complexity of the ACRC environment and the influences of factors including economics, politics, and organizational cultures by incorporating ongoing observation as a method to capture "rich, detailed, and contextualized data" (p.10). During the data collection period for this study, the evaluation was focused on the purpose of learning as the ACRC was in the development and early implementation stages. Therefore, the goal was to make evaluation findings accessible to the ACRC members to inform their work.

Transparency was identified as one of the principles guiding the evaluation, whereby the evaluation framework and findings "[would] be made transparent to co-collaborators and key

stakeholder groups" (Evaluation Framework, p. 47). The framework specified that findings would be shared with the project management team, "informing them along the way" to support planning and implementation decisions (p. 12). Developmental evaluation was identified as an appropriate approach for this purpose "because its strength is in the capture of real-time information" (p. 17). Mechanisms for sharing findings with the project management team, AI-HS, the EC, and the research community were identified in the framework and included reports, presentations, newsletters, the ACRC webpage, as well as "informal reporting" (p. 37, 79). One group that was not singled out as a recipient of information was the WGs. The embedded evaluator said they had "limited interaction" with the ACRC WG members; they shared and discussed findings mainly with the project management team and the EC (Evaluator, meeting summary, April 14, 2015).

In practice, the evaluation conducted during the development and early implementation stages was not aligned with the developmental evaluation approach. In this approach, the evaluator is a team member who contributes expertise and data to inform ongoing decision-making. The project manager described the ACRC evaluation "more as ethnography than as developmental evaluation" because the embedded evaluator observed, rather than participated in, meetings (field note, March 21, 2014). For this reason, the project manager felt the evaluator was "not an appropriate participant for [my] survey" (field note, March 21, 2014; Project Manager, personal communications, March 27, 2014). The fact that the evaluation had not proceeded as expected was a source of some sensitivity for the project manager, who "[felt] bad they [hadn't had] the evaluator doing more" (field note, March 21, 2014).

The project manager worked closely with the evaluator and reported that evaluation findings informed their work. They particularly valued the observational data collected by the

evaluator during the ACRC meetings about "how people act[ed], respond[ed] and behave[d]," and the two would discuss this observational data following the meetings (personal communication, March 27, 2014). Although not a participant in my survey or interviews, the evaluator provided feedback on my data collection tools. In an email exchange about how to categorize purposes of communication, the evaluator described a particular purpose of communication: they would call the project manager "after a difficult meeting just to see how they were doing emotionally." The evaluator labeled this purpose "sense-making" and explained that they considered it to be "qualitatively different" from planning (Evaluator, personal communication, January 19, 2014). This aligns with the project manager characterization of the embedded evaluator as a "sounding board." The project manager also noted this role required the evaluator to be "somewhat independent and kept at a distance on purpose so that they [maintained] a critical eye" (meeting summary, March 28, 2014).

Whereas the evaluator's role in the ACRC did not align with the developmental evaluation approach, it was greatly appreciated by the project manager and appeared to have been responsive to their needs. The project manager commented in an interview that the evaluator did not fully realize the value they had provided beyond the "concrete deliverables" of the evaluation. As a "facilitator and active actor" in the initiative, the project manager felt they were interpreting what was being communicated and "making assumptions along the way." For this reason, the project manager stated that when working to build consensus, "you never should do this by yourself. Never!" The evaluator collected detailed observational data that was then made accessible to the project manager to inform their decisions and the direction of the initiative: "[The evaluator] takes very extensive notes in terms of what's happening in the room. …. I read between the lines … in terms of where are the issues that people are having and then

how do we need to attack those issues." Following meetings, the project manager and evaluator would discuss what had happened, allowing the project manager to engage in "reflective thinking" (Project Manager). In these sessions, the evaluator would question the project manager's assumptions and provide alternative interpretations based on the evaluator's own detailed observations during the meeting. These dialogues provided the opportunity to "take that step back" and "sort out what's important" (Project Manager, Evaluator).

Connecting stakeholders. Networks of connections that exist among individuals serve as a means of disseminating information. Highlighting the role of networks with respect to the ACRC, the discovery phase of the communications strategy found that "stakeholders who [knew] about the project [were] receiving ACRC information from their peers who [were] in some way connected to the ACRC" (communications strategy, p. 2). The ACRC members were therefore identified early on as "champions" for the initiative, and were expected to disseminate information through their networks, as documented in both the communications strategy and terms of reference. Within the initiative, members were expected to communicate with one another within their WG or within the executive committee (EC) as well as across these boundaries with members from the other WGs and the EC. The anticipated role of AI-HS was to provide project management support to the ACRC members. However, data indicate that members connected with one another within their own WGs, but connections across groups generally did not take place. Further, members experienced challenges with respect to fulfilling their role as champions of the initiative in their respective organizations.

Limited communication occurred among groups within the ACRC. As each WG

developed processes and tools that aligned with their strategic priority and that could be adopted across the provincial health system, they received limited feedback or information from other ACRC members. There were few direct connections made between the WGs or between the WG and EC levels with the exception of an annual ACRC meeting (meeting summary, June 19, 2013). In the words of one WG member, "The only time I ever really work with anybody is directly through the meetings at the ACRC." It had been expected that information would be shared between the working and executive levels of the initiative, but "this [did] not happen; the WG members infrequently [spoke] to the EC member to whom they [were] expected to report" (Project Manager, meeting summary, March 28, 2014). For example, I observed on a visit to interview one member that the EC member to whom they were to report had an office only seven doors away, and yet was told it had been "forever" since they had last seen each other (field notes, May 23, 2014). Information was instead communicated between these levels indirectly via the project manager (Project Manager, meeting summary, February 27, 2014), who thereby assumed more of a communication management role within the initiative than anticipated. From the beginning of the ACRC initiative, the project manager played a central role in supporting communication both within the ACRC and within the partner organizations (see Figure 6).

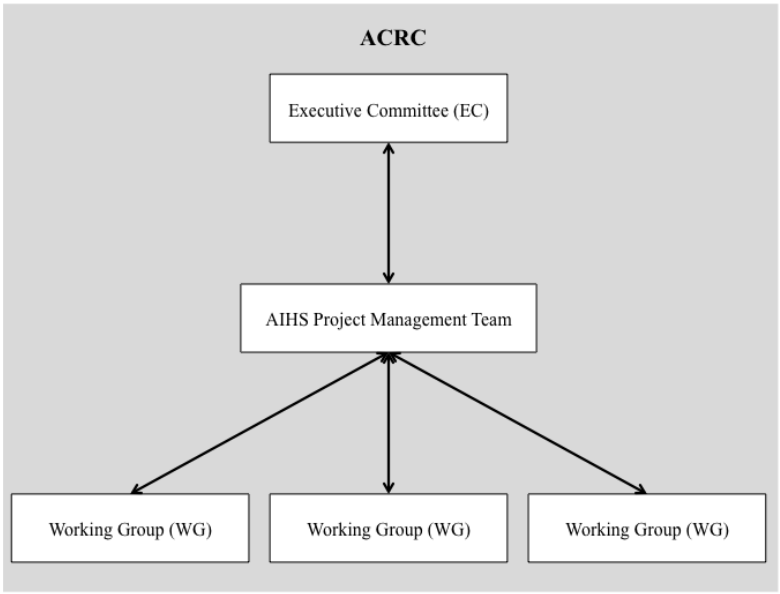


Figure 6: Connections among the ACRC members

***Making connections between and within partner organizations*.** Just as connections were lacking within the ACRC during the development stage, likewise limited connections between the ACRC members and others in their respective organizations presented a challenge for the implementation stage of the initiative. The ACRC members were dependent on individuals with decision-making authority in the partner organizations choosing to implement the standardized forms and tools they produced. As described elsewhere, the ACRC was supported by commitment letters from its partners, but did not have the authority to mandate changes in these organizations. Because individuals were frequently leaving the initiative due to changes in their own organizations, the ACRC members understood the importance of nurturing their connections with one another. As the project manager explained following turnover in the initiative, "The rest of the members [were] now looking at each other thinking 'I have to work with you. We need each other – you're helping me solve my problems' (meeting summary, March 28, 2014). Early in the initiative prior to Fall 2013, the project manager described

members as working in "silos" and the need to facilitate building relationships. The project manager reported that they sought to connect with individuals as well as "to connect them to each other" (Evaluator, personal communication, January 19, 2014). In fact, members asked the project manager for this support. One individual approached the project manager "asking if they could target communication up the governance structure" of their organization because this individual was "the only person in their organization who [knew] about the ACRC" (Project Manager, meeting summary, March 28, 2014).

***Bringing individuals together to build relationships*.** Through the ACRC, representatives from the partner organizations were brought together "to network, to learn about common issues, and to figure out common solutions" to these issues (WG Member). One WG member explained that the ACRC was "especially valuable in providing various opportunities to communicate. To my mind, this is the strength of this group. … I think the value here is bringing people together so that organic conversations can take place." Such opportunities were necessary for members who were distributed across various provincial organizations. Even individuals from the same organization were not necessarily in frequent communication.

The aim of relationship-building efforts on the part of the project manager was to create a space in which the members trusted one another and could openly discuss their mutual work. As one WG member observed, moving forward collectively required "trust and collegiality amongst all the partners." The first ACRC meetings were particularly important in "setting the stage" and building group "cohesiveness": "That really went far to set up that environment so that we could have those difficult conversations and work together on things, try to be collaborative." For example, the project manager informally connected with all new members prior to their first ACRC meeting: "When they come to the committee, they know one person. They may not know

anybody else, but they can still feel comfortable that they know one person there" (Project Manager). The WG members reported they were generally comfortable contributing to conversations at the ACRC meetings. One WG member was very comfortable and open with the project manager in particular because of the relationship they had developed.

Benefits and limitations of the process of building relationships. Coming together led to dialogue among the ACRC members and learning from one another. "Our groups can still discuss – even agree to disagree, still find common ground and learn from each other. I think learning is one of the most valuable by-products of the whole ACRC enterprise" (WG Member, personal communication, August 29, 2015). An example of a particularly rich learning experience was the collective development of a roadmap for clinical research in one of the WGs. The roadmap outlines the steps required of all researchers across Alberta to develop and conduct clinical studies in the province. A member of the group described the development of the roadmap as a contentious process that ultimately strengthened group relationships. This individual elaborated on learning about other members through the roadmap process in a follow-up interview: "I think those conversations went a long way to really give people an understanding of what some of those other folks were working with and, you know, their resourcing issues, structure issues,and all those things" (WG Member).

Whereas relationship building and ongoing communication led to trust being established, the opposite held true as well: a lack of communication bred distrust. For example, the project manager became less accessible after accepting a promotion to a more senior position in 2015, resulting in fewer opportunities for informal discussion. Commenting on the project manager's promotion, one WG member stated that the promotion was a significant change that left them unsure as to the state of their relationship with the project manager. As a result, this member

stated they would be less inclined to be open with the project manager until they could feel certain about the relationship again. Another example was provided by a WG member who described failed attempts to connect with an EC member. For this individual, the experience reinforced the idea that those in power are not interested in those lower in the hierarchy and led them to distrust the ACRC leadership. Not communicating is not a neutral action and may be (mis)interpreted in ways that affect relationships among members.

Benefits and limitations of the changing role of the project management team. The project management team facilitated connections among the ACRC members in the hopes that the members would then continue communicating with one another and sustain the initiative going forward. Although these activities were not originally envisioned as being part of their role, the project manager pragmatically reflected that: "If you don't do it [i.e., facilitate connections with senior leadership], the initiative will die. You have to do it" (Project Manager). Taking on this role centralized the responsibility for managing the ACRC communications within the project management team. The project manager effectively established relationships with members and was described by one WG member as "the glue for the group": "I think the relationships that she's developed as well have been integral to the success of the group." Being "the glue" meant facilitating connections, particularly when new members joined the initiative, and being responsive to the needs of the WGs. A recognized risk to the sustainability of the ACRC was the fact the members came to rely heavily on the project manager to facilitate their interactions. In a meeting on November 22, 2013, the project manager raised the concern that they "cannot be the only person doing this in the ACRC" and asked how members could take on the role of relating with one another outside of the WG meetings and across WGs to manage conflicts and build trust and respect. In early 2014, the project manager expressed concern that

"the ACRC [was] not sustainable" because "there [were] not enough of those relationships [among members] for the ACRC to sustain itself if the core group were to be removed" (meeting summaries February 27, 2014, and March 28, 2014).

Over time, the project management team "built a relational base, facilitated conversations, and brought people to the table" (Project Manager, meeting summary, March 28, 2014). One of the WG members said that the connections made through the ACRC made it "very easy to contact whomever" because "we know who we are now in terms of, you know, who does what in the province and with other organizations. And so it's not just a name, you know, in an email. You know who you're talking to." This interviewee claimed that these connections had, in turn, led members to be "more open to getting things done together." Another WG member related that the connections made through the ACRC led to collaborative work on other, non-ACRC projects. In a follow-up interview in early 2015, the project manager reported that members were communicating with one another to an extent that had not happened before: "I'm realizing that they're not coming to me anymore. They're actually telling each other [about organizational developments], and they're supporting each other in the process." Members also began to build relationships with a new member of the project management team, whose responsibilities included communicating with the ACRC members and stakeholders, although the project manager reported they had been told by some members, "We miss our chats."

Nurturing connections was not a one-time event, but a process requiring a significant investment of resources: "It takes time to build trust" (WG Member). The project manager estimated that up to 70% of their time early in the initiative was spent on building relationships (meeting minutes, June 19, 2013). This investment of time decreased to approximately 40% by November 2013 as the ACRC members began to have discussions with one another. It was over

a year later in early 2015 when the project manager observed that members were communicating with one another beyond the ACRC meetings and their role in facilitating relationships was greatly reduced.

The success of the initiative was dependent on relationships and they were therefore highly valued. Because the ACRC was not supported by a mandate to the partner organizations, "tomorrow they could stop and there'd be nothing we could do" (Project Manager). The project management team swiftly acted to address risks to their relationships with the ACRC members. One such risk to the relationships they had invested so much time and effort to develop was, in fact, my research study. The ACRC members were highly aware of ethics and privacy policies as well as the multiple sensitivities inherent in the context, such as power dynamics. A participant raised concerns about my use and reporting of their data; I conveyed these concerns to the project management team. As a result, the team met with me to agree on a strategy to address the participant's concerns, which included drafting a protocol for data collection and use and agreeing to not quote this individual in my dissertation. Data from this individual was paraphrased only; data from other participants were either paraphrased or quoted. The timely response of the project management team demonstrated the high value placed on maintaining positive relationships with the ACRC members (field notes, August 19, 2014).

Strategies for connecting stakeholders. The project management team recognized that strengthening connections among individuals was a key activity needed to support communication both internally and externally to the ACRC. In particular, connecting stakeholders had direct implications for the sustainability of the initiative. The ACRC members sought to build and support connections with stakeholders using two strategies: (a) being responsive to stakeholder needs and (b) connecting in person.

Strategy 4: Be responsive to stakeholder needs. Working collectively was an opportunity to create a "win-win situation" for the partner organizations (WG Member) whereby members could engage in dialogue and share knowledge and experience of best practices "to help each other to succeed" (First Annual General Meeting Proceedings, June 6, 2012). Providing benefit to members required being understanding and responsive to their individual needs. The project manager understood that members were "not operating 'in a petri dish,'" but were exposed to unique pressures from their respective organizations and was responsive to their needs (Project Manager, meeting summary, March 28, 2014). The project management team endeavoured to provide timely responses to the ACRC member requests, particularly in the early stages of the initiative: "We were very, very responsive. So there wasn't a day that went by that you did not get a response to a question within a day" (Project Manager). When the project manager was promoted, the WG members connected with the project officer more frequently "because they're realizing that she's more responsive" (Project Manager). One WG member described the project management team as "very approachable and eager to assist." Interviewees appreciated that the team followed up on their questions regarding clinical research tools, protocols, and submissions.

One need identified by some ACRC members was for support to "bridge" conversations between themselves and senior leadership within their own organizations (Project Manager). EC members approached the project manager for help in connecting and "getting conversations going" with senior leadership, specifically by drafting email messages for dissemination. As discussed earlier, providing the EC members with communication materials did not resolve the bridging issue because the partner organizations lacked effective dissemination mechanisms, leading the project management team to then develop a separate listserv to directly connect with stakeholders. It should be noted that issues with disseminating information were not present in

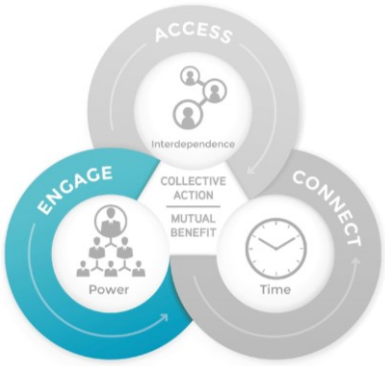
all the partner organizations. One member reported it was "very easy" to disseminate updates and newsletters at meetings and appreciated not having to develop the materials.

Strategy 5: Connect in person. According to one WG member, in-person meetings were an "integral" strategy for building relationships and trust "so everybody understands everybody else's perspectives and can carry that understanding moving forward." Highlighting the value of face-to-face meetings, this member went on to state that it was "important to develop those trust relationships before utilizing teleconferences and other forms of meeting where you're just a voice in a box." The key advantage to in-person meetings was the opportunity to engage in dialogue and clarify questions as they arose. As I worked with the project management team, I realized that other forms of communication, such as emails, at times led to confusion as to the writer's intent. Opportunities for in-person dialogue helped clarify points of confusion among individuals, as evidenced in an email I received from the project manager following one of our meetings: "Thanks for our dialogue, it was very helpful in better understanding your research focus. As such, it is easier for me to think about mapping the flow of information on the ACRC – how does this occur, what is communicated, when, where, why" (Project Manager, personal communication, March 27, 2014).

Opportunities for informal communication were incorporated into in-person meetings to further support relationship building among members. In the words of one of the WG members, "[At meetings] there's always time to sit down and chat with people, get to know them, and that really provides the basis to build some trust." Members communicated with one another outside of the ACRC meetings to varying degrees as many of these relationships existed prior to their involvement with the ACRC and were established through work. In their interviews, WG members revealed various instances of informal communication with others. The content of

informal communication encompassed members' personal lives and work as related to the ACRC, as well as work not related to the ACRC such as navigating other partner organizations, sharing perspectives, and seeking expertise (project management team, meeting summary, Nov. 22, 2013; survey data). In a meeting on March 28, 2014, the project manager said that even though the members were not often discussing the ACRC informally with one another, "These relationships make it easier to bring issues into the formal structure; that's how the work gets done." Informal communication was recognized as having an influence on formal communication within the initiative and was encouraged to take place.

Engaging stakeholders. As stated in my theory of communication in the ACRC, the overall goal of communication was to create a space in which stakeholders from across the provincial clinical research system were committed to engaging with one another in collective action for mutual benefit. A number of strategies have been presented in this chapter to demonstrate how two components of the communication process, providing access to information and connecting stakeholders, were facilitated among stakeholders. This section explores the strategies that were used to promote the final component of the communication process: engagement. It was generally assumed that access and connections would lead stakeholders to advocate for the implementation of the ACRC tools and processes across the system. For example, the communications strategy stated that providing the ACRC members with information and updates (e.g., key messages, overviews, summaries) would lead members "to engage their institutions, networks, colleagues and staff" (p. 8) and "to seize informal and formal opportunities to inform, persuade and inspire stakeholders" (p. 4).



However, access and connections were not sufficient to ensure such actions on the parts of the ACRC members. This section begins by exploring how engagement was understood within the ACRC. Three strategies used to engage the ACRC members are then presented.

