Understanding Emergency Medicine Physician Leadership within the Saskatchewan Health Authority

by

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COMMITTEE APPROVAL

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Abstract

This thesis explores the qualities that support Emergency Medicine (EM) physicians' leadership work and how the Saskatchewan Health Authority (SHA) may better support, learn from, and leverage their knowledge and skills. EM physicians in Saskatchewan who also held physician leadership roles within the SHA or the College of Medicine were randomly selected to participate in semi-structured interviews and focus groups conducted by the principal investigator. The themes explored included EM physicians' clinical experiences and how these affected their physician leadership roles. EM physician leaders were asked about their leadership journeys, their experiences of leadership support or mentorship, any overlap they might identify between ER physicians' clinical skills and leadership roles, and shift work and remuneration. Based on the study findings and conclusions, the research recommends that the SHA (a) should recruit EM physicians for leadership positions to bring EM insights and decision-making abilities into a variety of healthcare administrative roles, (b) leverage the knowledge EM physicians have gained from broad clinical exposure to the health care system, (c) consider a fair remuneration package for EM physicians when they enter a physician leadership role, and (d) establish mentorship for new EM physician leaders.

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Table of Contents

List of Figures

List of Tables

Chapter One: Focus and Framing

Effective physician leadership, it has been theorized, is important to transform the healthcare system and improve patient outcomes (Baker & Denis, 2011; Geerts et al., 2019). Physicians who take on leadership roles draw on their skills and experience from their clinical roles and apply these skills in non-clinical contexts. Emergency medicine physicians, due to the nature of their work, lead interdisciplinary teams, make decisions quickly, and learn to become professional problem solvers. Midnight shifts in the emergency department (ED) are a good example. Working a graveyard shift, you can be the lone physician in an ED doing your best to remain bright and hypervigilant as the rest of the world sleeps. While the normal infrastructure of the healthcare system is dormant, the emergency medicine physician makes their own rules, solves problems, and uses MacGyver as inspiration.

Working as an emergency physician for many years, I have witnessed this type of situation many times. During the SARS outbreak of 2003, I was the lone physician working in a large ED in a British Columbia port city. It was a busy night, with a great team of nurses and a steady supply of donuts and coffee. A call came in from the coast guard, which was unusual, so I was happy to take it. The concern was a Ukrainian ship, last port of call China, that had a sick sailor on board. Having no one to call for advice, I came up with questions for the coast guard and did my best to provide them with answers to their queries. I wondered out loud if there was such a thing as a quarantine naval dock, which there was, and the ship was directed there. On my direction, no one would be allowed off the ship except for the one sailor who would be transported to the ED by paramedics with full personal protective equipment. Once the paramedics and patient arrived—all in their white hazmat suits, we settled into the negative pressure room. A few hours later, the patient was cleared, the world was saved, and the

Ukrainian captain kept leaving me angry messages, wanting public health to lift the quarantine as soon as possible. That is why I love emergency medicine: We are never sure what will happen during a shift, and making decisions with incomplete information is our job.

What happens when an emergency medicine (EM) physician transitions from the ED to non-clinical leadership? Medical leadership has been identified as an important tool to improve the healthcare system, but how much do we know about the different styles of medical leadership? Does the style or nature of medical leadership make a difference? Based on my knowledge of the literature, the voices of frontline medical leaders of various specialties have not been explored. Over the last 30 years of EM practice, I have seen many emergency physicians enter the world of physician leadership, and I have wondered if they have carried their problem-solving, quick decision-making clinical mindset with them and if it has benefited them in their new leadership roles.

For my thesis research, I decided to partner with the Saskatchewan Health Authority (the SHA). I have discussed with the Chief Operating Officer (COO) how my project can hopefully be of use for the SHA. The COO met my initial contact with enthusiasm, and I have kept her updated on a regular basis. Saskatchewan's healthcare system is complex, and like many similar systems across the country, government priorities and political influence often must be considered in any decision-making or quality improvement project. I will be dealing directly with the SHA's COO but will have to consider the broader political context regarding the implementation of the recommendations this research generates.