Engagement involved participation, dialogue and commitment. Although one of the stated purposes of the communications strategy was to *engage* stakeholders, the document did not include a definition of this term. Key properties of engagement emerged, however, though analysis of the data. As a starting point, the ACRC Evaluation Framework was reviewed to determine how the project management team planned to assess member "engagement." An observation protocol for the ACRC meetings listed behaviours such as completing tasks on time, focusing on tasks, and acknowledging the contributions of others as indicative of member engagement (evaluation framework, pp. 65-67). These indicators define engagement as active participation in meetings.

An examination of how members described their participation in meetings revealed the importance of dialogue in supporting engagement. WGs were tasked with developing standardized processes and tools for their organizations. The members engaged one another through dialogue, that is, exchanging information and listening to one other. The project manager observed that the process of "making people listen to each other, and not just say, 'This is what I do and why it is important and better than your way'" was challenging (meeting summary, November 22, 2013). A WG member described the respectful dynamic that had developed in one of the WGs and that supported its work: "Everybody still brings their perspectives and we don't all necessarily agree … I think we all understand that we have to come to agreement, and we work towards that."

A definition of engagement that encompasses active participation and dialogue is limited,

however, if we take into consideration the vision of the ACRC. To achieve this vision, members needed to engage in developing tools and processes, as well as in advocating for their implementation across the health system. The need for a broader sense of "engagement" was evident from my data, one that included a commitment to the ACRC vision and, critically, a willingness to change so as to make this vision a reality. One member commented that in their WG, "We all understand that we need to shift our thinking, compromise."

Individuals who were not committed to the ACRC vision would not be expected to engage in the development or implementation activities aimed at achieving this vision. There were examples in the data in which certain members' commitment to the ACRC was in question. For example, the project manager observed that the WG members did not engage with one another beyond their meetings: "The work done in the development phase was done either during WG meetings or by AI-HS" (meeting summary, March 28, 2014). The fact that the members' placed much of responsibility for development and most of the responsibility communication management onto the project management team, which was external to the collaboration, led the project manager to question their commitment and the sustainability of the ACRC (meeting summaries February 27, 2014, and March 28, 2014). As discussed under "Strategy 10: Define a Shared Vision for the Future," individual-level commitment to the vision of the ACRC was not a one-time event, but needed to be continually re-affirmed in response to dynamic contextual factors and interactions with others.

A key ACRC activity that demonstrates the properties of engagement described above (i.e., participation, dialogue, and commitment) was the development of a system-level process map for clinical research. This activity was undertaken by a WG and required the members to come to consensus on the process for conducting clinical research in the province. The partner

organizations differed with respect to their processes and policies, views on risk, the support they provided to researchers, and the points in the research process at which they were involved (Project Manager, meeting summary, May 9, 2013; personal communication with WG member, August 29, 2015). At their meetings, the WG members engaged in extensive dialogue in their efforts to come to consensus on a process map. One member stated that this process led them to reflect on their own organizational practices and to challenge some of their assumptions:

> I was put on the spot by others in the group who pressed me to explain the WHY behind some of our processes. Some of the systems that we work with were in place when I started working at [my organization], and so I hadn't challenged those processes as yet. The discussion forced me to consider the "why" and consequently, my team and our work improved because of it. I think there is great opportunity associated with being transparent and working with partners, and validating systems in this way. (Personal communication with WG member, June 10, 2014)

In spite of the fact that this member described being "put on the spot," "forced," and "pressed" by fellow WG members to examine their organizational practices, when asked about the use of these terms and their negative connotations, the member stated that the outcome was ultimately positive because it led to greater understanding of these practices:

> I did use those words; but they weren't intended to imply a negative experience, rather a necessary one. I was trying to express the introspection – thought required to build a rationale, when having to identify the "why" of things and processes, i.e., some of our processes were handed down from before my time with the organization. And some of the processes that I helped introduce, I hadn't thought about for a while. It's sometimes uncomfortable being challenged to identify and explain the "why," but surely

worthwhile! (Personal communication with WG member, August 29, 2014)

The process map was showcased at the first Annual Meeting in 2012 and according to one member, was seen as representing their collective approach to clinical research and not that of any one organization. The fact that two WG members had the map on hand in their offices when I interviewed them is indicative of how engaged they were in the development of this document. One member had it prominently displayed on their office wall. Another member kept the document on their desk and described efforts to share it with senior leadership in their organization.

Strategies for engaging stakeholders. Engaging members was critical to the success of the ACRC and involved efforts to support individuals' participation in the initiative, dialogue among members, and commitment to the ACRC vision. Strategies aimed at promoting engagement included (a) addressing individuals' reasons for participating in the ACRC, (b) presenting individuals with the "big picture," and (c) including individuals in decision-making.

***Strategy 6: Address individuals' reasons for choosing to join the ACRC*.** Individuals participated in the ACRC for various reasons beyond fulfilling their organization's commitment to have representation in the initiative. The WG members I interviewed all saw their role as contributing their expertise to the initiative and ensuring that their organizations' perspectives were represented. These members also stated that they benefitted from participating in the ACRC, for example, by expanding their personal networks and learning about activities in the province that could impact the researchers supported by their respective organizations.

One way in which members reportedly differed, however, was in their willingness to change their own organizational processes. Two WG members I interviewed observed that some individuals participated in the ACRC because they thought their processes were right and did not

intend to change them. One member proposed that resistance to change was a "mentality": people are "wanting to create positive change, but then they get stuck on 'well, this is how we've been doing it'" and potentially view proposed alternatives as criticism of what they have done. This member went on to explain that this resistance can be overcome with a change in mentality: "It's that you don't want to change it, not that it can't be changed."

Other members were described as "systematic, provincial thinker[s]" who were frustrated with the system at the time and were committed to the ACRC vision of improving clinical research provincially (Project Manager). In the words of one WG member: "The whole point of doing all of this is to try and create efficiencies and to standardize it. … We're not here to say, 'We want to do what you're doing'." These individuals "need[ed] to be part of this [initiative]" and wanted to see change both within their own organizations and across the provincial clinical research system (Project Manager, meeting summary, May 9, 2013). Limiting their role to providing expertise to the ACRC was not enough for these "provincial thinkers." In fact, the evaluator stated that delays in the initiative led to turnover as "certain individuals dropped off because change didn't happen quickly" (meeting summary, April 14, 2015).

Through building relationships with the ACRC members, the project manager came to understand their motivations for participating in the initiative and the current issues faced by their organizations. The project manager said that they used this understanding when preparing communication materials in order to engage stakeholders and "get [them] to focus on the future of research in Alberta" (meeting summary, March 28, 2014). They explained that it was equally important to address "the 'so what' in terms of relevance" for stakeholders in communication materials as it was to provide information. For example, the project manager described an intentional shift in the messaging of materials distributed via the ACRC listserv to the research

community. Early materials featured the initiative. Over the latter half of 2013, the materials began "featuring researchers, promoting the spirit of collaboration" and supported recipients' capacity building by including, for example, tools developed by the ACRC (Project Manager, meeting summary, February 27, 2014).

A key aspect of this strategy was recognizing that individuals must *choose* to engage in the ACRC: "Everybody comes to the table at their own time and in their own way" (Project Manager). The project manager understood that individuals needed time to process information about the initiative as well as to address their own organizational priorities before making new commitments. For this reason, they communicated to stakeholders that they had open invitations "to come to the table" and engage when they were ready (Project Manager). This open approach eventually led to stakeholder engagement: "And it's interesting because people are saying that '… you never closed the door, you never closed the opportunity, and we appreciate that'" (Project Manager).

Strategy 7: Present individuals with the big picture. Presenting "the big picture" of the ACRC was another strategy to engage members in the initiative. Part of this picture included the potential for the ACRC to achieve its stated goals. The project manager relayed an interesting example about a moment in which the EC recognized the value of the ACRC tools. Initially, the EC did not appear to be fully engaged in the WG progress updates: "Then we showed them the first couple tools that went out. And they were like, 'holy smokes, guys!'" The EC was reportedly so impressed with the quality of the tools that they re-opened an earlier discussion regarding product distribution to consider charging for them (Project Manager).

Members also found it engaging to know what was happening in the initiative beyond their own WGs. As described earlier, the WGs largely worked independently of one another.

Members commented that although they were informed on the progress being made within their WGs, they were less informed on the progress made by other groups and the initiative as a whole. One WG member in particular expressed the desire for information to be more accessible within the ACRC: "it's important that not only you're meeting your goals, but everyone's meeting their goals." This member went on to explain that sharing this information would keep all members updated on the progress of the initiative and would acknowledge groups on the achievement of their milestones.

For other members, the "big picture" needed to extend further to present how the ACRC fit with respect to their organizations. One interviewee observed that another member does not always engage in the ACRC and attributed this to not sharing the ACRC vision: "I don't think they see their piece as being involved here. … I don't think they feel they are able to participate and provide anything meaningful." Not seeing the big picture, some individuals may choose not to engage in, or even to disengage from, the initiative. However, this is not the only reason why individuals varied in their commitment to the initiative. Other reasons identified in my findings include the extent to which individuals desire and are willing to change at the systems level (e.g., strategy 6), how individuals perceived the commitment of leaders from the partner organizations (e.g., strategy 13), as well as the degree to which they could contribute their time (e.g., strategies 16 and 17). These are addressed in other sub-sections of this chapter.

Strategy 8: Include individuals in decision-making. As discussed, the project manager expressed concerns on multiple occasions about the ACRC's sustainability because its members heavily relied on the project management team to drive the initiative forwards. To address this issue, the team structured meetings to engage members in decision-making. Members were expected to not only contribute their skills and expertise, but also to make decisions collectively.

For example, each activity undertaken by a WG began with the development of a "work plan" that reflected the group's consensus on the purpose and scope of the activity, necessary resources, expectations, anticipated risks, and specific goals (Project Manager).

The project manager explained to me that the use of work plans in the ACRC was a deliberate engagement strategy. They stated that even the decision to use the term "work plan" was intentional: it was selected because the original term proposed, "project charter" was not "palatable" and was therefore a potential "barrier" to engaging members who were not well known to one another and "not at the point of saying, 'we agree to do the following'." Further, the term "work plan" highlighted that members "ha[d] to work." The goal of having members develop work plans was not to have work plans: "It's not the plan that's important." The plan guided the group's thinking and built consensus among its members: "So the plan itself is just a piece of paper if you ask me. It's the engagement process once again. It's the engagement process."

The project manager's intended outcome appears to have been borne out: one WG member supported the need for work plans, explaining that the group "had to have some kind of basis from which to work otherwise we would have been [moving] in all kinds of directions." This member went on to say that the project manager "certainly provided the initial direction" for the work plans, but the group then "sat down and decided 'this is how we want to proceed'."

Context for the Communication Process

Recognizing interdependence within the system. Prior to the establishment of the ACRC, clinical research stakeholders in the province recognized the need to work together. By operating independently of one another, they were competing for

limited resources (e.g., government funding) and introducing redundant administrative processes across the system. Over time, each institution had developed its own administrative processes for clinical research to meet the needs of its own researchers. Feedback from researchers, however, indicated that the system was challenging to navigate, particularly for those working with collaborators at other provincial institutions. This made the province less attractive for investment from global pharmaceutical companies and the recognition that "in the global context, Alberta needs to enhance its ability to be competitive in attracting outstanding clinical researchers and clinical research investment to the province" (Inaugural Strategic Plan, p. iii). The decline in clinical research being conducted in the province gave stakeholders a sense of urgency to address their common challenges (Project Manager, meeting summary, March 28, 2014).

Around this time, national and provincial government strategies both emphasized streamlining processes and addressing common challenges to achieve efficiencies. At the provincial level, for example, Alberta's Health Research and Innovation Strategy (Government of Alberta, 2010) outlined initiatives to support "the development of integrated and coordinated provincial structures for health services delivery, postsecondary education, and the advancement of research and innovation" (p. 5). This reflected a shift in thinking from developing processes and addressing challenges at the organizational level, to achieving efficiencies in the provincial and national health research systems and positioning the province in a global context.

There was, in sum, a growing consensus among stakeholders within the province that they all had a part in creating an attractive environment for researchers and industry and that it was the appropriate time to act. However, the particular vision for the province and the means by which it would be achieved were not yet defined. In May 2011, individuals interested in defining

a provincial vision extended an invitation to all stakeholders to come together to agree on a shared vision and strategic plan for clinical research in the province (Inaugural Strategic Plan). Participants labelled the initiative a "consortium," a term highlighting the fact that stakeholders had the choice to maintain the status quo and function independently, but "together they [could] achieve more than any organization on its own" (Project Manager, meeting summary, March 28, 2014). Further, stakeholders recognized that they all stood to benefit from working together to enhance the provincial clinical research environment, just as they all stood to lose if the province failed to attract researchers or research investment. As one WG member explained, it was important that the stakeholders work together as they were "all painted with the same brush."

Strategies for recognizing interdependence. The ACRC leadership and project management strove to support collective action among the various provincial organizations involved in clinical research to achieve efficiencies in the provincial research system. The strategies they employed to support interdependence included: (a) striving for inclusive representation, (b) defining a shared vision for the future, (c) formalizing the collaboration, (d) maintaining the momentum of collective action, and (e) demonstrating commitment to the shared vision.

Strategy 9: Strive for inclusive representation. Changing a system requires identifying stakeholders and bringing them together. As one WG member stated, "If you want to collaborate, you have to collaborate. You actually have to pull everybody in." The ACRC was not initially inclusive of all stakeholders in the research community, as the impetus for the initiative came from researchers based in academic institutions in the province. The project management team thus recommended extending membership to a broader range of stakeholders, particularly those who had been typically excluded from similar initiatives provincially and nationally (Project

Manager, meeting summary, May 9, 2013). Attendees of the first annual meeting supported this view and identified "representation from multiple provincial perspectives" as part of an ideal, effective governance structure (First Annual Meeting Proceedings, June 6, 2012, p.7). One WG member commented that excluding stakeholders could even undermine the shared provincial vision: "we wouldn't know what they're actually doing, which would be eventually worse." Representation in the initiative was therefore sought from "all partners to ensure a variety of perspectives," including academic institutions, health services providers, and community researchers (Project Manager, meeting summary, November 22, 2013).

The ACRC members established inclusive representation as a key principle of the initiative and a means to "create the space for dialogue" to achieve the vision of the ACRC (first annual meeting proceedings, June 2012). This principle was documented in the WG terms of reference, which stated that the ACRC would "ensure representation of the full range of clinical research activity in the province including the community." Inclusion was further reinforced at meetings through the actions of the project management team. For example, the project manager solicited recommendations for new members from the executive committee (EC) and "at all meetings, members [were] asked who else should be part of the conversation" (project management team, meeting summary, November 22, 2013). "Creating the space for dialogue" thereby involved bringing all stakeholders together and looking for opportunities to include new members in the ongoing conversations.

***Strategy 10: Define a shared vision for the future*.** Stakeholders in the clinical research system came together in May 2011 to develop a shared vision for the province and to outline a strategic plan for realizing it. Common challenges were identified by all stakeholders at this meeting, including "insufficient funding and resources" and lack of communication among

stakeholders in an environment which they described as fragmented and lacking standardization (Inaugural Strategic Plan, Appendix C). A number of factors that could support a shared vision for the province were also discussed, including "motivated participants and researchers," "available funding," and "timeliness for change." In short, members supported collective action to address common, urgent needs. As a result of this meeting, the first phase of the ACRC initiative was agreed upon by stakeholders, including a strategic plan with defined priorities and enabling actions (Inaugural Strategic Plan, p. iii).

The vision of the ACRC was that partners would collectively act to align their administrative, legal, and training processes to achieve "high quality, integrated, and efficient clinical research for Alberta." This was reflected in all communications materials (First Annual Meeting Proceedings, June 6, 2012). The project manager, who assumed the role of managing communications in the initiative, ensured that the partner organizations were also "equally represented" in communications materials: "We're not highlighting one group over another group" (Project Manager). Newsletters for the research community, for example, state that the stakeholders are "working together" to achieve a shared vision and list all the partner organizations involved in the ACRC on the front page. Further, in presentations about the initiative to external audiences, the project manager consciously highlighted the collective action of the partnership rather than that of the project management team: "I actually say that I have the honour and privilege of presenting the work that's been done by many individuals."

There were occasions when members wanted communication materials to acknowledge the involvement of specific partners. For example, the project manager discovered that not all of the partner organizations had listservs. As email was the standard form of communication in this context and an efficient way to disseminate information, the project manager created and

maintained a listserv for the initiative. The project manager explained that their preference was for the partner organizations to distribute communications materials because this "would demonstrate support for the ACRC on the part of the organization[s]." Some groups reportedly requested that the ACRC materials be tailored to include an organization-specific signature line to highlight their involvement (Project Manager).

The partners understood that collective action would require communication across organizational boundaries. Strategies to facilitate inter-organizational communication were discussed at the inaugural strategic planning meeting for the ACRC. Three of the four enabling actions identified by the partners at this meeting addressed communication challenges (Inaugural Strategic Plan, pg. 8). The first action, creating a "common terminology used across the province," was seen as "an important starting point" to "avoid ambiguity." One of the ACRC WGs developed a common glossary of terms to address this enabling action. The second action was to develop a "communications strategy that effectively engages and informs individuals," and the third was to assemble an "information management structure that facilitates seamless exchange of information." The enabling actions highlight the partners' acknowledgment of the importance of effective communication to the success of this initiative.

"Getting people together on the same page" was a lengthy process: "It took at least a year to get people aligned to a provincial vision" and to harmonize divergent views (Evaluator, meeting summary, April 14, 2015). Member turnover meant that the process of getting people on the same page and aligned to the vision had to be started over with each new addition. Turnover was a common occurrence in this context, presenting a real risk to the sustainability of the ACRC because significant time was required on the part of the project manager to bring these new members into the initiative (Project Manager, meeting summary, November 22, 2013). The

experience of the ACRC partners illustrates that developing a shared vision is not a one-time activity, but an ongoing process in which the partners must invest time.

Strategy 11: Formalize the collaboration. To support the collective action of the clinical research stakeholders, the senior leadership of the ACRC sought to formalize the collaboration and have all partner organizations sign commitment letters. The letters, addressed from each partner to each of the other partners, expressed support for the vision of the ACRC and made a commitment to participate and contribute resources to achieve this vision (Commitment Letter). Interviewees reported they had not previously engaged in "formal" collaborations that had signed commitment letters and promised resource contributions. The commitment letters formalized the initiative to only a limited degree, since they did not impart authority on the ACRC to mandate changes to the clinical research system. Instead, the authority to act on the recommendations of the ACRC and implement tools and processes rested wholly with the partner organizations. As will be discussed in the following section on power dynamics, the ACRC's lack of formal authority impeded the momentum of the initiative, particularly when there was personnel turnover in the EC (Project Manager, meeting summary, May 9, 2015).

To further demonstrate the credibility and formality of the collaboration, a visual identity or brand was developed for the ACRC, including a logo and templates for all communications materials. The purpose of branding the initiative was to "visualize the collaboration, reinforce that ACRC is a researcher community-driven provincial initiative, foster a stronger sense of community among Alberta's clinical researchers, and help clearly define and communicate ACRC's vision and goals" (Communications Strategy). A website and newsletter for the clinical research community further established the initiative as a formal entity with an online presence and tangible products (e.g., the newsletters).

A governance structure was established to further formalize the collaboration and facilitate collective action. The project manager described the early days of the initiative as "a chaotic mix of voices" (meeting summary, November 22, 2013). Order was introduced by creating an EC of members endorsed as representatives by their organizations. This committee approved the strategic plan on behalf of the partner organizations (Inaugural Strategic Plan, p. iii). Individuals with expertise in their organizations' operational processes were then invited to join WGs that aligned to each of the strategic priorities of the ACRC.

The ACRC was formally supported by AI-HS, which provided "secretariat support, project management and coordination for ACRC activities" (First Annual Meeting Proceedings, June 6, 2012, p. 9). AI-HS was a stakeholder of the provincial health research system and therefore had an interest in supporting the ACRC. However, unlike the ACRC partners, AI-HS did not conduct clinical research. The selection of an external project manager by the partner organizations in the ACRC was a deliberate strategy to address unequal power among the partners, as discussed further under Strategy 14. AI-HS also viewed its provincial mandate as a key aspect of its leadership of the ACRC. The 2013 AI-HS Annual Report stated that provincial-level "initiatives were not previously attempted by any other entity because success is measured in provincial gains rather than in stand-alone achievements. […] Our mandate enables us to forge ahead where others cannot or will not" (p. 18).

Strategy 12: Maintain the momentum of collective action. As discussed, the stakeholders came together out of frustration with the provincial clinical research environment and viewed collaboration as a mechanism to achieve "a positive end" by addressing common issues in the system (Project Manager, meeting summary, March 28, 2014; Statement of Business Need, December 2, 2013). Failing to demonstrate progress towards the vision the

stakeholders had collectively defined would put the sustainability of the ACRC at risk:

> But if ACRC cannot communicate that the initiative can solve problems, it may lose support, and the partner organizations may instead start developing their own activities and engaging in side activities. Were this to happen, it would make it hard to move provincially. (Project Manager, meeting summary, March 28, 2014)

The project management team recognized the importance of communicating momentum towards the shared vision: "So always, always, always I indicate movement. There's never anything stagnant" (Project Manager). It was equally important that the shared vision remained constant, although this proved to be challenging in a "constantly changing landscape" in which the initiative "evolved" over time due to external pressures (Project Manager, personal communication, March 27, 2014). During times of instability in particular, the project manager strove to ensure communications materials reflected a consistent vision: "All I can do is make sure that we keep going forward, our message never changes." Maintaining momentum thereby involved communicating that the ACRC was advancing towards the unwavering vision of collective action for collective benefit.

Strategy 13: Demonstrate commitment to the shared vision. The senior leadership of the partner organizations publicly committed to the ACRC and signed commitment letters addressed to the other partners. The commitment of the partners to their stated vision and confirmation that "this is what we're striving for" was seen as integral to the success of the ACRC. The project manager highlighted that this "support, saying that we're moving towards quality research, it needs to come from an organizational [level]." Reassurance of ongoing commitment was particularly important to WG members who participated in the ACRC with the understanding that they were doing so with the support of their organizations. It was important that senior

leadership and ACRC members continually demonstrated that they were committed to working collectively toward the stated vision of the ACRC. When members perceived a lack of commitment on the part of senior leadership or other members, it caused them to question the potential success of the initiative in achieving its vision.

Charged with developing processes and tools aligned to the initiative's strategic priorities, the WG members looked to the EC as senior administrators and representatives of the partners to demonstrate the organizations' ongoing commitment to this vision. It was the role of the EC to review the WG's suggested processes and tools and to approve their implementation provincially. Delayed decision-making by the EC put into question the perceived ability and willingness of its members (and by extension, the partner organizations) to work together. The EC members, together with the WG members, were expected to support the implementation of the ACRC outputs in their respective organizations. Without strategic direction from the EC, the WG could not discuss the logistics of how the tools and processes would be implemented in their organizations. This led some to question the partner organizations' commitment to the ACRC. An example of delayed decision-making by the EC concerned the management of intellectual property resulting from the initiative. Prior to any tools being developed by the WGs, the project manager reported that the EC considered making tools openly accessible online. Impressed with the high quality of the tools developed by the WGs, the EC re-opened these discussions and debated selling the tools. The EC discussions on this issue were lengthy, and without strategic direction from the EC, the WGs could not move forward on their own discussions regarding implementation (Project Manager).

WG members were frustrated when the EC did not make implementation decisions in a timely manner or appeared unwilling to defer to those with operational expertise (i.e., the WG

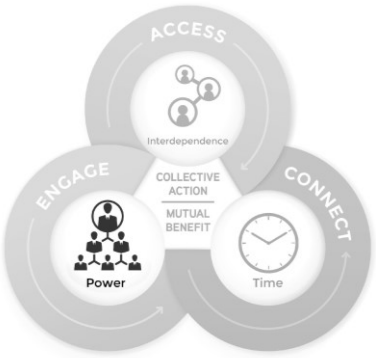
members). Having demonstrated they could work effectively with representatives from other organizations to agree on "a reasonable approach," WG members questioned why the EC members could not "at least say, 'don't agree with it, but we'll try it'." The lack of action resulting from their recommendations suggested to one WG member that EC members were "play[ing] small, personal agendas" rather than working collectively towards their stated vision. Another WG member commented that the ACRC members are supposed to work "together," but indicated that this was not really the case by using air quotes (field notes, August 12, 2014).

The partner organizations indicated they were not fully committed to collective action when organizational decisions were made without acknowledging the work of the ACRC. The risk of these actions to the ACRC was that the initiative appeared irrelevant and ineffective. For example, one interviewee described how a partner announced a new organizational policy that included a key clinical research term and definition. However, the definition in the policy was not consistent with the ACRC glossary, which had been developed with representation from all the partner organizations. Another interviewee suggested this situation was inevitable as the ACRC lacked the authority to mandate partners to implement changes: "If I'm in a position of power and I can choose otherwise, I will do [so] if I think I don't agree or it doesn't help me." Whether the partner organization in this case deliberately chose to ignore the ACRC definition or whether it was an oversight, the perception created was that the partner organization was not fully committed to the ACRC.

On occasion, members acted in ways that indicated they were not fully committed to collective benefit. A major issue arose early in the initiative with respect to certain members sharing tools or drafts of tools externally. The project manager reported some committee members had shared and implemented early drafts of tools from the initiative in their own

organizations, branding them as their own. These actions understandably "tainted the waters" (Project Manager). In addition to potentially misrepresenting the ACRC and negatively impacting its reputation, there was a sense that the products should not have been used to benefit one organization. It is possible that members were not clear on the expectations of them regarding when and how to share information. The WG Terms of Reference state the members were expected to promote ACRC and share minutes and information with "appropriate entities," but did not define what constituted an appropriate entity. The project management team clarified with all members that they would be provided with materials for distribution to their organizations at an agreed upon time.

Navigating power dynamics. A distinctive property of this context was the clearly delineated decision-making authority within and among the partner organizations. Power, or the ability to influence others, and particularly the dynamic interactions with respect to power, emerged as a key contextual factor from the data. Power was drawn from multiple sources, including (a) hierarchical position, (b) relationships, and (c) status. Although other sources of power were identified in the data (e.g., having access to resources), the three listed above were most clearly elaborated by the interview participants. The following sections explore these three sources of power, how individuals navigated power dynamics, and the particular strategies implemented to address power dynamics with respect to the ACRC initiative.



Defining sources of power. A close analysis of the data identified a number of sources of power. The three that were most distinct in the data included hierarchy, relationships, and status. There was evidence of other sources of power (e.g., having access to resources such as certain

kinds of information), but these could either be captured within the three identified sources (e.g., access to information is often dictated by hierarchy position) or there was insufficient data to fully articulate the role of these sources in the ACRC.

Power drawn from hierarchy. Hierarchy was a central feature of this context and defined individuals' relative scopes of decision-making authority. This section discusses hierarchy, its representation in organizational artifacts, and how individuals leveraged their positions within their organizations and the ACRC to influence others.

Individuals holding senior positions within the partner organizations had a broad scope of decision-making authority and a strategic focus; they considered the implications of decisions, particularly risks, for their respective organizations. The ACRC established an executive committee (EC) comprised of senior representatives from the partner institutions for the purpose of "provid[ing] ongoing strategic leadership in the development of an integrated approach to clinical research (Inaugural Strategic Plan, March 2012). The strategic focus of the EC was the research administration system, specifically on developing "a shared long-term sustainable vision for Alberta" (First Annual Meeting Proceedings, June 6, 2012). As discussed earlier, this required the EC members to shift their strategic focus from the organizational to the systems level.

Those in less senior positions within their organizational hierarchies had a narrower scope of decision-making authority; however, positioned on the frontlines, they had considerable expertise in organizational operations. The ACRC WGs were comprised of representatives who were experts in the day-to-day administrative and legal processes of the partner organizations. The operational focus of the WG members was reflected in their terms of reference: their objectives included reviewing processes across the partner organizations and consulting on

available assets and necessary activities to achieve the strategic priorities of the ACRC (Working Group Terms of Reference, September 2011).

As within the partner organizations, there was a hierarchy within the ACRC: strategic direction was the purview of the EC while the WGs undertook the development of processes and tools. The project management team from AI-HS provided administrative support to assist the ACRC members in moving forward on the shared vision. The project manager stated that their role included ensuring the EC remained focused "at a high level, strategic": if "the executive committee [was] getting too much into the weeds, essentially we move[d] it forward to say, 'why doesn't the working group handle that?'"

This is not to say that the EC did not discuss operational topics or that WG members did not consider the implications of their work with respect to their organizations or the provincial clinical research system. In fact, the project manager commented in an interview that WG members thought at a "blue sky," systems level and considered a variety options when developing tools and processes. The project manager hypothesized this was because the WG members were less focused on the organizational level and risk to the organization. The WG members themselves repeatedly expressed in interviews a desire to implement effective processes within and across the partner organizations.

Hierarchy was reflected in organizational artifacts, particularly documents such as organizational charts, job descriptions, terms of reference, and policies. Such documents typically define the expected roles and responsibilities of individuals and organizations, describing how they relate to one another. The hierarchical roles of the ACRC members were defined in the terms of reference with which they were provided upon joining the initiative. For example, the WG Terms of Reference state that members were "accountable to the ACRC EC"

(p.2). Individuals recognized the authority of organizational documents in this context; policies and procedures represented an organization and guided the actions of all its members. Hierarchy was also reflected in people's job titles with positions such as CEO, vice-president, executive, and manager denoting seniority within an organization.

In addition to hierarchies within the partner organizations and within the ACRC, a hierarchy also existed among the partner organizations. This hierarchy appears to have been established through mandates, policies, funding (e.g., who funded whom), and reporting requirements. Alberta's Health Research and Innovation Strategy (AHRIS) is an example of a top-down policy that was developed by the provincial government to "shape the business planning processes" in Alberta's health research system, encompassing the publicly funded ACRC partner organizations (Government of Alberta, 2010). Therefore, the strategic priorities of the universities, health services providers, and provincial funder were influenced by AHRIS. The ACRC was also strategically aligned to AHRIS, as stated in the public proceedings of the ACRC's first annual meeting, presumably due to the involvement of the publicly funded partners.

Individuals' hierarchical positions guided their interactions with others in this context, further reinforcing the hierarchy. Top-down decision-making required those lower in the hierarchy to implement decisions made by their superiors. For example, in 2013 the Deputy Ministers of Health and Enterprise and Advanced Education sent mandate letters to publicly funded institutions, including AI-HS, to meet specific objectives within defined timelines. This sudden change, the scale of which was described as "the world changing" with respect to at least one AI-HS initiative at a meeting with AI-HS staff, was a source of considerable tension for impacted organizations who nonetheless worked to fulfill the mandate (meeting summary, April

8, 2013).

The power dynamics stemming from individuals' hierarchical positions did not mean that those with less seniority necessarily yielded to those with greater seniority; rather, individuals demonstrated great respect for each other's areas of responsibility and authority. For example, I met with my liaison from AI-HS who is an executive director in the organization to discuss an agenda for an upcoming meeting regarding this study with the ACRC project management team. The executive director asked me to obtain the approval of the ACRC's project manager for the meeting agenda I had drafted prior to distributing it to attendees (meeting summary, December 11, 2013). The executive director, although more highly positioned in the AI-HS hierarchy, recognized the project manager's authority for the ACRC.

The ACRC leadership assumed that members had "the authority and ability to engage internal stakeholders for implementation" of ACRC tools and processes and would use their positions within their organizations to "facilitate achieving the objectives" of the initiative (EC terms of reference). The data included instances in which ACRC members used their positions to support the objectives of the ACRC by engaging with others in more senior positions. For example, the AI-HS representative on the EC contacted Provosts at the universities to promote the ACRC. On account of their senior position within AI-HS, it was easier for this EC member to contact senior university leaders than for WG members in less senior positions within the universities. Further, this individual used their connections to have the ACRC project manager invited to join committees to further promote relationship building with individuals highly positioned in the hierarchies of the partner organizations. The project manager came to realize that the EC members were "limited in their roles" and focused on "work[ing] through some of the senior leadership to actually move some of these conversations."

Power drawn from relationships. Individuals could influence action in this context through their personal and professional connections with others. In short, "who you know" is how things get done and can help one achieve desired aims (Project manager, meeting summary, March 28, 2014). These connections provided individuals with opportunities to exchange information and develop an understanding of one another's work, needs, and challenges. For example, one WG member reported they joined ACRC because another member had suggested their skills and knowledge would be of benefit to the initiative. Another individual related an example in which a member used a personal connection to support the work of the ACRC when a lawyer who had drafted many Confidentiality Disclosure Agreements (CDAs) in the province did not like the standardized CDA developed by a WG. An ACRC member invited the lawyer to an informal lunch and was able to resolve the issue (Project Manager, meeting summary, March 3, 2014). Informal, personal connections among individuals were thereby a source of power; one that was not evident in organizational artifacts but that was nonetheless used to influence others.

Power drawn from status. Another source of power was status, that is, the relative professional standing of individuals. The influence of status was culturally dependent and varied by organizations. For example, the project manager noted that a physician was chosen as the chair of a WG because there were physician representatives on the committee: "You need to actually identify a chair who[m] the committee relates to. … If you're going to have physician representatives, you have to have that level across the board" (Project Manager).

Some organizations may also have been perceived by individuals to have higher status than others. There were significant differences among the partner organization with respect to their capacity to support and engage in clinical research. One WG member noted that there was inconsistency among the partner organizations with some better able to manage research (e.g.,

provide oversight) than others. The universities in particular had a greater capacity in terms of resources and more developed infrastructure for conducting research than community researchers. Another member conveyed to me that the universities "are usually in a far stronger position because they can establish processes and procedures that people must follow." For example, the university has systems to receive and manage all research funds: "And I think that gives more structure to the work researchers can do."

Using sources of power to support collective action. A lack of authority or power presents a distinct challenge to implementing system change. As described earlier, the ACRC partners' agreement to collaborate with one another was formalized through commitment letters signed by senior leadership of the partner organizations. The commitment letters did not give the ACRC authority to mandate that the partners adopt ACRC processes or tools. For example, as noted earlier, a WG member described how senior leadership in one of the partner organizations included a definition for a key term in an organizational policy that differed from the definition put forward by the ACRC in its glossary tool in spite of that organization having signed a commitment letter. Although the ACRC lacked a mandate, its members could leverage the provincial status of the ACRC or their connections with individuals who had authority to implement changes in order to advance the work of developing and implementing systems level tools and processes. An example of individuals using status to achieve their aims was a group from a health services provider in Alberta that approached the ACRC to develop a lab manual. The group sought to use the provincial status of the ACRC to implement the resulting lab manual across the province (Project Manager, meeting summary, March 28, 2014).

Recognizing power as a source of distrust. There existed a certain degree of distrust of those in power among interview participants, particularly stemming from questions of who had

control over decisions being made and who benefitted from these decisions. Interviewees raised concerns about power in this context generally and not limited to the initiative. One WG member described a situation in which data were not being accessed in compliance with a legislative act. This had become an "engrained practice" over time in an organization and there were concerns that addressing the issue would curtail research. The interviewee described how an issue of non-compliance was identified and resolved quickly and went on to explain, "there's a willingness to collaborate," but "people are quite often afraid of meeting the stick" (e.g., losing their positions, being reported in the media). Another WG member described the "general culture of distrust" resulting from recent provincial government funding decisions that appeared to have been influenced by cronyism. The ACRC developed against a backdrop of government scandals that even the premier at the time acknowledged had eroded the trust and confidence of the civil service and the public (Premier's mandate to Health Minister, September 15, 2014; Edmonton Journal, November 26, 2014). Members had concerns from the start of the ACRC about the initiative possibly being perceived as a "consolidation of power" by the government over the administrative operations of the partner organizations (communications strategy, pg. 15). To address this concern, members suggested that ACRC's intentions and the benefits of the initiative to all partners and the research community be clearly communicated: "The ACRC isn't looking to take over the operations; it's looking to make things more efficient" (communications strategy, p.14).

Concerns stemming from distrust of those in power were raised during data collection for this study, specifically about how the data would be reported to and used by the ACRC leadership. Individuals were highly sensitive to issues of data use in this context: how what they said could to be interpreted by others, particularly those in power, and how it could intentionally

or unintentionally come back to harm them. One participant explained that in their experience, those in power had sought to protect themselves when faced with criticism by removing critical individuals or otherwise negatively impacting others' careers. A concern was expressed that individuals could be identified from their interview data, and that it could be used for purposes beyond those of the research study. For this reason, two participants wanted to know what I would report in my analysis. I provided participants with verbatim transcripts of their interviews for review so that they could retract or modify their data if needed. One participant stated they would have preferred to receive a summary of my analysis, rather than a verbatim transcript, to know what I had taken away from our interview (field notes, October 21, 2014). However, I could not be entirely sure what I had taken away from an interview until I had had time to analyse the data. Conducting iterative data collection and analysis and applying inductive and deductive reasoning, I found what I learned from an interview changed with time. A summary drafted after an interview would not have accurately reflected what I ultimately took away from the exchange.

Strategies for navigating power dynamics. The ACRC leadership intentionally sought to address power dynamics in this context and create a space conducive to collective action for mutual benefit. To this end, the ACRC leadership implemented two strategies: (a) selected a project management team external to the partner organizations and (b) established consensus decision-making.

***Strategy 14: Select an external project management team*.** One strategy to address the inherent power dynamics among the partner organizations was to assign an external project management team to the ACRC. The partner organizations were unequal with respect to power. In the words of one WG member, "There's some giants at the table." There was a sense that AI-

HS, as an external party (i.e., one not directly engaged in conducting research) could facilitate interactions among the partner organizations of ACRC. For example, one WG member stated that it was preferable to have AI-HS manage ACRC activities: "I'm hoping [AI] will be managing that [i.e., the clinical research portal] as opposed to assigning it to one of the groups. ... I almost think that some of the other organizations will feel that they don't have equal representation somehow."

At the time of this study, the role of AI-HS was expanding beyond funding health research to *"*bringing together disparate groups and agendas to broker consensus around major provincial developments" (AI-HS Annual Report, 2013). AI-HS was uniquely positioned in the system to provide leadership to provincial developments. Whereas ACRC partners had organizational level mandates, AI-HS had a provincial mandate whereby "success [was] measured in provincial gains rather than in stand-alone achievements" (AI-HS Annual Report, 2013). AI-HS was strategically focused on achieving collective benefit for all provincial stakeholders in the health research system, making it a logical choice to project manage the ACRC.

An aspect of the external project manager role that gained significance over time was the content expertise of the project manager. The project manager's experience in this context contributed to their credibility among the ACRC members. One WG member described how it is evident that the project manager understands their audience and presents information as a knowledge expert. The project manager transitioned out of this role in 2015 to assume a more senior position in AI-HS. They conveyed a conversation they had had about their transition regarding which aspects of their role, facilitation skills or content expertise, were most important: "More of the individuals came back and said 'it's more important to have the content

expertise in doing this work.'" The project manager went on to explain that having content expertise made it possible to navigate the power dynamics among the partner organizations. Where a facilitator would have spent time exploring possibilities, the project manager offered an informed opinion on directions with greater potential for success for the collaboration.

Strategy 15: Establish consensus decision-making. A second strategy implemented by ACRC leadership to address the existing inequalities and resulting power dynamics among the partners was consensus decision-making. Central to consensus decision-making is the principle that all members have equal standing in decision-making: "that all voices at the table are equally important" (project management team, meeting summary, Nov. 22, 2013). At a meeting with the ACRC Advisory Committee for Evaluation in December 2013, the project manager shared their view that upholding the equal standing of all members, although challenging, was necessary to encourage all partners to share their perspectives. The individuals interviewed in this study generally reported feeling comfortable sharing their perspectives in meetings and appreciated the opportunity to do so. This is reflected in one WG member's statement: "That's the one thing I do appreciate is my opinion is never negated, and I'm never told to shut up."