The goal of my thesis has been to investigate and understand EM physician leadership by conducting and then analyzing data from a series of semi-structured interviews and focus groups. My primary research question was: What are the qualities of EM physicians that support their

work as leaders, and how can the SHA better support or learn from and leverage their knowledge and skills? I further explored these sub-questions:

- How does EM physician leadership reflect the experience of EM clinical practice?
- Was mentorship or sponsorship important for developing EM physician leaders?
- How might the learned skill set of EM physicians benefit or challenge their development as physician leaders?
- How might broad clinical exposure to the healthcare system contribute to the strength of EM physician leadership?
- How do EM physicians define, recognize, and execute successful physician leadership?

Significance of the Inquiry

Strong, engaged, and well-trained physician leadership is necessary to transform and promote positive outcomes for Canada's healthcare system. One of the SHA's goals is to "establish physicians as leaders in the healthcare system" (SHA, 2018, p. 8). The current CanMEDS framework (Frank et al., 2015) defines the necessary physician competencies required for improving patient care and highlights physician leadership as one of the key pillars of physician competency. As part of an iterative review in 2015, CanMEDS made a bold move, removed the term manager, and emphasized the role of physician as leader. This was in recognition of the need for physicians to apply leadership skills in a more deliberate manner to deal with the increased complexity of the healthcare system. It was acknowledged that leadership competencies are integral to a physician's practice, whether they hold a formal title or not. It was hoped this emphasis on leadership would encourage physicians to develop and use leadership

skills to advance the care of their patients and to contribute to improving the healthcare system (Dath et al., 2015).

Healthcare leadership "is the collective capacity of an individual or group to influence people to work together to achieve a common constructive purpose: the health and wellness of the population we serve" (Dickson & Tholl, 2014, p. 17). LEADS Canada (Dickson & Van Aerde, 2018), operating with the Canadian College of Health Leaders, defines the capabilities required by leaders to make meaningful organizational change. Each letter in the LEADS acronym refers to a domain with actions a leader needs to take to influence a system positively: L represents the importance of leading self, E is for engagement of others, A is for achieving results, D is for developing coalitions, and S is for systems transformation (Dickson & Tholl, 2014). The framework aims to guide healthcare leaders and maximize the capabilities of the healthcare system. When LEADS is brought to life, it "contributes to patient-centered, system-wide healthcare reform" (Dickson & Tholl, 2014, p. 8). The authors of LEADS share the belief that leaders are not born but can be made from effort and self-reflection.

The concept of LEADS and how it relates to physician leadership was an important starting point for my concept of physician leadership: "Leadership is the power inherent in your ability to lead others" (Dickson & Tholl, 2014, p. 9). Early in my career, the thought of physician leadership evoked an image of a grey-haired physician shifting his talents to administrative paperwork as he wound down his clinical practice. We now have higher standards for physician leadership as outlined in the LEADS (Dickson & Tholl, 2014) and CanMEDS frameworks (Frank et al., 2015), but has the old image really changed all that much? As one young physician leader asked me recently, "Why do men with no leadership capabilities who act like dictators, climb the ladder?" (personal communication, May 20, 2021). For some at least, it seems the

perception persists that physician leadership is not based on leadership skills or training but on seniority and gender.

It has been hypothesized that physician leadership can be part of the formula for solving the issues that currently challenge Canada's healthcare system (Collins-Nakai, 2006; Ham, 2003) including access wait times, patient dissatisfaction, health worker burnout, and spiralling costs (Grady & Hinings, 2019; Lazar et al., 2013). I believe studying physician leaders to understand how they think and the challenges they face will be critical in fully engaging in this transformation of the healthcare system. If physicians are to be part of the solution to the ills of the healthcare system, there is a need to understand how they think and what their approach will be. Once their approach is understood, it will be easier to utilize their expertise.

There is a growing interest in emergency physician leadership. The American College of Emergency Physicians puts on an annual conference focused on leadership. The Canadian Association of Emergency Physicians started hosting its own annual leadership conference in 2020 as well as a virtual leadership educational series that has been offered over the last two years. There is also an expanding scholarly interest, with several academic articles on EM leadership published over the last few years (Guptill et al., 2018; Lateef, 2018; Sinclair et al., 2016).