Interviewees drew attention to the role of individual personalities in decision-making. The reason why some people may not contribute to group discussion may be influenced by their personalities rather than power dynamics. One WG member observed that some individuals are "more apt to verbalize what they are thinking or think out loud." Another member commented they are personally comfortable sharing their opinions, but observed that some individuals are not willing to share their opinions unless they have been asked to do so.

The strategy of consensus decision-making was communicated to members through (a) documents, (b) interactions with the ACRC leadership, and (c) their experience of the process

and outcomes of consensus decision-making.

Documents. The terms of reference for both EC and WG members clearly stated, “all members [would] have equal standing” (Section 3). Further, the terms of reference stated that decisions would be made “by consensus whenever possible” or “by majority vote with each entity having a single vote” (Section 6). This document was provided to all incoming members of the ACRC, thereby acknowledging the principle of “equal standing” was an aspect participating in the ACRC.

Interactions with initiative leadership. The strategy of consensus decision-making was reinforced to the initiative members by their interactions with the project manager and initiative leadership. The WG members stated there was a general understanding that all members had equal standing in the ACRC, but recognized that this was facilitated to a point by the initiative leadership (i.e., the project leader, chair, facilitator). One interviewee noted that the chair would confirm decisions with each member: “so it’s never a matter of ‘Okay, we’re going to decide on this.’ Everyone has an opportunity to speak." Further, the chair or facilitator would monitor the group’s discussion and call on those who had not yet contributed their perspectives. As one interviewee noted, “Some people feel like they have to be asked before they're willing to say things." The project manager team demonstrated their commitment to consensus decision-making by intentionally eliciting contributions from all members to group decisions.

Experience of the process and outcomes of consensus decision-making. The aim to have equal standing among the ACRC group members may have been empowering to those from smaller organizations who were appreciative of the opportunity to contribute to decision-making, but appears to have been a source of tension for some individuals who saw others as “driving” the agenda. Two WG members from large partner organizations felt that smaller organizations

were over-represented in the groups. One explained this to mean "in the sense that they do not represent a large percentage of the research that is taking place in the province. .... Their voice is probably too loud in the context of what [larger organizations] are doing." The concern expressed by these two individuals was not that smaller organizations were represented in the initiative, but that they had a full voice in decision-making and could potentially drive the initiative agenda. From the perspective of an individual from a small organization, however, ACRC was driven by the priorities of the large organizations: "And I realize the rationale behind that is 90% of the research done in the province is through [the universities], so it has to be kind of driven by that, but I think there might be a bit too much focus [on them]... They have very different ways of looking at things."

The ACRC leadership's commitment to the strategy of consensus decision-making was reinforced by how opposition to it was addressed. Members observed how the leadership reacted in situations where the principle of equal standing was questioned: "One particular person didn't feel that other people should have an equal say because they were so much bigger. But that got dealt with fairly quickly." Another issue arose in a WG where some individuals acted disrespectfully towards others in the group: "There's nothing wrong with having a strong voice, but when you're tromping on other people, then that's a problem." It fell to the project manager to address the issue of disrespectful members: "This diminished others. Once it happened a few times, these individuals were pulled aside and told they could not do that" (project management team, meeting summary, November 22, 2013). By directly addressing issues as they arose, the project manager demonstrated to all members the importance of each representative having equal opportunity to contribute in meetings.

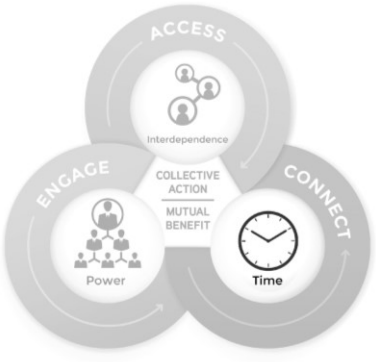
Stepping back from the principle of consensus. Over the course of the development and

implementation stages of the ACRC, the project management team came to realize that reaching consensus in decision-making was neither possible nor desirable in all situations. WG members did not have equal expertise with respect to the various activities in which the group was engaged; therefore, not all members were equally capable of meaningfully engaging in these activities.

It was challenging to achieve consensus among individuals who wanted to be involved in decision-making, but who lacked necessary content expertise. Involving all individuals in the decision-making process significantly increased the amount of time required to develop the tools. The project manager described an experience of trying to get all members to consensus and concluded: "I did it once, and we got sunk. It was a conversation that could have been done by the people who really are impacted by it in two months. ... It took six months to get through."

Instead of aiming for consensus, the project manager sought input from all members with respect to implementation in their respective organizations. Consensus with respect to a particular activity was sought only from those with content expertise. The project manager concluded it had been "wrong" to expect consensus from all members with respect to the tools.

Managing time. The context of the ACRC was compared to sand that is "always shifting": "One thing is certain is the constantly changing landscape […] and the initiative is evolving in development and in response to pressures" (Project Manager, personal communication, March 27, 2014). Change was manifest in various ways including shifting organizational priorities, budget reductions, staff turnover, and wage and hiring freezes (CTV Edmonton news article, March 14, 2014). Adapting to change with fewer staff and resources



particularly constrained members' *time*. One interviewee described how reduced access to resources due to a shift in organizational priorities had forced them to cut back on developing products and to put new initiatives on hold. Limited time emerged as a consistent source of tension across data sources, and it was this valued resource, time, that members were asked to contribute to the ACRC.

Members had limited time to contribute to the SCI. The ACRC members interviewed for this study all considered themselves to be busy individuals and perceived that this was also true of others in this context: the view that "everybody is busy" was expressed repeatedly across data sources. To highlight individuals' limited time, the project manager said that one ACRC member "doesn't even write [the project manager's] full name out in emails; he writes [the initial] instead" (meeting summary, March 28, 2014). Further, it was necessary to exclude the EC members from my participant pool because they were too busy (meeting summary, March 21, 2014). Asked why individuals are so busy, one interviewee's response was that those who work in this context are "high-functioning" people who engage in opportunities like the ACRC because they are "excited about new things and moving things forward." This sentiment was echoed by another interviewee who stated that their organization had a culture in which all employees engage in activities "off the side of their desks" to advance the organization's goals of improving health outcomes and patient care. From this perspective, an initiative like the ACRC attracts busy individuals.

Members managed their limited time by prioritizing their multiple, competing commitments. Understandably, the needs of members' organizations were prioritized ahead of those of the ACRC. One WG member explained, "Administrative things, changing processes, kind of take a back seat." As a result, members reported that they did not necessarily read

communications from the ACRC, provide feedback on materials, or meet deadlines for assigned tasks. Another WG member stated, "I can see how that busy-ness impacts what we're able to contribute [to the ACRC] and the outcomes. It's a lot to cram into the day." Yet another member described feeling caught between the competing demands of their organization and those of the ACRC. This pressure was exacerbated because individuals were not necessarily given the resources to take on ACRC work in addition to their regular workloads, so the work "spills into your home life and everything else." The project manager recognized that the ACRC members did not function "in a petri dish," but were exposed to external, competing pressures (meeting summary, March 28, 2014). They therefore encouraged members to keep operating at the organizational level with an eye to the provincial vision.

Time was a valued resource. Associated with the perception that time was limited in this context was the perception that time had value. As described earlier, the purpose of the ACRC was to enhance the efficiency of clinical research administration provincially to save time for those who navigate the system (i.e., researchers and industry). To this end, the senior leadership of the partner organizations agreed to commit resources to the ACRC in the form of their employees' time. The value of time was tangible to ACRC members: one interviewee quantified the time they contributed to the ACRC in number of hours and its monetary value to industry in cost savings resulting from administrative efficiencies.

Recognizing that their time provided value to others, ACRC members expected that they would receive value or benefit in return. Anticipated benefits included opportunities to network, solutions to common challenges, reduced workloads as a result of realized efficiencies, and knowledge of "what's coming down the pipe and what's being done" that could be conveyed to researchers in their own organizations. One interviewee suggested that the EC periodically

demonstrate its appreciation to the WG members for their time: "It's the actual sitting down and hearing from … them: 'Thank you for all your hard work. We actually do appreciate it'." When individuals perceived that their time was not valued, their commitment to the ACRC was negatively affected. In fact, one individual had considered leaving the ACRC. This individual felt their organization was not committed to implementing the ACRC's recommendations, effectively dismissing the time they had spent as its representative on the ACRC.

Collaboration required a significant investment of time. An important aspect of effectively managing time in this context was having realistic expectations of the time required to collaborate and investing adequate resources to do so. As stated earlier, the partner organizations had not previously worked together to align administrative processes. It became evident from the data that substantial resources were required to develop and sustain the ACRC. The need for this level of investment had not been anticipated by the partner organizations: the ACRC was initially anticipated to take a year and at the time of writing this dissertation, is currently in its sixth year (Evaluator, meeting summary, April 14, 2015).

Over time, the project manager came to understand that collaborating in a context of "shifting sand" required time: time to build consensus around a shared vision, time to get people to "come to the table," and time to develop members' comfort levels and move forward with decisions. They described this as a "frustrating" process of taking "baby steps." Another WG member explained the process of coming to consensus around the roadmap as getting together repeatedly, settling into roles, building relationships, and coming to understand how to function as a group. Collaboration required a significant investment of time before the actual work of developing and implementing new administrative processes could take place.

Individuals' expectations with respect to the time required for collaboration were evident

in how they viewed the timelines set to complete the ACRC activities. One WG member noted that the timelines were reasonable, but could be shorter. This individual assumed the longer timelines reflected differing perspectives on efficiency held by members conducting research in private clinics and those in public or academic institutions. They suggested that private researchers view their work as a business and are highly motivated to develop efficiencies because these lead to greater profits. This member also indicated that some individuals in academic institutions view their work as a "job" and are less interested in efficiency. The question of whether members from public institutions were less motivated to develop and implement efficient processes was one that could not be answered based on the data; however, their participation in this initiative conveys an interest in doing so. The project manager, however, presented an alternative view of the project timelines: initial timelines, they said, were "aggressive." Over time, they came to understand that collaboration required longer timelines, particularly in a changing context.

As discussed earlier, the initiative was constantly adapting to changes in the context, and adaptation required an investment of time. For example, when a few ACRC members were let go from their positions in their organization, ACRC work temporarily stalled as the project manager and ACRC members worked to re-establish shared vision and consensus through building relationships with the new representatives (WG Member; project management team, meeting summary, Nov. 22, 2013). Change also forced individuals to prioritize tasks; some tasks thereby took longer or were not done. For example, when a new ACRC priority arose in January 2014, I was asked to delay conducting my social network survey until late February (field note, February 21, 2014).

The ACRC members came to work together more efficiently over time. For example, the

project manager observed that through the process of collectively creating a roadmap for clinical research across the partner organizations, WG members developed a knowledge base with respect to process mapping. The initial meetings to develop a roadmap were reportedly "very hard," but similar group discussions became reportedly easier once members' expectations shifted to a provincial perspective: "I'm coming to this meeting because we're going to move towards a provincial process" (Project Manager). Collaborations in such contexts clearly require nurturing with significant investment of time upfront to build the shared vision and relationships that drive the work forward.

Nonetheless, the time required to nurture this collaboration resulted in tensions because the partner organizations were experiencing pressures to improve clinical research administrative processes. ACRC outcomes were at risk of becoming irrelevant to partner organizations if they could not be implemented in a timely manner. For example, getting the partners to agree on a set of online training courses took so much time that one of the partners could not wait for consensus and announced an approved set of courses for their organization (project management team, meeting summary, November 22, 2013, with project management team). This event served to undermine the work of the collaboration.

Strategies for managing time. The ACRC developed a highly centralized structure with responsibility for communication management (both within the ACRC and with the partner organizations) primarily situated within the role of the project manager. The project manager recognized the time constraints on ACRC members and consistently made communication decisions that reflected an awareness of the limited time members had available to commit to the ACRC. Two time management strategies were implemented: (a) finding ways to increase the efficiency with which members' time was used and (b) limiting work burden on members.

Strategy 16: Use members' time efficiently. The project management team provided support to the ACRC members so that members could conduct the majority of their work during their meetings. This support included the preparation of all meeting materials beforehand and some of the initial development work for the ACRC tools. In a meeting in March 2014, the project management team estimated they were doing 80% of the work of the ACRC in an effort "to respect the working group members' time" (meeting summary, March 28, 2014). By laying the "groundwork" for these intense working meetings, the project management team ensured the ACRC members' time was used efficiently; however, in doing so, they substantially increased their own workloads.

Technology played an important role in efforts to increase communication efficiency among the geographically distributed ACRC members. Webinars and teleconferences were used in place of in-person meetings that would have required members to travel to a single location. Technology was also used to support the work of the ACRC members outside of their meetings, although it required some time to establish efficient processes for doing so. For example, one WG attempted to use a SharePoint site to collectively develop tools because of its ability to store documents in one location and track changes made by multiple users. Due to some individuals' personal preferences and issues with the SharePoint site that affected its ease of use, the group adopted email as the medium for this collaborative work (project management team, meeting summary, November 22, 2013). One WG member explained that email became a more efficient medium for communication once the group developed a system for reviewing and making changes to documents so as not to duplicate efforts by having multiple versions of a document in circulation.

Even as using technology to communicate was perceived as efficient, respondents said it

was not always as effective in practice as in-person meetings. For example, individuals participating in meetings via videoconference may not be fully present (e.g., they may be doing other work during the meeting in an effort to multitask), negating to an extent the desired efficiency of this medium (WG Member). The efficiency of in-person communication was mirrored in my own interactions with the ACRC members. Being external to the initiative, my interactions with its members differed from those among the members themselves; however, I interacted with these same members in their context and thereby gained insight into their communication. It was my experience as a researcher that in-person meetings were often more efficient ways to communicate with the project management team. A particular in-person meeting with the project manager to discuss some of the logistics of my study organically evolved into a four-hour interview about the history and development of the ACRC. This opportunity to ask questions was invaluable to informing my understanding of the ACRC, and the project manager "admitted that I could not have gained this insight into the ACRC just from the documents they had provided me with" (meeting summary, March 28, 2014). In my experience, email communication often led to delays and misunderstandings with respect to my study; when possible, I met with the project management team in person.

Strategy 17: Reduce the burden on members' time. Other efforts were focused not on using time more efficiently for specific tasks, but on limiting the burden on individuals' workloads. One way in which this was achieved was by the project manager assuming much of the responsibility for communication management. Disseminating ACRC information with stakeholders and senior leadership in the partner organizations was originally envisioned as the responsibility of WG and EC members, as documented in their terms of reference. However, assumptions regarding both the members' capacity to undertake communication activities and

the effectiveness of the partner organizations' communication structures were not fully borne out. In the large academic institutions in particular, the "multiple layers" between the ACRC members and the senior leadership impeded dissemination. Communication issues were further compounded by the fact that not all institutions had listservs to efficiently disseminate information (Project Manager, meeting summary, February 27, 2014). The project manager stated that EC members reported that they struggled with "getting conversations going" within their organizations: "Our hands are not tied per se, but they're limited in their reach." The project manager therefore assisted in bridging communication between ACRC members and senior leadership across the multiple layers in the partner institutions. These efforts included developing a listserv to support the initiative and "circumvent the poor communication structures of the partners" (Project Manager, meeting summary, May 5, 2013).

Further efforts to limit the burden on ACRC members involved tailoring the content and format of communications materials. The partner organizations asked the project management team to undertake this aspect of communications management to ensure consistent messaging (meeting summary, February 27, 2014). For example, the team formatted information for those organizations with listservs according to the requirements of each organization "so they can distribute it without having to do a lot of work around it" (Project Manager). Given that "members are very busy and do not read emails carefully," the team crafted materials with the premise that the target audience was comprised of busy professionals (meeting summary, January 15, 2014). Information materials therefore included concisely crafted messages and clear action items as well as defined expectations for individuals.

Efforts to reduce the burden on the WG and EC members substantially increased the workloads of the ACRC project management team, which in turn had implications for the team's

roles and priorities and called into question the sufficiency of resources dedicated to the team. With varied audiences that included ACRC members, the public, researchers, and government, the project management team was challenged with crafting communications materials that conveyed what was most important to each group: "It's not in the sense of saying, 'Oh, we can write it up and then we can kind of tweak it a bit.' It's really distinct messaging you have to do" (Project Manager). Another means of reducing the burden was ensuring that information was accessible. For example, email invitations to complete the social network survey for this research study, sent to ACRC members on behalf of the researcher, included a unique link to the survey for each individual. The ACRC assistant sent individual email invitations to all members. In subsequent reminder emails, the assistant recopied each member's unique survey link into the body of the email so that recipients would not need to search for these links in their email history (project management team, meeting summary, March 28, 2014).

The project manager expressed difficulty in keeping up with the communication needs and wants of the ACRC members (Project Manager, meeting summary, March 28, 2014). Challenges included selecting what to communicate from the numerous ACRC activities, making information "digestible," and tailoring information to varied audiences. To a certain extent, AI-HS recognized this challenge through the allocation of additional resources to ACRC (e.g., funds to hire project support staff), although the need still remained for additional resources for communications (Project Manager; Job Posting for Project Officer for ACRC, November 2013).

Revisiting the ACRC Communications Strategy in Light of the ACE Theory

The following section considers the ACRC Communications Strategy through the lens of the ACE theory that identifies three communication sub-processes: providing access to information, connecting stakeholders, and engaging stakeholders). The previous sections in this

chapter delved into each aspect (sub-process and structural condition) of the ACE theory of communication and through the descriptions of various strategies employed by ACRC members, highlighted how the sub-processes and structural conditions inter-related to shape the overall communication process. The ACE theory has been abstracted from the raw data collected in this study; therefore, a means of validating the ACE theory is to apply it back to the raw data and through comparison, determine if it fits with and explains the data. This section applies the ACE theory to a key document for communication in the ACRC: the ACRC Communications Strategy.

In a side discussion at a meeting with the ACRC project management team in December 2013, the participants mentioned a document that proved to be relevant to my study: the ACRC Communications Strategy. During a break in our conversation about my work, someone inquired whether the ACRC communications strategy would be evaluated. The ACRC director at the time responded that such an evaluation was unnecessary given the strategy had not been implemented. The evaluation would therefore be little more than a "check mark" for accountability, identifying "good intentions" rather than what was done. When asked why the strategy had not been implemented, the director explained it had been developed by someone with communications, not content, expertise. What surprised me about this exchange was that the meeting participants did not consider their communications strategy to be relevant to my study of their communication process. This document had clearly not been useful in guiding the team's communication decisions. My interest piqued, I examined the strategy to better understand the purpose for which it had been developed, its content, and why it was not useful to the project management team.

In the early planning stage of the initiative, the partners developed a shared vision for the

province and agreed that communication processes would be key supports for the collective work of the ACRC partners. One of the four enabling actions identified in the ACRC Strategic Plan was, in fact, the development of a "communications strategy that effectively engages and informs individuals" (Inaugural Strategy Plan, p.8). An external consultant worked with a communications officer from AI-HS in early 2011to develop a strategy focused on engagement and information access for the ACRC. As part of this process, the two communication experts (one internal to AI-HS, one external) interviewed fourteen stakeholders, some of whom were already engaged in the ACRC, "to identify the communications needs of stakeholders, potential opportunities and issues, and barriers to implementation" (Communications Strategy, p. 13). The communication experts connected with stakeholders, speaking with stakeholders to understand their needs so as to develop a responsive communication strategy. The interviews were designed to collect information to inform how access to information could be provided to ACRC stakeholders. The strategy that was developed included key findings from these interviews, a list of ACRC stakeholders and their information needs, key messages for the ACRC implementation stage, and suggested communication tools (i.e., in-person opportunities, toolkits for champions, email notifications, branding, and a website to support the formation of an online community).

Although the strategy was developed with input from ACRC stakeholders and informed by best practices in communication, it was a reportedly static document that was not referred to, revised, or used. The document was labeled "for internal use only," marked "draft," and not made accessible to ACRC members. It was evident from meetings with the project management team that the strategy was not seen as useful to the initiative. The team provided two reasons for this: (a) the strategy was mismatched with the ACRC context, and (b) the strategy did not sufficiently address engagement. I propose a third reason: (c) the communications strategy was

not developed for all stages of the initiative.

Insufficient attention to the ACRC context and its effect on information access. The ACRC partner organizations had long operated in silos. Each organization had therefore invested resources to develop administrative processes that met their local needs (First Annual Meeting Proceedings, June 6, 2012). The vision of the ACRC required that the partners change and align "similar or related" administrative processes. As a result, the ACRC members needed to navigate potential power dynamics and individuals' resistance to change (Project Manager, meeting summary, May 9, 2013; WG Members). From the start, there were "anticipated difficulties with coordinating competing stakeholders' interests while integrating multiple systems and processes across a number of complex environments" (Inaugural Strategic Plan Consultation, executive summary). One WG member explained that asking the partner organizations to change and align their processes was interpreted by some individuals as a criticism of their work: "They're kind of happy with what they're doing because they think it's working and they don't really want to change their processes." Changing processes also had potential cost implications for the partners. For example, the selection of one electronic platform for research administration across the province entailed that organizations that had invested resources in other platforms would need to shoulder the additional burden of implementing a new one (Project Manager, meeting summary, March 28, 2014).

The two communication experts (one internal to AI-HS, one external) who developed the strategy were not intimately familiar with the ACRC context and how it influenced communication among members and stakeholders (project management team, meeting summary, December 18, 2013). Although the communications strategy was informed by the findings from stakeholder interviews, the interview questions did not ask about contextual factors such as

existing administration processes, infrastructure, power dynamics, and individuals' available time to contribute to the ACRC (Communications Strategy, Appendix A). This was a missed opportunity to connect with stakeholders and learn about their contexts so as to inform the communications strategy: whereas the communication experts lacked familiarity with the context, the stakeholders could have provided valuable insights on context. For example, stakeholders were asked about their communication needs and preferred communication channels and tools, but not about how information was being shared in their organizations or about existing communication challenges. Only one question (posed to stakeholders not engaged in ACRC) asked how they accessed research information. This had ramifications for ensuring adequate resources were in place to enhance information access. The resulting communications strategy instead assumed that the partner organizations had effective communication mechanisms. This assumption was later found to be false. It is interesting to consider whether the communication experts thought contextual information fell outside the scope of what was needed to develop a communications strategy for the ACRC, and whether other AI-HS staff or stakeholders could have been involved in connecting with stakeholders to collect information on their contexts and needs.

The strategy lacked detail around existing communication mechanisms and how stakeholders use these mechanisms to communicate information within their organizations (Communications Strategy, Appendix A). In the case of those stakeholders who provided examples of how they access research information, it seems the interviewers did not prompt them to explain these mechanisms in detail to understand how they could be used to further the work of the ACRC. For example, one stakeholder stated that their organization "uses technology as an effective tool for communications," but the nature of this technology and why it is effective

were not probed, nor does it seem that these stakeholders were later asked to provide more detail in follow-up interviews (Communications Strategy, Appendix A). There are many questions to consider for each mechanism of communication. Email updates, for example, are commonly used to communicate in this context, but to use email effectively, a number of questions needed to be answered: Who should write the email updates? Who should disseminate the emails? Which listserv(s) will be used? Who are the contacts for each partner organization's listserv? Are there formatting considerations for each listserv? What is the audience and general focus of each listserv (i.e., would ACRC information be relevant)? This level of detail is absent in the strategy.

Stakeholders were not asked whether they were capable or able to communicate information in their organizations (e.g., whether they had enough time to contribute to the initiative). ACRC members were expected to connect with the ACRC communications officer and thereby "facilitate transparent communications among the partner organizations and streamline the flow of information among stakeholders" (Communications Strategy, pg. 3). It was assumed if ACRC members were provided with key messages and communication tools, they would disseminate information through their organization's communication channels "to effectively and persuasively encourage their institutions, colleagues, and networks to support the Consortium's goals and implementation of the strategic plan" (Communications Strategy, p. 4-5). According to the project manager, "That wasn't happening: they weren't communicating up [their organization's hierarchy] and particularly weren't communicating down." The strategy further stated, "The success of system level changes often hinge[d] on the leadership support and a network of change agents" (p. 2). It was assumed not only that leadership was supportive of the ACRC and committed to its shared vision for the future, but also that "the identified ACRC change network [i.e., ACRC members] primarily consist[ed] of champions" who would use their

positions and expertise to maintain the momentum of systems-level change (p.2). The assumption that all members were committed to the shared vision and willing to contribute their time to this endeavour was apparent by the lack of a detailed strategy to identify or nurture "champions," that is, individuals to advocate for the ACRC in their organizations.

Lack of context in the strategy was an issue as contextual factors played a role in the how effectively information was made accessible to members and stakeholders. Collecting information about individuals' actual behaviours, rather than their preferences, would have provided information for more effective communication planning. In short, "the communications strategy developed for ACRC assumed that the communication structures within the partner organizations [were] simpler" and that individuals would have a greater capacity to disseminate information than they did (Project Manager, meeting summary, March 28, 2014).

Insufficient emphasis on engagement activities. In addition to revealing an incomplete understanding of the external context, the strategy also reflected a lack of attention to engaging stakeholders in the ACRC. In spite of the stated purpose of the communications strategy to both inform and engage stakeholders, the communication needs identified for each stakeholder group in the strategy related primarily to the former. For example, the strategy stated that ACRC members needed to be informed about the initiative, its components, progress, key messages, and relation to the partner organizations. Government stakeholders were to be informed about the initiative, as well as its progress, performance, and relation to other initiatives. Finally, the research community and the public were to be informed about the ACRC, its benefits, and success stories. The strategy does state that engaging stakeholders in dialogue promotes information exchange and commitment to the ACRC. Details on *how* to engage these stakeholder groups, however, were limited apart from suggestions to host information sessions for the

research community and to create a website for information exchange and networking.

In analyzing the gap in detail in the communications strategy on how to engage stakeholders, I came to understand that for me, the concept of "communication" was broader than it was for the ACRC members. My definition of "communication" as "the process by which individuals interact and influence each other" encompasses the two-way exchange of information between individuals (Craig, 1999, p.143). The project manager explained that "communication for most organizations is unidirectional: I tell you/I let you know or you tell me/you let me know." Members appeared to understand communication as requiring specialized skills and activities used to share information from the organization with external audiences. These skills and activities included identifying stakeholders and their information needs, branding, and crafting key messages (Project Manager). The communications strategy was developed by communication experts, so it is perhaps not surprising that the document lacked detail on how to engage the various ACRC stakeholders. The field of corporate communication has been gradually shifting in recent years from a focus on broadcasting information about organizations to stakeholders, who were seen as passive recipients of information, to a focus on dynamic, interactive communication with stakeholders who increasingly expect to be engaged by, and to interact with, corporations, e.g., through social media (Cornelissen, 2014).

The strategy identifies "push" and "pull" mechanisms for information sharing. These mechanisms refer to unidirectional processes of actively "pushing" out information and making information available for stakeholders to "pull" on whenever they choose (e.g., posting information to a website). These mechanisms are not about engaging stakeholders in the sense of creating opportunities for dialogue and real-time exchange of information. According to the project manager, the ACRC members recognized the need to engage stakeholders, but "did not

really understand perhaps all the aspects of engagement at that period of time."

Lack of a communications strategy for the development stage. The project management team recognized that the communications strategy was ineffective because it had not adequately considered the ACRC context and how to engage stakeholders. I propose that the development of a communications strategy that did not encompass all stages of the initiative also contributed to its ineffectiveness. The strategy was developed to fulfill the second enabling action of the ACRC Strategic Plan, which stated that it is "crucial" to inform individuals through "an active, two-way communications strategy to reach a broad range of stakeholders" (p.8). As it was articulated, this enabling action did not limit the communications strategy to the implementation stage of the initiative. However, the communications strategy that was developed focused only on the "introduction, implementation, and operation" stages of the ACRC (Communications Strategy, pg. 1). It did not consider the orientation stage of bringing new members on board the ACRC and the development stage in which the ACRC members worked together to create standardized tools and processes. Communication at these earlier stages also required a strategic approach to inform and engage members within the initiative.

The inaugural meeting of ACRC stakeholders in which the strategic priorities and enabling actions for the ACRC were decided was held on May 30, 2011 (Inaugural Strategic Plan). The communications strategy was not developed until September 2012, nearly a year and a half into the initiative. For nearly a year and a half, the need for stakeholders to work collectively in the ACRC context was evident; however, without an effective communication strategy, information was not as accessible to members and stakeholders as it could have been. The strategy therefore does not specifically address the internal communication needs and preferences of the ACRC members at the early stages of the initiative.

Collaboration among the ACRC stakeholders required effective communication. A fundamental managerial problem was how to manage communication to support the ACRC in achieving its stated vision of mutual benefit through system change. The communications strategy developed was ultimately not useful to the project management team, but a review of this document has provided insight into how communication was understood by ACRC members at an early stage of the initiative as well as reasons why the strategy did not meet their needs. The failure of the strategy to consider context affected access to information, and its lack of detail around how to engage stakeholders reinforce the need to attend to all aspects of the ACE theory of communication. Although this document (i.e., the ACRC Communications Strategy) was ultimately not useful to the ACRC project management team, the team clearly managed communications in the initiative and furthermore, did so with strategic intent. Although the communications strategy failed to adequately consider context, engagement, and timeliness, the ACRC members intentionally addressed these in practice, as evidenced by the strategies identified in the data.

Chapter Summary

The ACE theory of communication, generated by a grounded theory study within the context of a SCI, involved a driver, three communication sub-processes and three structural conditions. The driver of communication for the ACRC members was to create a "space" in which individuals were committed to working collectively to change research administrative processes and training across the clinical research system for mutual benefit. The label "ACE" for my theory is derived from the three communication sub-processes: providing **A**ccess to information, **C**onnecting with stakeholders, and **E**ngaging with stakeholders. The label reflects one order in which the sub-processes occurred: providing access to information facilitated

building connections, which in turn supported the meaningful engagement of individuals in decision-making. However, the ACE sub-processes did not have a strictly linear progression; the findings of this study demonstrate that access, connect, and engage are inter-related and concurrent processes at all stages of the ACRC initiative. In addition, the theory highlights the dynamic interactions among the communication sub-processes and the structural conditions for communication: system interdependence, power dynamics, and time management. The dynamic interactions of process and context are reflected in the strategies ACRC used to communicate. The following chapters connect the findings of this grounded theory analysis to the literature and explore the implications of the ACE theory for practice and theory.

Chapter 5. Discussion

In the following chapter, I discuss two points in relation to the ACE theory. First, the ACE theory contributes a theoretical means of understanding the communication process inherent to a system change initiative (SCI): the Alberta Clinical Research Consortium (ACRC). Further to this point, I consider the driver of the communication process and each of the sub-processes of communication particularly with respect to an existing framework of public sector collaborations developed by Koschmann et al. (2012). I selected Koschmann et al.'s framework because it was developed using an organizational communication approach and therefore focuses on the communication process, providing an opportunity to explore my findings on the communication process in a SCI with collaborations more generally. Second, the ACE theory provides insights related to contextual influences to and by the communication process in a SCI. Further to this second point, I consider each of the structural conditions with respect to existing frameworks of collaboration in public sector organizations.

The ACE Theory Extends Theoretical Understanding of Communication in SCIs

The ACE theory contributes a theoretical means of understanding *why* and *how* individuals communicate in a SCI. Identifying the central driver for communication in a SCI (i.e., why individuals communicate) focuses our attention on the communication process and its component sub-processes. Understanding the communication sub-processes and how they inter-relate (i.e., how individuals communicate) extends our thinking of communication in collaborative contexts. In this section, I discuss how the ACE theory contributes to addressing gaps in our understanding of communication in SCIs. I will consider my findings with respect to frameworks of collaboration in the public sector, in particular with Koschmann et al.'s (2012) Communicative Framework of Value in Cross-Sector Partnerships (XSPs). Koschmann et al.'s

framework considers a phenomenon similar to the focus of this study (i.e., communication in collaborations) using an organizational communication approach. SCIs can be viewed as a sub-type of the broader concept of XSPs. Koschmann et al.'s framework therefore presents an opportunity to consider the implications of my study of communication in an SCI with respect to an existing framework of communication in collaborations more generally.

The ACE theory identifies the central driver, or goal, for the communication process in a SCI as the creation of a space where individuals are committed to working collectively to affect change at the systems level. The ACE theory explains that within the SCI that I studied, members sought to not only respond and adapt to change within their system but also to *change* their system to address a wicked problem. System change requires the collective action of stakeholders from across the system. The central driver of the ACE theory aligns with the central argument of Koschmann et al.'s (2012) framework: "the overall value of XSPs is not merely in connecting interested parties but, rather, in their ability to *act* – to substantially influence the people and issues within their problem domain" (p. 332). The agreement between the ACE theory and Koschmann et al.'s framework on the centrality of collective action to SCIs and XSPs respectively, validates the centrality of this concept to collaboration.

The ACE theory focuses our attention on how SCI members communicate to work towards systems level change by identifying three, inter-related sub-processes of communication: providing access to information, connecting with stakeholders, and engaging stakeholders. Each of these sub-processes is considered in the following sections particularly with respect to Koschmann et al.'s (2012) framework.

Highlighting the role of information access in a SCI. The ACE theory identifies access to information as a sub-process of communication within SCIs. Open and transparent access to

information builds trust among SCI members and consequently supports collective action. Conversely, my analysis found that a lack of communication fostered distrust. It is established in the organizational literature that trust is integral to collaboration and must be continually fostered (Emerson et al., 2011; Huxham & Vangen, 2005; Lee et al., 2012). However, access to information and its role in fostering trust, which figure prominently in the ACE theory, are not featured in Koschmann et al.'s (2012) framework. The lack of attention to access may be as a result of Koschmann et al. defining communication as a complex inter-subjective process of coordinated interactions by which meaning is negotiated and constructed. With this definition of communication, it is not surprising to see engagement, but not information access, as a key communicative practice in Koschmann et al.'s framework. The researchers acknowledge their definition diverges from the commonly held view of communication as one-way information transmission in the management and organizational literature. The sub-process of providing access to information in the ACE theory does include activities that could be viewed as one-way transmission of information (e.g., newsletters). I found in my analysis, however, that making information accessible to others within a SCI goes beyond the one-way transmission of information tailored to different audiences and to different stages of an initiative. All ACRC members were expected to share information in a *reciprocal* manner to advance the work of the SCI. The ACE theory therefore reinforces the role of information access and highlights the importance of reciprocity to support collective action for mutual benefit.

My analysis generated strategies employed in the ACRC to address the structural conditions of power dynamics, interdependence, and time management in order to promote access to information among SCI members. These strategies highlight the dynamic interactions between the communication process and the SCI context and the need for practitioners to attend

to these dynamics to effectively support collective action for mutual benefit. With respect to power dynamics, for example, open and transparent access to information from partner organizations was facilitated when senior leadership from these organizations were committed to and involved in the SCI. As a result, working group (WG) members felt they had "permission" to share information from their respective organizations to advance the work of the SCI. With respect to the limited time members had for the ACRC, for example, communication was centralized in the project management team so that information was efficiently and reliably disseminated in a timely manner. The irony of the decision to centralize communication to support access to information was that the resulting process was less transparent. WG members stated in interviews that they were not aware of what information was being shared with the EC and what was being discussed by the EC. The issue of transparency was compounded by the fact communication management was under-resourced: the project management team could not keep up all communication demands, and so communication materials had to be prioritized.

The ACE theory further contributes a nuanced understanding of information access within a SCI by distinguishing a tension between promoting open and transparent access to information and limiting access to sensitive information. This tension appears to stem from the dynamics between the sub-process of providing access to information and the structural conditions of interdependence and power dynamics. On the one hand, open and transparent access to information (e.g., all partners sharing information about their respective organizations' administrative processes) reflects a commitment to the shared vision of the SCI and supports collective action toward this vision. On the other hand, although strategies were employed to address the power dynamics in this context and support collective action, these dynamics remained and members were wary about sensitive information being released and misused. The

tension between opening access to information and limiting access to sensitive information must be effectively managed with an awareness of how context influences communication in order to foster trust and support collective action among SCI members.

Emphasizing the need to cultivate personal connections in a SCI. The ACE theory identifies connecting stakeholders as a sub-process of communication in a SCI. This sub-process involves nurturing relationships among stakeholders of the SCI to foster mutual trust and understanding, thereby supporting sustainable collective action. The ACE theory emphasizes the personal nature of connections, which is enhanced through informal communication where members can discuss their personal lives or work unrelated to the SCI. Koschmann et al.'s (2012) XSP framework does not describe the potential personal nature of connections or the relation of personal connections to informal communication. Instead, informal communication would be subsumed under their more inclusive concept of "conversations."

The ACE theory further identifies personal relationships as a source of power in a SCI. My analysis found that ACRC members influenced others through their personal and professional connections. For example, an ACRC member used their personal connection with a lawyer to invite them to an informal lunch and resolve an issue over adopting a standardized Confidentiality Disclosure Agreement (CDA) for the province. Koschmann et al.'s XSP framework inherently captures personal connections and informal communication because it encompasses all interactions among members; however, there is value in highlighting how personal connections can be nurtured, particularly for practitioners in SCIs.

Dialogue plays a critical role in fostering mutual trust and understanding among SCI stakeholders. It was through dialogue that ACRC members established trust and came to understand each other's motivations for participating in the initiative as well as to understand the

current clinical research practices and challenges in their organizations. Trust and understanding supported the collective action of the ACRC members. For example, the ACRC members collectively produced a roadmap outlining the steps required of all researchers across Alberta to develop and conduct clinical studies in the province. Producing this roadmap required ACRC members to understand each other's practices with respect to developing and conducting clinical studies. The ACE theory is consistent with the literature in its focus on the relationship between dialogue and building trust and understanding. Researchers strongly promote the necessity of face-to-face dialogue for collaboration and its role in building trust, mutual respect and understanding, and commitment to collective action (Ansell & Gash, 2008; Gilliam et al., 2002; Lasker & Weiss, 2003).

The ACE theory expands on a communication practice identified in Koschmann et al.'s (2012) framework: managing centripetal and centrifugal forces, i.e., the interests of organizations and those of the collective. Centripetal and centrifugal forces act in opposition to each other (Bakhtin, 1981), and this tension, if not managed, can hamper efforts to attract resources and support for sustainable collective action. Koschmann et al. focus on promoting opportunities for dialogue as a mechanism for collaboration members to openly explore new ideas to manage these opposing forces. The ACE theory expands on this idea of promoting dialogue by highlighting the need to cultivate personal connections to foster trust in this process. I concur with Koschmann et al.'s assertion that "valuable partnerships do not develop simply by having the right people in the room; *how* people interact is at least as important" (p. 339). The ACE sub-process of connecting stakeholders encompasses efforts to build personal relationships through dialogue, to gain understanding of others and their needs, and to be responsive to these needs. In this way, connecting stakeholders supports the management of centripetal and centrifugal forces.