My study investigated the qualities of EM physicians and how those qualities relate to their leadership roles. While other specialties can be quite siloed in their approach, the EM physician interacts with all aspects of the healthcare system, obliging emergency physician leaders to be keenly aware of what works and what does not (Helman et al., 2019). In amongst the clinical chaos, EM physicians have developed an effective way of approaching their world and feel comfortable in that chaos. Scholars who have studied emergency physician leadership

(LaSalle, 2004; Lateef, 2018; Lowe et al., 2016) acknowledge the specific clinical leadership qualities that are required by EM physicians leading interdisciplinary healthcare teams in the ED. In one EM physician's opinion, "The reason why ER docs make good leaders is that they understand the entire system because they have to deal with it every day" (T. Ledding, personal communication, October 12, 2019).

Through this inquiry, I engaged EM physicians in leadership roles to understand their approach to physician leadership. Is their approach unique, working as an extension of their specific type of medical practice and training, or when they become a component of the medical leadership bureaucracy, does their orientation and perspective change? It has often been said that physicians who enter leadership positions are entering "the dark side." Through this inquiry, I hoped to learn the approach of EM physicians when they enter leadership and what changes, if any, in their approach occur once they are in the leadership role?

My capstone partner, the SHA, has begun encouraging physician leadership as part of its mandate for improving the healthcare system (SHA, 2018). This inquiry could help the SHA achieve this goal by informing the SHA how its EM physician leaders are functioning and suggesting potential system improvements, which have been drawn from their stories and knowledge. The research will also add to the scholarly and professional knowledge base of EM leadership and physician leadership in general.

Organizational Context and Systems Analysis

The SHA is the largest organization in Saskatchewan, with over 40,000 employees and more than 2,500 physicians responsible for delivering healthcare in the province (SHA, n.d.-a, para. 1). It is currently undergoing a multi-year, system-wide transformation, which began in December 2017, when it amalgamated former geographic siloes into one province-wide health

authority (*Provincial Health Authority Act*, 2017). The intention is to improve frontline patient care and provide more consistent and coordinated care across the province.

While undertaking this structural change, the SHA hopes to achieve its strategic vision of "Healthy People, Healthy Saskatchewan" through a series of goals including a goal of "establishing physicians as leaders in the healthcare system" (SHA, 2018, p. 3). The SHA believes that physician knowledge and experience are essential to improve health system performance, both by improving the design of healthcare delivery and promoting shared responsibility:

> Goal 3: Establish physicians as leaders in the healthcare system
>
> *Physician knowledge and experience is essential to improve the design of healthcare services, and to promote shared accountability for health system performance.* (SHA, 2020, p. 1)

In my work with the SHA, I have often heard that we are "building the plane as we fly it." I hope my research contributes to the aircraft assembly project by helping the SHA achieve its strategic goal of establishing physicians as leaders in the healthcare system. By investigating the work of EM physicians in leadership positions in the SHA, the best qualities of physician leaders can be demonstrated and give the SHA a goal to focus on for future leadership policies.

Within the SHA, as Provincial Head of Emergency Medicine, I have a dual role. Half of my role is to promote excellence in emergency care across the province. The other half is dedicated to the University of Saskatchewan Medical School to promote excellence in EM undergraduate and post-graduate training. I have regular contact with the SHA's COO and my organizational partner in this research, Dr. Susan Shaw, and the dean of the medical school, Dr. Preston Smith. Both have expressed interest in my thesis, and Dr. Smith has sponsored

discussions and learning sessions on leadership for department heads. Dr. Shaw has encouraged me to identify aspects of EM physician leadership important to physician leadership in the SHA.

During the pandemic, many EM physicians stepped forward to take up leadership positions within the SHA. These EM physicians embraced their leadership roles with a typical "just get stuff done" attitude. The healthcare system, not known for its agility in decision-making, was forced by the pandemic to switch into a rapid decision-making mode to face the challenge. The input of these EM physician leaders was viewed as important by the SHA's COO, which was communicated to me on several occasions, especially in the early chaotic days of the pandemic to help with the rapid decision-making required in the situation.

The COVID-19 pandemic has added challenges for completing my thesis and advocating for the recommendations generated through this inquiry. As Provincial Head of Emergency Medicine, most of my time over the last two years has been focused on the pandemic response, overloaded EDs, and mentally stressed staff across the province. There have been staff shortages, as EM physicians have become ill at the last minute, and many EM physician leaders, including myself, have had to balance increased clinical duties with our leadership roles. Despite the challenges of these last two years, I have had the opportunity to observe EM physician leadership in action. I have been able to witness new EM physicians take up leadership roles and observe in real-time the stresses and challenges they face.

I believe important information about physician leadership can be gathered by candidly investigating the challenges and frustrations of physician leaders. While the SHA has made it part of its mandate to encourage physician leadership to improve the healthcare system (SHA, 2017, p. 8), there is a concern among some local physician leaders that despite good intentions, this leadership mandate has not always been fulfilled. Some local physician leaders have a level

of suspicion because they have not always felt respected by the SHA in the past. Trust between physicians and organizations is a key variable in the healthcare system, which can only develop with open communication and willingness to share relevant data (Denis et al., 2013). Personally, I have attended meetings where I have been assured my opinion mattered and physicians' concerns would be addressed, only to eventually see the opposite being done. It will be important to investigate the possible frustrations of the physician leaders to understand their experience.

It is possible that a lack of trust in the SHA's commitment to supporting physician leadership partially stems from physicians' concerns about compensation for leadership. According to Denis et al. (2013), trust between a healthcare organization and physicians is fundamental to aligning the physicians' and organizational goals, and physicians need to be properly compensated for their involvement in improvement initiatives. This is an important topic for the SHA, and I also investigated this during the data generation.

Overview of the Thesis

After introducing the context and purpose of this research in Chapter 1, the thesis moves on to a literature review of three central topics: (a) leadership skills training for medical trainees and residents, (b) leadership training for working physicians, and (c) EM physician leadership and it's relation healthcare system improvement. Chapter 3 describes the process and design of this study. I discuss my methodology and methods, which include first-person reflection, a series of semi-structured interviews with EM physician leaders who work in the SHA, and focus groups with participants chosen randomly from the interview sample. I used these three methods together to enhance the validity of my data through the convergence of information (Patton, 1999). In Chapter 4, I present my findings and conclusions, and in Chapter 5, I synthesize the key themes to make recommendations for local action planning and further dissemination.

Chapter Two: Literature Review

There is a growing interest in the importance of physician leadership within the healthcare system. My literature review concentrated on peer-reviewed literature published since 2000, covering three broad themes, to help me understand physician leadership and advance the rationale for my thesis. To understand the current state of physician leadership, I examined how leadership training is approached in medical school and residency and whether leadership concepts and skills are taught in those training programs. Some articles examined existing types of training, and others identified gaps and suggested improvements. Secondly, I explored the topic of physician leadership: its perceived significance, how physicians acquire leadership skills both formally and informally, and how good physician leadership can help transform a healthcare system. Finally, I also examined physician leadership in the ED and how it relates to system improvement.

Undergraduate and Postgraduate Medical Leadership Training

The literature suggested that current medical training does not adequately prepare physicians for the role of leadership in the modern healthcare system. While it is acknowledged that teaching clinical skills is emphasized, leadership training is lacking in current curricula despite its importance**.** The literature on leadership and medical training agreed that despite the acknowledged importance of leadership training for medical trainees, there is a significant deficit in curricula for leadership training in medical education programs (Danilewitz & McLean, 2016; Goldman et al., 2011; Lyon et al., 2019; McKimm & Swanwick, 2011; Rotenstein et al., 2018). In their opinion piece in the *Harvard Business Review*, Rotenstein et al. (2018) encouraged medical schools to make leadership training a priority. They advanced that while medical schools do a good job of clinical education, leadership training is, at best, an afterthought.