My analysis generated strategies that were employed in the ACRC to address the structural conditions of power dynamics, interdependence, and time management in order to facilitate connections among its members. With respect to time management, my study particularly highlights the need to invest significant time into nurturing connections with stakeholders in a SCI, in spite of the widely held perception that time was limited. My data revealed that relationships were necessary to build trust and understanding to support sustainable collective action. Other researchers have also observed that building trust requires a lot of time (Ansell & Gash, 2008). Whereas efficiencies can be found by centralizing responsibility for managing communications or establishing listservs, time must be invested in building relationships even if doing so seems inefficient. My data indicated that although building relationships required significant time up front, it facilitated collective action so that later work proceeded more efficiently. With respect to power dynamics, my analysis highlights that the ACRC drew power from relationships because it did not have the authority to implement changes in the clinical research system. Nurturing relationships was therefore a key activity in the SCI and risks to these relationships were promptly addressed. My analysis found meeting in person to be a particularly valuable strategy for nurturing relationships, and that informal interactions facilitated formal interactions.

Defining the engagement sub-process in a SCI. The ACE theory identifies engaging stakeholders as a sub-process of communication in a SCI. Engagement is defined as SCI members actively participating in dialogue and choosing to commit to a shared vision. Notably, commitment to a shared vision requires that individuals be willing to change their views and practices to make this vision a reality. There was evidence in my data that not all ACRC members were committed to its vision. For example, some members did not communicate with

others outside of meetings and expressed a resistance to changing their practices, believing their own practices to be right. Engaging stakeholders in a SCI, particularly in decision-making so that they can represent the interests of their organizations in collective decisions, increases their commitment to a shared vision and consequently supports collective action. The importance placed by the ACE theory on commitment is shared with the wider collaboration literature where members' commitment to the collaborative process is seen as necessary for success (Ansell & Gash, 2008). For example, Margerum (2002) surveyed collaborations and identified commitment as the key factor to collaboration. Further, the literature supports the finding that commitment can be improved through increased meaningful participation (Gilliam et al., 2002).

The focus on engagement in the ACE theory of communication in SCIs is shared with Koschmann et al.'s (2002) framework of communication in XSPs, validating the important role of engagement in collaboration. The sub-process of engagement captures two communicative practices identified in Koschmann et al.'s framework: (1) increasing meaningful participation and (2) managing centripetal and centrifugal forces. The ACE theory and Koschmann et al.'s framework both stress that collective action involves more than inviting diverse stakeholders to the table: it involves members having meaningful opportunities to participate in and influence collective decision-making through dialogue to generate legitimate solutions to common problems. The collaborative governance literature supports this finding, widely maintaining that collaboration entails stakeholders be directly engaged in decision-making (e.g., Ansell and Gash, 2008; Freeman, 1997). The ACE sub-process of engagement also captures Koschmann et al.'s (2012) communication practice of managing centripetal and centrifugal forces in a XSP, i.e., managing the tension experienced by the SCI members between acting in the interests of their respective organizations and in the interests of the collective. Mechanisms proposed by

Koschmann et al. to manage centripetal and centrifugal forces (e.g., ensuring sufficient time for conversations, being open to new ideas and alternative solutions) are consistent with the ACE theory's engagement strategies, (e.g., the need to understand members' reasons for choosing to join a SCI). In taking the time to understand why members have joined a SCI, one can better understand how members view and manage the tension between their organization's interests and those of the collective and then find ways to best support these members.

My analysis generated strategies that were employed in the ACRC to address the structural conditions of power dynamics, interdependence, and time management in order to engage SCI members in collective action for mutual benefit. With respect to engagement and power dynamics, for example, questions were raised in my data about the extent to which all partners were committed to the shared vision of the ACRC, particularly the commitment of the most powerful partners. As described, the initiative was established through commitment letters that did not confer authority on the ACRC to implement the tools and processes collectively developed by its members. The ACRC partners were all stakeholders in Alberta's clinical research system; however, the partners were unequal in terms of power with respect to the volume of clinical trials they conducted and the infrastructure each had in place to support this work. Creating meaningful opportunities for ACRC partners to participate in and influence collective decision-making involved larger partners agreeing to give smaller partners an equal voice at the table. One perspective on this situation is that larger partners were willing to share power because they recognized the interdependence of all stakeholders to the clinical research system. Another perspective, however, is that because the ACRC did not have the authority to implement changes in the system, larger partners were not taking a risk in sharing their power: they could appear to be engaged in collective action while maintaining the option of reasserting

their power and resisting change if proposed changes ran counter to their organizational interests. Ansell and Gash (2008) also observed that the incentive for partners to engage in collective action is low if they can achieve their own goals unilaterally. And if other partners consequently view their role as advisory or symbolic, their incentive to engage also decreases (Futrell, 2003). Participants in my study indeed questioned to what extent the largest partners were engaged in the ACRC, especially when these partners unilaterally made decisions without reference to the ACRC and without repercussions. A test of engagement is therefore how partners act when an initiative requires them to expend resources and implement changes.

The ACE Theory Advances Theoretical Understanding of the SCI Context

The ACE theory is a substantive theory that contributes an understanding of how the context of a SCI influenced, and was influenced by, the communication process. The field of organizational communication has limited empirical studies of communication in the public sector, and there is also a need for further theory development to guide practice in collaborative contexts such as SCIs (Bryson et al., 2015). Identifying structural conditions that influence, and are influenced by, the communication process focuses our attention on the SCI context. Understanding the structural conditions of system interdependence, power dynamics, and time management can inform our understanding SCIs generally and to communicating in these contexts. The three structural conditions identified in the ACE theory are aligned with the three core contingent conditions identified by Ansell and Gash (2008) as the contextual conditions mostly likely to affect collaboration governance: interdependence, trust, and time. Ansell and Gash arrived at their three contingent conditions through a largely inductive empirical analysis of 137 cases of collaborative governance across policy areas. Findings from my study of a SCI in the area of clinical research policy are therefore consistent with the broader collaborative

governance literature. In this section, I discuss how the ACE theory contributes to addressing gaps in our understanding of communication in SCIs.

Supporting the need to reflect the interdependence of SCI partners. The ACE theory identifies interdependence as one of three structural conditions constituting the context for communication in the ACRC. The ACRC members recognized that by collectively addressing common challenges to the clinical research system, they could all benefit from reduced competition and increased efficiency. Recognizing their interdependence, the stakeholders developed a shared vision for the clinical research system in Alberta and documented this vision in various organizational artifacts (e.g., terms of reference, strategic plan, glossary). The ACE theory's structural condition of interdependence is consistent with other collaboration frameworks (e.g., Emerson et al., 2011). In their review of cross-sector collaboration frameworks, Bryson et al. (2015) observed that agreement among stakeholders with respect to a common challenge and recognition of their interdependence are commonly identified as factors in these frameworks. The ACE theory is also consistent with the broader collaborative governance literature in recognizing that inclusive representation of stakeholders from across the system is necessary for members to then commit to collective action (Ansell and Gash, 2008; Chrislip & Larson, 1994; Gray, 1989).

Recognition by stakeholders within Alberta's clinical research system of their interdependence led to the establishment of the ACRC. My analysis generated strategies employed by the ACRC project management team to reflect the interdependence of all stakeholders of Alberta's clinical research system and to strengthen the credibility of their collective action. The ACRC was thereby constituted by the actions of its members, which included developing and formalizing a shared vision and collective identity. The ACRC vision

and identity are reflected in organizational artifacts including the ACRC governance structure, terms of reference, website, newsletter, and brand. My findings align with the broader literature on collaboration in acknowledging the role a shared vision and collective identity have in supporting collective action. For example, Koschmann et al. (2012) state that XSPs gain legitimacy when their members develop distinct and stable collective identities separate from those of their respective organizations. According to Koschmann et al., two practices that promote the development of collective identity are naming the collaboration and constructing narratives that express the collaboration's identity. An example of these practices from my data is when stakeholders of the clinical research system in Alberta chose to label their collaboration a "consortium" to express that they could achieve more collectively than they could as individual organizations.

The ACE theory further highlights the importance of the perceived commitment of SCI members to collective action for mutual benefit. My data includes examples of ACRC members questioning others' commitment to the ACRC and consequently questioning the credibility and sustainability of the initiative. In an example from my data, WG members questioned the ability and willingness of the partner organizations to work together when the executive committee delayed making decisions based on WG recommendations regarding the management of intellectual property produced by ACRC members. Such examples potentially reflect that members perceived the ACRC partners to be highly interdependent, so much so that the loss of one partner would put the initiative at risk. Alternatively, such examples may indicate that in spite of the messaging that all partners were interdependent and had equal voice in the ACRC, it was actually imperative that the partners with the most power be at the table and committed to the initiative. Indeed, it was the commitment of the largest partners to the ACRC that was

questioned in my data. As one of the largest partners is not represented in my study sample, exploring this question of commitment and interdependence further is not possible with my data.

Two strategies employed by the ACRC project management team to sustain the commitment of ACRC members to the initiative included demonstrating commitment to collective action and communicating progress towards a consistent and shared vision for the ACRC. The ACE theory aligns with the broader literature on collaboration in acknowledging the role of members' commitment to effective collective action and the need for strategies to promote and sustain commitment to collective action. As Emerson et al. (2011) state, "the confirmation that participants in a collective endeavour are trustworthy and credible, with compatible and interdependent interests, legitimizes and motivates ongoing collaboration" (p. 14). Ansell and Gash (2008) highlight that collective action is diminished when members act independently to address their own interests over those of the collective: "if alternative venues exist where stakeholders can pursue their goals unilaterally, then collaborative governance will only work if stakeholders perceive themselves to be highly interdependent" (p.553). Koschmann et al. (2012) further emphasize that communicating the value of a collaborative initiative (e.g., its progress towards stated goals) can legitimize its ability to continue to secure resources from individuals and organizations (e.g., time, funding) so as to sustain collective action.

Addressing unequal power among SCI partners. The ACE theory identifies power dynamics as one of three structural conditions for communication in the ACRC. Power dynamics can be interpreted with respect to collaborative governance frameworks, which have identified power dynamics as a key variable (e.g., Ansell & Gash, 2008; Bryson et al., 2006, 2015; Emerson et al., 2011). SCIs can be considered a sub-type of collaborative governance, a term that more broadly considers "the processes and structures of public policy decision-making and

management that engage people constructively across boundaries of public agencies, levels of government, and/or the public, private and civic spheres in order to carry out a public purpose that could not otherwise be accomplished" (Emerson et al., 2011, p.2). The ACE theory is novel in that it specifies how power dynamics contribute to the collaborative governance of a SCI.

The ACE theory states power dynamics stem from hierarchy, relationships, and status among the ACRC members and their respective organizations. Although collaborative governance frameworks differ in how they conceptualize and label sources of power, hierarchy, relationships, and status are reflected in, and consistent with, these frameworks. Ansell and Gash (2008), for example, closely relate power with resources, claiming that power imbalances stem from differences in capacity, organization, status, and resources. Bryson et al. (2015) closely relate power with authority and provide examples of stakeholders drawing power from representing or being affiliated with certain groups and from having specialized knowledge.

Power dynamics can strain trust and commitment to collaboration among SCI members. My data captured the example of individuals being disrespectful towards representatives from organizations with less status and questioning the principle of equal standing among the ACRC members. The project management team intervened in these situations to reassert the principle of equal standing. This example is consistent with the collaborative governance literature, which maintains power imbalances among stakeholders can serve as impediments to successful collaborative governance (Ansell & Gash, 2008), potentially "exacerbate[ing] conflict and lead[ing] to stalemate in partnership proceedings" (Gray & Purdy, 2018, p. 104). Power imbalances may breed distrust among stakeholders, weakening their commitment to collaboration (Ansell & Gash, 2008; Bryson et al., 2015; Huxham & Vangen, 2005) or preventing them from meaningfully participating in collaborations (Gray & Purdy, 2018).

Effective collaboration requires that measures be put in place to address power imbalances and ensure stakeholders with less power are represented (Ansell & Gash, 2008; Bryson et al., 2006; Gray & Purdy, 2018).

In the ACRC, strategies generated from my findings to address power dynamics included adopting consensus decision-making and having an external project management team provide facilitative leadership. Both of these strategies arise in the literature and can serve as examples of organizational ambidexterity (O'Reilly & Tushman, 2013). Ambidexterity entails employing strategies to manage tensions such as "existing power structures versus voluntary and involuntary power sharing" in order to support the long-term viability of organizations (Bryson et al., 2015, p. 653). The project management team therefore demonstrated ambidexterity in employing strategies to address existing and potential tensions stemming from unequal power among the ACRC partners. Consensus decision-making is advanced as a systematic and effective means of decision-making in collaborative contexts (Innes & Booher, 1999). Facilitative leadership is proposed as a means to bring stakeholders together and to support their decision-making by "setting and maintaining clear ground rules, building trust, facilitating dialogue, and exploring mutual gains" (Ansell & Gash, 2008, p. 554). ACRC's project management team facilitated the process of consensus decision-making among the ACRC members by documenting clear ground rules for this process in the terms of reference, demonstrating this process in interactions with ACRC members, and promptly addressing opposition to this process.

Recognizing the necessary investment of time for SCIs. The ACE theory identifies time management as one of three structural conditions constituting the context for communication in the ACRC. Time was a valuable commodity in this context; therefore, the partners' commitment of time to the ACRC indicated their commitment to collective action.

Research on collaboration has shown, however, that decision-making as a collective can be time-consuming, particularly when trust needs to be built among partners (Ansell & Gash, 2008; Margerum, 2002; Roussos & Fawcett, 2000). In my data, the issue of timely decision-making was exacerbated in part because adapting to a constantly changing landscape limited partners' available resources for collective action. For example, member turnover delayed collective action as new members had to be oriented to the ACRC. Consequently, when partner organizations needed to make a decision, they did not necessarily wait for input from the ACRC. In making decisions without reference to the ACRC, these partners created a perception that they were not fully committed to collective action, leading other ACRC members to question the legitimacy and sustainability of the initiative. My analysis indicated that the SCI required a significant investment of time upfront to build a shared vision and the relationships required to drive collective action forward. Over time, the SCI members came to work together more efficiently. This finding aligns with the collaboration literature, which suggests that investing time in early collaboration stages can save time in the implementation stage (Ansell & Gash, 2008). Setting clear expectations with respect to the time required for collective decision-making, particularly at the early stages of the SCI, is therefore an important aspect of managing centripetal and centrifugal forces (i.e., the interests of organizations and those of the collective), a communication practice featured in Koschmann et al.'s (2012) framework of public sector collaborations.

In the ACRC, strategies generated from my findings to address the need for time management included reducing the burden on members' time and using their time efficiently. I observed in my data that efforts on the part of the project management team to make the most of the ACRC members' time meant that members were less involved in the operations of the

ACRC. The limited involvement of members in the ACRC operations calls into question the collaborative nature of the initiative. Time was at a premium in this context and having an external project management team reduced the time needed from partner organizations for the operations of the ACRC. However, this also reduced the commitment needed from the partners for collective action. The partners had less to lose in joining the ACRC because they were now able to "collaborate" with less resources invested and therefore, less risk to their organizations. As discussed, the ACRC lacked the authority to implement changes in the clinical research system. Partners could therefore collaborate until it was no longer in their interests to do so.

Considering the potential role of individual characteristics in SCIs. In addition, this study identified another condition that may influence the communication process in a SCI: individual characteristics of organizational members. In my review of the literature and of the ACRC communications strategy, it occurred to me that members' commitment to an initiative was often assumed because their organization had committed to the initiative. Commitment is also a personal decision to take on responsibility. In the case of the ACRC, WG members were asked to not only provide information and actively participate and make decisions around process and tool development within the ACRC WGs, but also to take on the responsibility of disseminating outputs and advocating for their implementation across the clinical and health research system. Varying levels of commitment to the ACRC were evident among my study participants, indicating that individual-level factors may influence how they participate in the communication process and their commitment to the initiative.

My data provided some initial insight into individual-level factors that may influence communication in a SCI. How members viewed their roles with respect to the ACRC had implications for the extent to which they reportedly chose to participate in communication

processes and their expressed commitment to system change. Some members considered their roles as mainly providing access to information, that is, sharing what was being done in their own organizations as an advisor or consultant to the ACRC. It emerged in the findings that some of these members were not willing to take on personal responsibility for the success of the initiative or to change their own practices. On the other hand, other members talked about wanting to be engaged in decision-making in the ACRC and seeing the tools they helped develop be implemented in their own organizations and across the system. It seems possible that the individuals one chooses to involve in the development stage of an initiative may not be the same individuals one would choose to involve in disseminating information. However, additional data are required to explore individual-level characteristics with respect to their influence on the communication process and the ongoing development of SCIs.

Enabling the transfer of the ACE theory to other contexts. As a substantive theory of the communication process within a particular SCI, the ACE theory should not be uncritically applied to other initiatives. One cannot assume that the ACE theory is appropriate for other contexts or even for other SCIs. For example, it is possible that the communication process within an initiative in which partner organizations have been mandated to work collectively to achieve system change differs substantially from one established through letters of commitment such as the ACRC. It is incumbent on practitioners to assess the transferability of the ACE theory to their own work. I have detailed the ACRC initiative and its context to enable practitioners to compare the ACRC context to their own and determine the transferability of the ACE theory.

One additional aspect of the ACRC context that is relevant to the transferability of the ACE theory is the initiative's stage of development. The communication activities undertaken by

SCI members when planning an initiative may reasonably be expected to differ from those undertaken when implementing a new initiative or maintaining an established initiative. At the time of this study, the ACRC was transitioning from a development stage in which members collectively developed new tools and processes, to an implementation stage in which members distributed information on the tools and processes they had developed to other stakeholders in the partner organizations. Although communication activities aligned to each of the three ACE sub-processes at each stage, the specific activities differed, as summarized below in Table 5.

Table 5: Alignment of ACE Theory and Communication Activities to the Initiative Stage

ACE Sub-process	**Development Stage**	**Implementation Stage**
Providing Access to Information	• Provide information to members to support their work • Promote information sharing among members • Protect sensitive information	• Tailor documents to stakeholders • Communicate the "big picture" of the initiative to members
Connecting with Stakeholders	• Connect with individuals to build relationships, gain understanding, and develop trust	• Connect with individuals to facilitate information dissemination to the partner organizations, strategically targeting those in senior leadership positions
Engaging Stakeholders	• Engage members so that all actively participate in decision-making	• Engage members to take on personal responsibility for distributing information within their organizations and implementing new tools and processes

In identifying the structural conditions of the ACRC that interact with the communication process, the ACE theory illuminates aspects of a SCI context to which practitioners in similar contexts could attend. In practice, communication plans designed for SCIs could therefore minimally consider each of the ACE structural conditions: system interdependence, power dynamics, and time management. In articulating how context and how the communication process mutually influence one another in a particular SCI, the ACE theory reinforces the need for practitioners to attend to the structural conditions present in their own contexts.

Challenges in Applying GT in Practice

This study demonstrates that grounded theory (GT) is a useful methodology for practitioners seeking to develop data-driven theories of social processes, such as the communication process in a SCI. Despite its evident strengths, I encountered issues in applying GT in practice. In particular, it was challenging to balance my stakeholders' needs with my independence as an academic, to align business and research timelines, and to maintain independence as a researcher external to, and later internal to, the initiative I studied. I describe these issues below to inform researchers as well as practitioners who are interested in adopting this methodology in their own work in contexts similar to that of my study. Although I worked in this context as a researcher, I believe my experience has many similarities to that of a practitioner's: both researchers and practitioners seek to understand programs, their underlying processes, and their contexts.

Balancing stakeholder needs and academic independence. In my interactions with the project management team, I was aware that I needed to avoid being overly influenced by their opinions on the ACRC communication process as I designed my study, collected my data, and interpreted my findings. From an ethical perspective, I wanted my work to benefit the ACRC

stakeholders. However, I was also conscious of the need to maintain my independence as a researcher.