Clinical skills in medical school are taught with facts advanced and emotions removed, with little emphasis on the special skills required for leadership. The leadership skills taught tended to be clinical, such as how to be an effective lead physician in a response to a cardiac arrest. Perry et al. (2017) suggested that medical schools' emphasis on teaching physicians to keep emotion out of their clinical role does not adequately prepare them for managing complicated workplace relationships. These authors attested there is a need to move beyond clinical expertise and have insight into a more holistic view of the healthcare system. Lateef (2018) agreed that physicians are trained to be clinical leaders and lack the specific training to lead in an administrative context and advocated for more clear leadership training at the residency or medical school level.

A Canadian guideline for teaching medical trainees is CanMEDS. It is the most widely accepted physician competency framework in the world and is integrated into Canada's medical education system (Royal College of Physicians and Surgeons of Canada, n.d.-b). CanMEDS defines the necessary competencies for medical education and practice in Canada. Developed in the 1990s "to improve patient care by enhancing physician training" (Frank et al., 2015, p. 5), the CanMEDS framework has been used mainly in postgraduate medical education but is embedded in the structure of many medical organizations (Royal College of Physicians and Surgeons of Canada, n.d.-a). The seven competencies listed are professional, communicator, scholar, collaborator, health advocate, medical expert, and leader (Frank et al., 2015, p. 2). The category of leader is relatively new. Stakeholders in the 2015 CanMEDS review process changed the competency of manager to leader to reflect the reality of physicians leading in an increasingly complex medical system (Frank et al., 2015, p. 11). It was the only name change for any of the competencies and indicated the importance the committee put on this skill. The definition of

physician leadership used within CanMEDS describes physicians taking responsibility for the delivery of excellent patient care through their leadership and administrative activities. Despite the importance of CanMEDS in the Canadian medical training infrastructure, much of the literature did not describe physician leadership training as one of the healthcare's success stories (Danilewitz & McLean, 2016; Goldman et al., 2011; Lyon et al., 2019; McKimm & Swanwick, 2011; Rotenstein et al., 2018).

The literature regarding postgraduate EM leadership programs and leadership training mirrored the experience in medical undergraduate training. Researchers found that while clinical skill learning was approached with rigor, leadership skill learning was unplanned, tended to focus on clinical captaincy, and was learned by trial and error with little reference to literature or organized teaching (Blumenthal et al, 2012; Goldman et al., 2011; Lateef, 2018; Thoma et al., 2015). Goldman et al. (2011) conducted a series of semi-structured interviews with EM residents in a tertiary care training centre, asking these trainees about their experiences learning clinical versus leadership skills. The consensus was that while learning clinical skills was approached with rigor, leadership skill learning was largely unplanned. Goldman et al. surmised this could lead to a narrow perspective on leadership among EM residents. The authors went on to say that opportunity exists for enhancing EM residents' learning of leadership skills as well as the teaching of these skills, as resident trainees tended to equate leadership with managerial skills.

In 2015, Thoma et al. worked to create a consensus document identifying leadership competencies that should be included in the EM residency training curriculum using the CanMEDs competencies as a starting point. The participants, comprised of residency program directors, leadership, and medical administration experts, were able to identify 59 competencies that should be included in an EM administration and leadership curriculum. Thoma et al. also

acknowledged that although multiple publications have recognized the importance of fostering physician leadership skills, these ideas have not been included in any Royal College postgraduate curricula.

Mentoring has a long tradition in medical training and can be viewed as the essence of its apprenticeship style of learning. Mentorship is also viewed as an excellent method of teaching leadership skills. Numerous examples in the literature endorsed mentorship as a beneficial activity for fostering leadership (Bamford, 2011; Hernez-Broome & Hughes, 2004; Hobson & Sharp, 2005; McAlearney, 2005; Messmer, 2003; Warren & Carnall, 2011). While within medicine mentorship traditionally occurs informally between junior doctors and their seniors (Warren & Carnall, 2011), scholars theorized that a formal leadership mentoring program could be established to benefit aspiring medical physician leaders (Guptill et al., 2018**;** Stead, 2005; Warren & Carnall, 2011). Guptill et al. (2018**)** stated that having a mentor or sponsor was key to navigating the initial steps of leadership. However, Straus et al. (2013) had concerns and found there were many gaps in the literature on what constitutes an effective mentoring relationship. For example, Woolworth (2019) emphasized that a mentoring relationship needs to focus on the whole person not just a narrow view of academic success. If mentoring is to be used for medical leadership development, potential limitations should be considered and a more formal process should be considered (Warren & Carnall, 2011).

A search of the international literature outside of North America regarding leadership and medical training was consistent with Canadian trends (Lyon et al., 2019; McKimm et al., 2009). Lyon et al. (2019), for example, these researchers looked at leadership training in New Zealand and Australia, where they found significant gaps existed, and they perceived that some dimensions of leadership would be more appropriately learned after medical school, such as

through mentorship. McKimm et al. (2009) compared initiatives in New Zealand and the UK regarding leadership development programs at all levels of training and found similar challenges in both countries.

In summary, the literature suggested that current medical training does not adequately prepare physicians for the role of leadership in the modern healthcare system. This topic is discussed in greater depth in the next section.

Physician Leadership and Training Working Physicians

Leadership is not prioritized in medical education curricula, but what does the literature say regarding leadership education opportunities for working physicians? It was advanced in the literature that physician leadership is important for improved patient care and organizational success in the healthcare system. However, is there a way to bridge the gap between the lack of leadership training in undergraduate and postgraduate medical training, and what is required for the working physician?

Physician Leadership in the Healthcare System

Many authors wrote about the importance of physician leadership within the current healthcare setting. Physician leadership has been associated with improved patient outcomes and overall improvement in the healthcare system (Dickson & Tholl, 2014; Geerts et al., 2019; Kornacki, 2017; Reinertsen, 1998). For example, in their systemic review, Geerts et al. (2019) found that physician leadership development initiatives benefitted patients in a variety of ways, including reduced clinical errors, reduced mortality rates, and shorter hospital lengths of stay. There are editorials written about physician leadership and the critical role it plays in hospitals and health systems. Kornacki (2017) attested that we should raise the profile of physician leadership within the healthcare system. In their narrative review, Swanwick and McKimm

(2011) stated that leading and managing systems of healthcare was a professional obligation of all clinicians, and physician leadership is necessary at all levels of the healthcare system.

Aside from opinion pieces, studies have also investigated physician leadership. In a study on leadership and healthcare system redesign, Dickson and Tholl (2014) concluded that quality physician leadership will be necessary for reform to be successful in the healthcare system. Snell et al. (2016) studied physician leaders through a survey, followed by a series of semi-structured interviews to describe the realities of physicians who take on leadership roles in Canada. Their findings showed that "survey respondents and interview participants were in full agreement that physician leadership is essential for effective health-care reform" (p. 268).

Using various sources, including some of the mentioned studies thus far, the Canadian Society of Physician Leaders (Van Aerde & Dickson, 2017) produced a white paper offering a national perspective on Canadian physician leadership with a broad view of the current Canadian reality with recommendations for the future (Van Aerde & Dickson, 2017). In their paper, Van Aerde and Dickson (2017) documented that physicians should play a central role in planning and implementing change for the transformation of the Canadian healthcare system to be successful. However, the authors found that processes and methods dedicated to creating and supporting physician leaders were disorganized, episodic, and limited in scope—if they existed at all.

Suggestions for Change

It was generally agreed that physician leadership is an important aspect of a successful healthcare system, but what is the best approach to ensuring physicians become part of the leadership structure in the healthcare system? Numerous authors advocated modifying the way physician leadership and the development of physician leaders are approached (Makary, 2013; Perry et al., 2017; Sonnenberg, 2018). Sonnenberg (2018) wrote that the old style of physician

leadership must change. Rather than remain focused on independent practice in a physician-centred system, Sonnenberg attested that physician leaders needed to embrace the concept of becoming a member of a healthcare team that focuses on coordination of care in a patient-centred system. He elaborated that this would require a culture change in how physicians see their role within the system.