In analyzing this issue, I reflected on my interactions with the project management team through the process of writing memos. There were occasions on which I felt that others were unintentionally exerting influence on my work. For example, the project management team provided me with a document that detailed the two business needs they expected my study to address and wanted some measure of assurance that I would meet these needs. I explained that using GT, I could not guarantee that I would develop a theory around specific concepts; the theoretical concepts would have to emerge from the data. The team also asked to review my study proposal, including my literature review. I did not share my proposal with the team until I had completed my analysis, wishing to avoid influencing their views on the communication process during data collection. However, I did provide the team with a summary of my research, including the study background, purpose, research questions, methodology, data sources, deliverables, personal background, and ethical considerations.

In addition, the project management team was genuinely interested in engaging with me with respect to my methods and research questions. Supporting their interest and our relationship meant that I needed to be open to some flexibility in my study design, rather than strictly maintaining my independence as a researcher. For example, the project manager requested that I add a particular question to my survey instrument. I added the question as it was not burdensome to participants, was of relevance to the communication process, and met one of the initiative's information needs. In protecting my independence as a researcher, I did not intend to close myself to input from the initiative stakeholders, and I understood their desire to be engaged and to ensure my research provided benefit to them and the initiative. I maintained memos

throughout this process to ensure that I was clear as to why I was making certain decisions and how these decisions would impact my research.

Aligning business timelines with research timelines. It was my experience that GT presented a distinct challenge to my stakeholders because theory development was data-driven. This statement may at first seem counter-intuitive. From my stakeholders' perspective, however, GT presented many unknowns: the theoretical concepts and final theory could not be predicted, the point of theoretical saturation could not be determined in advance by number of interviews or some other calculation, and timelines for data collection and analysis were educated guesses as I strove to be responsive to the context of my study. I found this methodology to be highly labour- and time-intensive. My timelines for data collection and analysis were delayed or extended a few times for various reasons including my inexperience with this methodology and managing the large amounts of data I collected and generated through field notes, limited stakeholder availability, ongoing initiative activities, changing initiative priorities, and my own responsibilities and commitments beyond this study (including a maternity leave).

Delays with respect to my study resulted in some tensions with my stakeholders, as this was a fast-paced context in which timely information was needed for decision-making. If I did not meet their timelines, I lost an opportunity to inform decisions when they needed to be made. Therefore, my work was at risk of being irrelevant to the very stakeholders I hoped to benefit. To compound the uncertainty presented by these unknowns, I had to limit how much information I shared with them during data collection and analysis in order to maintain my independence as a researcher and avoid overly influencing them by sharing too much, too soon. Such uncertainty meant that my stakeholders, having very certain information needs and timelines, took a risk by participating in my research study. I was fortunate that my stakeholders were highly

knowledgeable of the research process and in particular, the challenges and ethical issues involved in research, and that they were open to discussing issues with me proactively and as tensions emerged.

Maintaining academic independence – from outside and inside the organization. Although I was sensitive to certain aspects of the ACRC context from having previously worked as an intern at Alberta Innovates - Health Solutions (i.e., AI-HS, the organization providing secretariat support to the ACRC), I was externally positioned to the initiative when collecting data for this study. On the one hand, this was an advantage because I could more easily maintain my independence as I collected and analyzed data. On the other hand, I found it challenging to understand a context in which I was not physically immersed. I also had fewer opportunities for informal discussions with stakeholders as I had to arrange most of my meetings. When opportunities for informal discussions arose, I found them to be rich sources of data. In the spring of 2015, I accepted a position with AI-HS and found myself immersed in the context of the ACRC. This transition was an opportunity to reflect on how I was influenced by now being internally positioned with respect to AI-HS. In my memos, I reflected on this transition from outsider to insider and came to appreciate the importance of continually grounding my analysis in data and periodically taking time to reflect on how my biases may be influencing the analysis. For example, an informal conversation with an individual from one of the partner organizations at a health research event led me to hypothesize about the influence of a particular aspect of the context on communication. However, there was no evidence in my data to support such an analysis. I relegated my hypothesis to a potential future direction for research.

I noted in my memos that what most influenced how positively or negatively I viewed certain events in my data was the degree to which I assumed the perspective of my stakeholders.

There were times in which I was frustrated by certain interactions I had had with stakeholders and how they impacted my study. During an interview, a participant encouraged me to put myself in the place of each of my interview participants. This reminder helped me refocus on the many dynamic influences at play in this context. For example, I reminded myself that the long response times to my emails were not a reflection of my stakeholders' commitment to me, but rather that they were busy individuals. When I encountered challenges and needed assistance, my stakeholders were generous both with their time and their assistance in navigating their context. I respect the difficulty of what the ACRC stakeholders were trying to achieve and that what I experienced and learned from the data was the result of a confluence of factors. I feel that I came to better understand my stakeholders, though not in the sense of overlooking what did not work in favour of focusing only on the positive aspects of the initiative. I believe that grounding myself in my data and challenging myself through the process of writing memos helped me avoid negatively or positively skewing my analysis.

Implications for Practitioners in SCIs

This section is organized around two implications stemming from the ACE theory specific to practitioners in system change initiatives (SCIs). First, practitioners in the context of a SCI must potentially plan for access, connections, and engagement at all stages of an initiative. Second, it is important that practitioners consider the influence of context on the communication process. Practitioners working within SCIs might particularly consider the potential influence of system interdependence, power dynamics, and time management. The decision whether to adopt the ACE theory to guide their own practice will require practitioners to assess its transferability by comparing the context in which it was developed to their own. Finally, potential practical applications of the ACE theory are described.

Plan for ACE at all stages and allocate resources to each sub-process. The ACE theory states that in the SCI examined in this study, all three communication sub-processes (providing access to information, connecting and engaging with stakeholders) are inter-related and together support collective action for mutual benefit. In their communication strategies, practitioners may consider planning for, and allocating resources to, each sub-process with due consideration for the stage of their specific initiative. In particular, my study highlights the importance of connecting and engaging with stakeholders. These sub-processes can be overlooked in actual communication plans, as was the case with the ACRC. I have provided descriptions of the communication process as well as examples of strategies that were used by ACRC members to address each sub-process. My findings highlight the need to invest resources, particularly a significant investment of time, to support communication in the context of a SCI. Insufficient resources for communication activities (e.g., time, individuals with both communications and context expertise) may lead to instances of miscommunication and introduce a certain degree of risk to the sustainability of an initiative.

Attend to and monitor the SCI context. The ACE theory describes how context and the communication process interact in a SCI and identifies three key conditions for consideration with respect to communication in this initiative: interdependence, power dynamics, and limited time. Practitioners who have chosen to implement the ACE theory in another SCI could consider addressing these three conditions. To support practitioners in developing communication strategies for SCIs, I have provided descriptions of the ACRC context, conditions for the communication process, and examples of strategies used to address each condition. For all practitioners, regardless of the context in which they work, my findings demonstrate the importance of considering context when selecting theories and frameworks. Practitioners seeking

theories or frameworks to guide their work should closely attend to the context in which they were developed as this influences their transferability to other contexts.

Potential applications of the ACE theory. As a substantive theory of communication in a SCI, the ACE theory can inform the development of practical tools for various practitioners in SCI contexts. The following three applications of the ACE theory are not intended to comprise an exhaustive list. First, the ACE theory can inform the development of a guideline for communication planning that encompasses not only strategies to ensure information is accessible to stakeholders, but that also connects and engages stakeholders. Second, the ACE theory can be used to support participant reflection on completed initiatives with respect to communication. I demonstrated this application in Chapter 4 by reconsidering the communications strategy that had been developed for the ACRC through the lens of the ACE theory. Third, the ACE theory can be used as a framework for evaluation training. I demonstrated in Appendix I that the ACE theory aligns with the Program Evaluation Standards (Yarbrough et al., 2011) as well as identifies and addresses two gaps in the practice standards. The ACE theory can be applied so that evaluation training materials reflect all three communication sub-processes.

Chapter Summary

The ACE theory makes two contributions to organizational communication literature. This study addresses theoretical gaps in understanding communication in a SCI, an emerging type of organization in the public sector. The ACE theory brings communication into focus through identifying the driver and sub-processes of communication, thereby giving researchers and practitioners the opportunity to validate how well this theory reflects their own understanding and experiences of communication in their own contexts. The ACE theory illuminates key contextual influences on communication in a SCI to which researchers and

practitioners may attend in similar contexts. SCIs aim to affect change at a systems level through the collective action of multiple organizations in the system. This study demonstrates the importance of considering systems level contextual influences when seeking to understand communication processes with respect to such initiatives. Finally, although GT offers a practical approach to theory development, three challenges in applying GT in practice included balancing needs, aligning timelines, and maintaining independence as a researcher. The following chapter explores the limitations of this study and future directions for research.

Chapter 6. Limitations and Future Directions

This chapter discusses limitations related to the development of the ACE theory using grounded theory (Corbin & Strauss, 2008) as well as directions for future research. First, a review of the study procedures identified four areas of limitations associated with recruitment, sampling, data, and time. These limitations constrained the extent to which I could study the communication process in the Alberta Clinical Research Consortium (ACRC). Second, two future directions for research are proposed to address the study limitations and to extend the use of the ACE theory beyond the ACRC. Specifically, I propose that additional data sources be used to advance the ACE theory and that the ACE theory be applied in other contexts so that it can be developed into a formal, and therefore more broadly transferable, theory of communication.

Limitations of the Study

Limitations of this study emerged from a review of the research procedures related to four areas: recruitment, sampling, data, and time. In terms of recruitment, the exclusion of a key stakeholder group from my study reduced my participant pool, thereby limiting the number and diversity of perspectives I could capture and obstructing potential avenues for theory development. With respect to sampling, the low participant response rate to the social network survey further reduced my participant pool and opportunities for theoretical sampling. In the area of data, the lack of observational data limited my ability to explore concepts emerging from other data sources. Finally, the limited time participants had available to participate in the study made it difficult to attain theoretical saturation.

Recruitment. My participant pool was expected to include all members of the ACRC; however, a key stakeholder group could not be recruited to my study. As discussed, the executive committee (EC) members were excluded from the pool due to their limited availability. As a

result, I cannot claim that my theory is representative of the perspectives of this stakeholder group. I also could not conduct comparative analyses of EC and working group (WG) members' perspectives on communication, a line of inquiry that I believe would yield rich insights due to their different roles, positions, and access to information. Although WG members shared their ideas on what was happening at the EC level, without the opportunity to interview EC members, I could neither confirm nor counter these claims. In a context in which power dynamics greatly influenced communication, the exclusion of the group with the most power in the initiative (i.e., the EC) introduced a significant limitation to my study.

I did not recruit the minimum number of participants that I had anticipated to my study, resulting in a limited pool of participants. I believe that one aspect of my study design in particular hindered my ability to recruit participants: placing the invitation to participate in an interview at the end of the social network survey. Prior to sending out the survey, I discussed the possibility of a low survey response rate with the project management team. Based on their knowledge of the participant pool, the team did not anticipate a 100% response rate, but felt that the ACRC members would generally support this research. As discussed in the methodology section, in an effort to encourage members to respond to the survey, the project manager distributed the survey invitations with an introductory email I drafted to all members. Nonetheless, the response rate for the survey was low. My pool of potential interview participants was consequently limited to those who had both completed the survey and agreed to be contacted for an interview.

Sampling. The limited pool of participants recruited to my study impeded theoretical sampling and therefore, theory development. The impact of the low response rate to the social network survey on theory development was that not all the ACRC partner organizations were

represented in my participant pool and therefore, could not be sampled. There was one group of members in particular to whom I wanted to extend a direct invitation to participate in my study, but was unable to do so due to time constraints. The low response rate I obtained was a point of ongoing discussion between the project management team and myself. On more than one occasion, team members stated that they wanted to understand if saturation would be met or if I would have sufficient data to answer my research question using grounded theory. I explained that I would develop my theory using field notes and document review in addition to interview data. As I had not fully analyzed my data at the time, I could not answer their questions about saturation and the sufficiency of my data for theory development. In the end, I concede that I likely did not achieve saturation. However, the rich data I collected from my participants helped me develop a substantive theory that can, in a future study, be tested and refined with data collected from other stakeholders.

Data source. The study design did not include direct observations of communicative interactions as a data source, excluding an important source of insight into organizational routines. The decision not to include observational data was made for reasons of feasibility. Instead, social network analysis (SNA) was intended to serve as a proxy measure for communication in practice. The SNA, interviews, field notes, and document review were expected to be manageable for me to conduct on my own and sufficient for theory development. With the loss of the SNA from my study due to the low response rate to my survey, I lost the opportunity to explore the performative aspects of communication in this context. It would have been valuable for theory development to test participants' claims about the communication process as collected through interviews by observing the ACRC members first-hand.

Time. Grounded theory involves ongoing and iterative data collection until theoretical

saturation is attained; however, my ability to follow up with participants was limited by the limited time they had available to meet with me. It was impressed upon me during interviews and in discussions with the project management team that the ACRC members were very busy individuals and that participating in my study was something they had committed to in addition to their other responsibilities. Understanding that participants' time was limited led me to carefully prepare for interviews to ensure I made the most use of their time, similarly to how the project management team approached ACRC members. However, I also acknowledge that continually hearing that participants were busy, being aware that members could raise concerns about my study to the project manager, and observing that I did not always get timely responses from members to my emails, made me cautious about contacting them. In hindsight, I may have been overly sensitive to the ethical issue of not over-burdening participants. On occasions when I did reach out to participants with questions, they generally responded. I believe I would have felt more comfortable had I discussed with participants during their interviews about whether and how they would prefer I follow-up with them with clarification questions.

Future Directions for Research

Two directions for future research are proposed to develop the ACE theory into a more broadly transferrable theory of communication. First, researchers can advance our understanding of the communication process in the ACRC by addressing the limitations of my study, specifically the limited number and diversity of data sources. In doing so, researchers should continue to compare and integrate the ACE theory with current understandings of organizational communication. Second, researchers can develop the ACE theory into a broader theory of communication by studying its application to other contexts. In addition, two specific aspects of SCI contexts that warrant further research are described.

Continue to develop the ACE theory through additional data sources. One direction for future research is to refine the ACE theory and to integrate it with current understandings of organizational communication, such as the PARC meta-theory (Deetz & Eger, 2014). In particular, researchers could address the limitations I identified in my study with respect to recruitment, sampling, data, and time. Future studies could use a grounded theory (GT) approach to integrate additional perspectives from ACRC members on the communication process, particularly those of the ACRC EC members. Researchers could also pursue additional data sources to validate and refine the properties and dimensions of the communication sub-processes and structural conditions identified in the ACE theory. In particular, observational data of ACRC members' interactions would enhance our understanding of the ACRC communication process, as observational data was not collected in my study. The continued development of the ACE theory will enhance our understanding of communication in a SCI.

Enhance the transferability of the ACE theory to other contexts. A second direction for future research is to develop the ACE theory into a more formal theory of communication by studying its application to other contexts. The ACE theory is a substantive theory of communication specific to the ACRC at a particular time. A formal theory, on the other hand, could be transferred to other types of initiatives and not necessarily limited to SCIs. Studies examining communication processes in diverse contexts with different goals, structures, stages of development, and stakeholders would serve as a test of the ACE theory. This research could affirm or refute the importance of the three contextual conditions for the communication process identified in this study as well as identify additional conditions. Further, by comparing the communication process and conditions across varied contexts, researchers could determine which conditions are common across contexts and which are unique to particular contexts.

Developing the ACE theory into a more robust and broadly transferrable theory will advance our understanding of communication and enhance the practice of evaluation.

Explore specific aspects of SCI contexts. A specific issue that remains to be addressed by future research is the nature of leadership in a SCI. In my analysis, I found that the project manager played a prominent and evolving role in the ACRC that was integral to its ongoing operations. The project manager demonstrated leadership characteristics identified in the collaboration literature (Bryson et al., 2006), including the ability to span boundaries (Crosby & Bryson, 2010) and to frame issues so they are understood and relevant to diverse partners (Page, 2010). However, research on cross-sector collaborations has identified the need for many individuals to demonstrate leadership within collaborations and within partner organizations to support such initiatives (Agranoff, 2012). Indeed, the ACRC project manager deliberately highlighted the collective action of the partners rather than the role of the project management team in order to promote the shared vision of the ACRC. I believe that additional data will be required to understand the nature of leadership in a SCI, including data representative of the perspectives of executive committee members who would traditionally be expected to demonstrate leadership.

Another complex issue that future research could address with respect to contextual conditions for communication is "who are the 'right people' to have at the table when undertaking a SCI?" This question could not be fully answered by my data. However, I believe that the answer to this question will contribute to an explanation of why addressing access, connections, and engagement within a SCI may still be insufficient for persuading certain individuals to commit to "collective action for mutual benefit." The link between effective communication and "collective action for mutual benefit" appears to be the choice of the

organizational members to individually commit to this goal.

Conclusion

The purpose of this study was to generate a substantive theory of communication in the context of a system change initiative (SCI). To understand the communication process, it was necessary to understand the context in which this process occurred and how the process and context influenced each other from the perspectives of the SCI members. Accordingly, I sought to understand the communicative interactions of individuals involved in a SCI, including how individuals perceived their interactions, through the collection and analysis of interviews, field notes, and documents. This study contributes a substantive, data-driven theory of the communication process in a SCI to address the existing practice and theory gap with respect to communication in SCIs. To assist practitioners in assessing the transferability of the ACE theory to their own work, the ACE theory, the SCI context, and the communication strategies that were used in practice are described in rich detail. The study proposes avenues for research to further develop a comprehensive and broadly applicable theory of communication.

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Appendix A: Introduction Letter

ACRC Update and Doctoral student project

Tue, Apr 8, 2014 at 7:39 AM

Hello ACRC Working Group Members,

Happy Spring. Thank you to everyone who has responded to our request for your point of view (POV) on the ACRC portal. We are compiling the information and moving forward. Please feel free to still submit your comments. In the upcoming weeks, we will be communicating more on the recent developments in the ACRC.

In support of building capacity and young researchers, we have been asked to participate in a study looking at communication in inter-organizational collaborations such as the ACRC. You are being invited as you are part of the ACRC Inaugural Strategic Plan activities. The survey responses will help map communication within and emerging from the ACRC community, so please support Dorothy in her doctoral dissertation by completing the request below. Your responses will be collected and reported anonymously.

Regards,

[Project Manager]

Dear [Working Group Member],

My name is Dorothy Pinto, and I am a PhD Candidate at the University of Alberta in Measurement and Evaluation. My research interest is in understanding how communication works in inter-organizational collaborations to support ongoing information sharing and effective collaboration.

I have been permitted by AIHS to conduct a research study to learn about the emerging communication network among members of ACRC's Executive Committee and Working Groups. This work will also inform the ongoing ACRC evaluation and may identify ways to enhance communication in ACRC going forward.

I would greatly appreciate your participation in this study. This would involve:

1. Completing a **survey** about your communication with other ACRC members to map the emerging communication network*. To understand the whole network, responses from all members would be appreciated.* The survey will take

less than 30 minutes of your time.

You have been sent a unique link to the survey. Using this link, you can save your responses and return to complete the survey at a later time. *Do not share your link with others.*

Your unique survey link is: http://fluidsurveys.com/surveys/dpinto/acrc-communication-survey-1/?code=7p55ssbnwd

2. At the end of the survey, you will be invited to participate in an **interview** to talk about communication in ACRC. Interviews will take place at a mutually convenient time and location.

This study has been reviewed and approved by Research Ethics Board 2 at the University of Alberta. Your participation is voluntary.

Click on the link below to read the information letter required by my ethics board. The survey follows the information letter.

Dorothy Pinto

Appendix B: Information Letter – Social Network Survey

"Communication in Inter-Organizational Collaborations within the Public Sector" Project

Dear _____,

I invite you to complete this survey about communication in the Alberta Clinical Research Consortium (ACRC). You have been identified as a person who is involved in the ACRC initiative and is knowledgeable about the communication activities related to ACRC. As such, your input will be a valuable contribution to this study.