Part of that culture change would be engagement and alignment of physicians with the healthcare system's organizational goals. Makary (2013) pointed out that medical leadership, or lack thereof, is an issue in modern healthcare, and Makary advocated for a system in which physician leaders advocate for changes to enable better transparency and improve patient care. Writing in the *Harvard Business Review*, Perry et al. (2017) expressed that a leadership pipeline needs to be created to train physicians to lead. They attested that the dyad model (a paired leadership model, in which one of the leaders is often a physician and the other an administrator or nurse) used in many medical systems is inefficient and does not allow physicians to lead or learn how to lead. While they felt that cooperative work can break down intellectual silos, the model can create confusion about roles and does not give doctors the training to be organizational leaders. Instead, they suggested a leadership pipeline in which physicians experience longitudinal mentoring in skills such as managing others, acquiring managing skills, and developing a strategic perspective. This concept expressed by Perry et al., while not backed up by evidence, did get support from other scholars such as Schwartz and Pogge (2000), who stated that the old tradition of an elder physician retiring from clinical work and taking on leadership roles no longer resonates well with working physicians. Collins-Nakai (2006) stated that removing successful practicing physicians from their practice to take over leadership roles is not ideal and that an ongoing clinical role is needed to maintain physician leadership credibility.

Collins-Nakai also described some physicians as “accidental leaders” who come into leadership positions through happenstance rather than deliberate choice.

Some authors stated that developing individual physician leaders is not enough to create systemic improvements (Shortell, 2002; Totten & Combes, 2015). Shortell (2002) wrote that while leadership development programs were good for individual career development, they need to be paired with fundamental organizational change if the system is to achieve the systemic improvement essential in the healthcare system. It is suggested that a leadership approach focused on how physician leaders contribute to quality could be effective, but there is also the need to bring in innovative physician leaders to achieve this (Totten & Combes, 2015).

To cultivate physician leadership more effectively, the literature suggested a change in pay structure. Scholars agreed that payment models are problematic. For example, insufficient remuneration for leadership roles has been noted to be a source of stress for physician leaders (Eagle, 2016; Snell et al., 2016). According to Snell et al. (2016), in the past, there was an expectation that physicians would take on leadership roles with minimal remuneration as part of their professional obligations.

This model led to problems recruiting physicians who were interested in making leadership a career path. Snell et al. (2016) interviewed a variety of physician leaders to understand how these physicians viewed their role. Formal versus informal leadership roles were described as was the lack of compensation for some specific roles. A feeling of dissatisfaction in leadership roles was expressed due to lack of respect, lack of pay, long hours, and lack of recognition of leadership efforts to name a few. Eagle (2016) stated that physician leaders may face financial stresses due to the varying remuneration models and the opportunity costs when ongoing clinical practice costs are not fully compensated. Snell et al. noted that the participants

in their study put in at least 20 additional hours per week to fulfill their leadership commitments. Suggestions for change need to include consideration of current compensation models.

Pathways of Learning

This literature review has discussed the importance of physician leadership and the pathways for change, but has the literature described pathways for education through which physicians might increase their leadership skills? Ham (2003) wrote that there is no clear pathway to becoming a medical leader, and physicians often lack the time needed to learn leadership skills. He indicated there is an inverted power structure in many healthcare organizations, where clinicians who have leadership roles have little influence over decision-making on a day-to-day basis.

The LEADS leadership capabilities framework (Canadian College of Health Leaders, n.d.) has been adopted by the SHA as a framework for physician leadership. This framework provides a comprehensive approach to leadership development for physicians and the Canadian health sector. The LEADS framework follows the title, teaching leaders to lead self, engage others, achieve results, develop coalitions, and be involved in systems transformation (Canadian College of Health Leaders, n.d.). Dickson and Van Aerde (2018) used a descriptive case-based methodology to look at the effect of LEADS on physician leadership in Canada. The authors outlined how the LEADS framework should be of interest to physicians who wish to shape the future of the Canadian healthcare system, and they included a plea for medicine to foster leadership in faculty and students. In this same article, Dickson and Van Aerde endorsed medical leadership as essential to both improving patient care and transforming the broader healthcare system. Chan et al. (2022) examined the link between CanMEDS2015 and LEADS frameworks. They found the frameworks were “mutually supportive, addressing leadership action in different

contexts" (p. 47). The two were found to be complementary in support of increasing physician leadership capacity in the service of better patient care.