Successful collaboration requires effective communication structures to support ongoing information sharing. This survey will collect information about your communication with other individuals within ACRC. The survey results will be compiled to map ACRC's communication network. Finally, if you are interested in participating in an interview to discuss trends in the survey results, please provide your contact information at the end of the survey.

Methodology: Survey results will contribute to my doctoral dissertation, a larger study that aims to develop an evidence-based theory of communication within an inter-organizational collaboration. This survey will take about 30 minutes to complete. You may save your responses and return to the survey at a later time. Only the researcher will have access to your data and contact information.

Withdrawal from Study: Your participation is voluntary. You are free to withdraw from the survey at any time without penalty. Closing the window at any point prior to clicking "submit" will end your participation in the survey. Selecting the "submit" button at the end of the survey submits your data. You have one week following submission to withdraw your data from the study by indicating your intention to do so in writing to the researcher.

Confidentiality: All reasonable measures will be taken to ensure confidentiality of your

data in presentations of study results to external audiences including appropriate storage, access of data, and use of pseudonyms. Data will be stored on a password-protected computer in a secured location for the five-year duration required.

Benefits and Risks: The findings of this survey will provide insight into communication processes within ACRC. Data will contribute to the larger study of communication in inter-organizational collaborations and will be disseminated to various audiences. Your responses will not be used to evaluate your performance as a professional. Due to the nature of the data collected, it is not possible to guarantee anonymity of survey data.

For Information: If you have any questions or concerns regarding the study, contact Dorothy Pinto at dorothy.pinto@ualberta.ca or Dr. Cheryl Poth at cpoth@ualberta.ca.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by Research Ethics Board 1 at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Appendix C: Information Letter - Interview

"Communication in Inter-Organizational Collaborations within the Public Sector" Project

Dear _____,

You recently completed a survey about communication in the Alberta Clinical Research Consortium (ACRC). At the end of your survey, you indicated an interest in discussing trends in the survey results.

Successful collaboration requires effective communication structures to support ongoing information sharing. This interview will explore your perspective on communication processes within ACRC. Interview results will contribute to my doctoral dissertation, a larger study that aims to develop an evidence-based theory of communication within an inter-organizational collaboration.

Methodology: The interview will take place at a mutually convenient time and location. It will require approximately 45-90 minutes. The interview will be audio-recorded and transcribed verbatim. You may be contacted by the researcher for a short follow-up interview if additional information or clarification is needed.

Withdrawal from Study: Your participation is voluntary. You are free to withdraw from the survey at any time without penalty by informing the researcher of your intention to do so in writing. There will be an opportunity for you to review your interview transcript. Upon receipt of your transcript, you will have one week to make clarifications or withdraw your transcript in part or in its entirety from the study.

Confidentiality: All reasonable measures will be taken to ensure confidentiality of your data in presentations of study results to external audiences including appropriate storage, access of data, and use of pseudonyms. Data will be stored on a password-protected computer in a

secured location for the 5-year duration required.

Benefits and Risks: Interview findings will provide insight into communication processes within ACRC. Data will contribute to the larger study of communication in inter-organizational collaborations and will be disseminated to various audiences. Your responses will not be used to evaluate your performance as a professional. There are no foreseen risks to your participation in this study.

For Information: If you have any questions or concerns regarding the study, contact Dorothy Pinto at dorothy.pinto@ualberta.ca or Dr. Cheryl Poth at cpoth@ualberta.ca.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by Research Ethics Board 1 at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Sincerely,

Dorothy Pinto

Doctoral Student, Measurement, Evaluation & Cognition

Appendix D: Consent Form- Interview

"Communication in Inter-Organizational Collaborations within the Public Sector" Project

- I have read and retained a copy of the letter of information concerning the study *"Communication in Inter-Organizational Collaborations within the Public Sector" Project* and agree to participate in the study. All questions have been explained to my satisfaction. I am aware of the purpose and procedures of this study.
- I understand that my participation will involve an interview. I have been informed that the interview will last between 45 and 90 minutes and will be audio-recorded. I may also be contacted by the researcher for a follow-up interview if required.
- I understand that I will have one week to review the interview transcript and to submit any additions and/or deletions in writing to researcher.
- I understand that this interview contributes to the researcher's doctoral dissertation. I also understand that the researcher intends to disseminate the findings of this study through various means including conferences, articles, and reports.
- I have been notified that participation is voluntary and that I may withdraw at any point during the study without any consequences to myself. I understand that all reasonable measures to protect confidentiality when presenting results to external sources will be taken with appropriate storage, access of data, and use of pseudonyms.
- I agree to keep all research information shared with me confidential and not to discuss or share this information in any form or format with anyone other than the researcher.
- If I have any questions about this project, I am aware that I can contact the researcher, Dorothy Pinto, at dorothy.pinto@ualberta.ca or her supervisor, Dr. Cheryl Poth, at cpoth@ualberta.ca.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by Research Ethics Board 1 at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Please sign this copy of the consent form and return to Dorothy Pinto.

I HAVE READ AND UNDERSTOOD THIS CONSENT FORM AND AGREE TO PARTICIPATE IN THE STUDY.

Participant's Name: _____

Signature: _____

Date: _____

Appendix E : Information Letter – Document Analysis

"Communication in Inter-Organizational Collaborations within the Public Sector" Project

The successful collaboration of multiple organizations requires effective communication practices to support information sharing. Organizational documents provide valuable insights into communication practices. To more fully understand communication within the Alberta Clinical Research Consortium (ACRC), I propose to conduct a document analysis. The results of this review will contribute to my doctoral dissertation, a larger study that aims to develop a theory of communication in inter-organizational collaborations.

Methodology: The review will include organizational documents with relevance to the ACRC context and communication processes. Documents may include minutes of meetings, organizational charts, communication plans, and news releases.

Withdrawal from Study: Your participation is voluntary. You may withdraw the document(s) from the study without penalty. You must submit a written request to withdraw specific documents within one week of signing the document release form.

Confidentiality: Study findings will be disseminated to various external audiences and to ACRC. All reasonable measures will be taken to ensure data confidentiality in disseminated materials including appropriate data storage, access of data, and use of pseudonyms for individual names. Materials disseminated to external audiences will use pseudonyms for organization names. You must indicate whether the source organization of the document(s) provided can be identified in reports to ACRC. Data will be stored on a password-protected computer in a secured location for the five-year duration required.

Benefits and Risks: The findings of this document analysis will provide insight into communication processes within ACRC. Data will contribute to the larger study of

communication in inter-organizational collaborations and will be disseminated to various audiences. There are no foreseen risks to your participation in this study.

For Information: If you have any questions or concerns regarding the study, contact Dorothy Pinto at dorothy.pinto@ualberta.ca or Dr. Cheryl Poth at cpoth@ualberta.ca.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by Research Ethics Board 1 at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Sincerely,

Dorothy Pinto

Doctoral Student, Measurement, Evaluation & Cognition

Appendix F: Consent for Document Release

"Communication in Inter-Organizational Collaborations within the Public Sector" Project

I ,_____, release the following document(s) to Dorothy Pinto:

Please provide the following information for each document:

Document Name	Source Organization	Type (electronic/hardcopy)

I agree that:

- I have read and retained a copy of the letter of information concerning the study *"Communication in Inter-Organizational Collaborations within the Public Sector" Project* and agree to participate in the study. All questions have been explained to my satisfaction. I am aware of the purpose and procedures of this study.
- I am providing the above document(s) to the researcher voluntarily and can withdraw the document(s) from the study without penalty within one week of signing this release by submitting a written request to the researcher.
- I have obtained the required approvals from my organization to release the above document(s) to the researcher.
- I understand that the document(s) will contribute to the researcher's doctoral dissertation. I also understand that the researcher intends to disseminate the findings of this study through various means including conferences, articles, and reports.

- I understand that all reasonable measures to protect confidentiality when presenting results to external audiences will be taken with appropriate storage, access of data, and use of pseudonyms. I also understand that I may choose whether the source organization of the document(s) can be identified in any reports to the Alberta Clinical Research Consortium (ACRC).
- If I have any questions about this project, I am aware that I can contact the researcher, Dorothy Pinto, at dorothy.pinto@ualberta.ca or her supervisor, Dr. Cheryl Poth, at cpoth@ualberta.ca.

The plan for this study has been reviewed for its adherence to ethical guidelines and approved by Research Ethics Board 1 at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

Please sign this copy of the document release form and return to Dorothy Pinto.

I HAVE READ AND UNDERSTOOD THIS CONSENT FORM AND AGREE TO PARTICIPATE IN THE STUDY. **Please one of the following:**

☐ I authorize the researcher to use the document(s) listed above and to identify the source organization in reports to ACRC.
Note: The source organization will *not* be identified in materials disseminated to external audiences (e.g., in conferences, articles).

☐ I authorize the researcher to use the document(s) listed above on condition of organizational anonymity.
Note: The source organization will *not* be identified in reports to ACRC nor in materials disseminated to external audiences (e.g., in conferences, articles).

Participant's Name: _____

Signature: _____

Date: _____

Appendix G: Social Network Survey Example

Q1. Gender

- ○ Male
- ○ Female
- ○ Other
- ○ Prefer not to answer

Q2. Age

- ○ 25-34
- ○ 35-44
- ○ 45-54
- ○ 55-64
- ○ 65 or Above
- ○ Prefer not to answer

Q3. When did you first become engaged in the ACRC? ____/__/__ (YYYY/MM/DD)

Q4. With which of the following individuals have you initiated communication over the past 6 months? This is NOT limited to communicating about the ACRC. For example, this may include communicating for other work or for personal reasons. Select all that apply. [List of all SCI members included]

Q5. Over the past 6 months, by what means and how often (on average) have you contacted [name of ACRC member]?

	How Often (On Average)?
Email	○ Everyday ○ Once a week ○ 2 to 3 times a month ○ Once a month ○ Less than once a month ○ Not applicable
In person (outside of working group meetings)	○ Everyday ○ Once a week ○ 2 to 3 times a month ○ Once a month ○ Less than once a month ○ Not applicable
Phone	○ Everyday ○ Once a week ○ 2 to 3 times a month ○ Once a month ○ Less than once a month ○ Not applicable
Other	○ Everyday ○ Once a week ○ 2 to 3 times a month ○ Once a month ○ Less than once a month ○ Not applicable

If 'Other', please describe below:

For what purpose(s) do you contact [name of ACRC member]?

Overall, how much of your communication with [name of ACRC member] is directly related to ACRC?

- ○ We exclusively communicate about the ACRC
- ○ We often communicate about the ACRC
- ○ We sometimes communicate about the ACRC
- ○ We rarely communicate about the ACRC
- ○ We never communicate about the ACRC

Did you know [name of ACRC member] prior to your engagement in the ACRC?

- ○ Yes
- ○ No

If you have any comments you would like to share with the researcher about your communication with [name of ACRC member], please provide them below.

[ ]

Q6. If you have any comments you would like to share with the researcher regarding communication in the ACRC, please provide them below.

[ ]

Q7. Are you interested in participating in a follow up interview?

- ○ Yes
- ○ No

Email [ ]

Phone [ ]

Your response above has been saved. Select 'Next' below to continue on to the survey.

Selecting the “submit” button at the end of the survey submits your survey data.

Appendix H: Interview Protocol Example

1. Could you briefly describe the initiative from your perspective?
    a. What is its purpose?
    b. What role does your organization play in this initiative? What is your role?
    c. Who is involved (e.g., formal bodies)? What are their roles?
2. Describe a time you experienced effective communication in this initiative.
    a. Please provide some background information on this example (e.g., context, key players, type of communication)?
    b. What supported effective communication in this situation?
3. In your opinion, how could communication be enhanced in this initiative?
4. What formal or informal rules or practices exist with respect to communication in this initiative?
        i. What document(s), if any, guide communication in this initiative?
        ii. How do you typically communicate with others in this initiative?
        iii. How do others typically communicate with you in this initiative?
2. Who are key individuals with respect to communication in this initiative?
    a. What makes these individuals key to communication?
    b. What roles do these individuals play?
3. Please describe the role(s) you have played with respect to communication in this initiative.
4. Are there other comments or experiences you would like to share with respect to communication in this initiative?

Appendix I: Implications for Evaluation Practice

The ACE theory can be used to reframe the professional standards that guide evaluators in how to communicate and support communication within SCIs. As previously discussed, the theory identifies sub-processes of communication within a SCI and highlights that they are inter-related and collectively necessary to support system change in this context. In practice, communication plans designed for SCIs could consider each of the ACE sub-processes identified through the study of the ACRC. In this section, I introduce the Program Evaluation Standards with respect to communication (Yarbrough et al., 2011) and then apply the ACE theory to a sub-set of the standards that aim to enhance the *utility* of evaluation in organizations. In using the ACE theory to reframe the utility standards, I identify points of alignment that support my theoretical scheme, areas for theory refinement, and gaps in the professional standards with respect to communication and communication planning.

The Program Evaluation Standards (Yarbrough et al., 2011) guide the professional practice of evaluation and include recommendations pertaining to communication. There are a total of 30 standards categorized according to five attributes of quality: utility, feasibility, propriety, accuracy, and accountability. "High-quality communication and the need for communication planning" is recognized as an "integrating theme" that is woven through these attributes and standards (p. xiv, x1ii). However, with its emphasis on informing action, the *utility* standard is particularly relevant to the driver of communication identified in the ACE theory, that is, informing collective action for mutual benefit. In this section, I therefore focus on the eight utility standards that guide evaluators' communication to enhance the use of information for learning and decision-making in organizations. Although I have chosen to focus on utility, I recognize that communication is relevant to the other quality attributes and that valuable

suggestions for effective communication are embedded in the remaining standards pertaining to the feasibility, propriety, accuracy, and accountability of evaluation.

Alignment between the ACE theory and the Program Evaluation Standards (Yarbrough et al., 2011) provides validation for the theoretical scheme that emerged from my analysis. I used the ACE theory to reframe the utility standards in terms of the communication sub-processes of providing access to information, connecting with stakeholders, and engaging with stakeholders. Of the eight utility standards, five pertained to communication. Table 6 below presents the five utility standards reframed as ACE sub-processes. The table includes a description of each utility standard and how it aligns to the ACE theory. All three sub-processes are reflected in the utility standards, affirming their importance in enhancing the use of evaluation to support learning and decision-making in organizations. As well, the standards affirm the relationships the ACE theory proposes exist between the sub-processes. For example, the second utility standard, Attention to Stakeholders, is reframed as the ACE sub-process of connecting with stakeholders. This standard states that working closely with program stakeholders to understand them and ensure they feel respected enhances information access, which aligns with the ACE sub-process of providing access to information, and supports the engagement of these stakeholders in the evaluation, which aligns to the ACE sub-process of engaging stakeholders.

Table 6: Alignment of ACE Sub-processes to the Program Evaluation Utility Standards

ACE Sub-process	**Utility Standard**	**Alignment of ACE Sub-processes and Utility Standard**
Providing Access to Information (A)	Timely and Appropriate Communicating and Reporting (U7) This standard instructs evaluators to attend to "the continuing information needs of their multiple audiences" and make information "available in forms that adequately serve [stakeholders'] needs" (p. 57). It also recommends that evaluators carefully plan for communication, with due attention to stakeholders' cultures and contexts (see U2, p. 58).	This utility standard aligns with the ACE sub-process of providing access to information as both pertain to making information available to stakeholders. The standard states that timely and appropriate reporting lead to "timely understandings" of the evaluation and findings and the ability to take action and make decisions (i.e., engaging stakeholders). Further, upholding this standard in practice is proposed to enhance the evaluator's credibility and support building connections with stakeholders (i.e., connecting with stakeholders).
	Relevant Information (U5) This standard states evaluators should conduct evaluations that produce information to serve stakeholders' needs.	This standard aligns with the sub-process of providing access to information by maintaining that stakeholders be provided relevant, appropriate, and credible information. The understanding of what stakeholders consider relevant, appropriate, and credible information is gained through connecting with stakeholders. This information is used to support decision-making (i.e., engaging stakeholders).

Connecting with Stakeholders (C)	Attention to Stakeholders (U2) Evaluators are to attend "to the full range of individuals and groups invested in the program" (p. 23), seeking multiple perspectives on the program. Evaluators are encouraged to "work with [stakeholders] to bring to light assumptions, interests, values, behaviours, and concerns regarding the program" and ensure stakeholders "feel respected by the process" and have "realistic expectations of the evaluation" (p. 23-4).	Attention to stakeholders, key to connecting and building relationships with individuals, is proposed to support "access to pertinent information" (i.e., to provide access to information) as well as to "create conditions for stakeholder engagement that are safe, comfortable, and contribute to authentic participation" (i.e., to engage stakeholders).
	Negotiated Purposes (U3) This standard relates to coming to agreement on the purpose(s) of evaluation with stakeholders. It involves "initial and ongoing processes that clarify [stakeholders'] needs and changes in needs" (p. 29). In doing so, the evaluator and stakeholders develop shared language and understanding of purpose.	This standard aligns with the ACE sub-process of connecting with stakeholders in highlighting the importance of understanding stakeholders' needs. All decisions regarding the evaluation design, including communicating and reporting, should be made with respect to the purpose(s) negotiated with stakeholders (i.e., through engaging stakeholders). This standard also highlights the need communicate the purpose(s) "in ways that are understandable and meaningful to all Stakeholders" (i.e., to provide access to information) (p.32).

Engaging Stakeholders (E)	Meaningful Processes and Products (U6) Meaningful processes and products are "perceived to have significance and value for stakeholders" and "encourage participants to rediscover, reinterpret, or revise their understandings and behaviours" (p. 51). Such processes and products build stakeholders' understandings of their programs and support decision-making.	This standard aligns with the ACE sub-process of engaging stakeholders; both focus on ensuring processes (e.g., decision-making) are meaningful for stakeholders. Understanding what has significance and value for stakeholders involves "making the effort to learn about how various stakeholders view and contribute to the program" (p. 52) by connecting with stakeholders. Products (e.g., findings, judgments) will be meaningful if "stakeholders judge them to be clear and functional," requiring that access to this information be provided (p. 51).

Table 5 identifies points of alignment between the ACE theory and five of the eight utility standards upheld by the Program Evaluation Standards (Yarbrough et al., 2011). However, the Standards also include aspects of communication not captured in the ACE theory, although consistent with the sub-processes of providing access to information, connecting with stakeholders, and engaging with stakeholders. These aspects indicate potential avenues to refine the properties and dimensions of the ACE sub-processes. For example, the utility standard "Evaluator Credibility" addresses "establish[ing] functional professional relationships" (p.17) and therefore aligns to the ACE sub-process "connecting with stakeholders" as both involve establishing relationships. However, the standard of "evaluator credibility" also highlights the importance of an evaluator's reputation in relationship building, specifically their reputation for being trustworthy and reasonable and for conducting work that informs stakeholders' understanding of their programs. The concept of evaluator credibility did not emerge as a distinct category in my analysis. Whereas this standard does not contradict my theoretical scheme, it does identify an avenue for future data collection and theory refinement.

The ACE theory identifies and addresses two gaps in the practice standards: an understanding of the concept of engagement as well as detailed practical strategies for communication and communication planning in SCIs. The preface to the Program Evaluation Standards (Yarbrough et al., 2011) states that the standards are meant to "encourage reflective practice related to … communication and stakeholder engagement" (p. xii). Therefore, I was surprised to discover that "engagement" is neither defined nor directly addressed by the standards. The ACE theory contributes a detailed description of engagement and articulates how this sub-process inter-relates with providing access to information and connecting stakeholders. Further, to support evaluators in implementing the ACE theory, I have provided descriptions of

practical strategies that were used to support the communication process in the Alberta Clinical Research Consortium (ACRC) and how they functioned in practice. These descriptions provide evidence to inform how evaluators in SCIs could enhance access to information, connections with stakeholders, and stakeholder engagement in decision-making. The strategies may not be suitable for other SCIs or contexts and are therefore presented in detail so that evaluators can determine the transferability of these strategies to their own contexts.