The Canadian Medical Association (CMA) has shown an interest in developing physician leadership in Canada (CMAjoule, n.d.-b). The CMA has a Physician Leadership Institute, established with the goal of training physicians in leadership skills (CMAjoule, n.d.-a). These courses in Saskatchewan are supported by the Saskatchewan Medical Association, and I was able to participate with Saskatchewan Medical Association support as early as 2010. The current iteration of the Physician Leadership Institute aligns with the LEADS framework, has a bilingual offering, and identifies a series of core courses deemed as essential knowledge for physicians interested in leadership positions (CMAjoule, n.d.-a). In addition to the core courses, the course catalogue outlines the courses that are organized within the LEADS framework of leading self, engaging others, achieving results, developing coalitions, and systems transformation (p. 3). Certainly, this level of engagement of the physicians' national body is a positive force for the development of physician leadership in the country.

Emergency Medicine Physician Leadership and Its Relation to System Improvement

My thesis focuses on the qualities of EM physicians that support their work as physician leaders. Only a small body of current literature has examined EM physicians in leadership roles and outlined some of their unique qualities and challenges. Several authors described the unique competencies they feel are required to be an EM physician leader (LaSalle, 2004; Rixon et al. 2020; Rutledge & Sinclair, 2013), the need for preparation and training (Rixon et al. 2020; Rutledge & Sinclair, 2013), and how the clinical skills acquired in the emergency room (ER) overlap with physician leadership skills (LaSalle, 2004; Lateef, 2018; Lowe et al., 2016).

A summary of EM leadership written by LaSalle (2004) in *Emergency Medicine Clinics* categorized different leadership styles and how they relate to frontline EM physician leaders. LaSalle theorized that top-down leadership was a style that would not work in the modern ED and noted a sense of realpolitik is important for an EM leader to be successful: It was important for EM physician leaders to understand that the ED was part of a larger system and that it was necessary to work within it. LaSalle surmised that no clear route existed to becoming an EM leader, but there was a need for EM leaders to establish both clinical and administrative credibility to be respected by their peers. EM leaders are in a unique training ground for physician leadership. LaSalle stated,

> No other similar peace time venue comparable to the ER exists in which the decisions that must be made second-by-second, 24 hours a day, 365 days a year represent such a terrific opportunity for leadership success and such a terrible risk for team failure. (p. 11)

This concept of specific EM leaders' skills was elaborated in 2013. Rutledge and Sinclair (2013) agreed in an opinion piece that EM leaders possess specific skills and experiences necessary for health system leadership. For example, their experiences in the ED afford them a unique perspective on gaps in the healthcare system, as those gaps are reflected negatively in their daily clinical environment. Rutledge and Sinclair also brought attention to some of the skills that EM physicians would need to develop to become effective physician leaders, including personal mastery, attention to local culture, communication skills, and the need for system thinking.

Almost a decade ago, scholars looked more deeply into the concept of EM physician leadership at a one-day Canadian Association of Emergency Physicians (CAEP) national meeting. The publication that emerged examined emergency physician leadership (Sinclair et al.,

2016). The recommendations reported by Sinclair et al. (2016) aimed to support EM physician leaders in Canada. The recommendations were: (a) physician leaders to seek out leadership training either through self-study or formal training, (b) the importance self-reflection for physician leaders, (c) aspiring leaders interested in academic leadership should educate themselves about their own strengths and weaknesses, and (d) CAEP should develop a plan to improve academic gender balance in EM leadership. The panel also highlighted the LEADS framework as the leadership model most applicable to the Canadian medical reality (Sinclair et al., 2016). It was noted that most EM leaders learned how to handle their position and developed leadership strategies during their leadership appointment. The symposium recognized this as a deficit in healthcare's current leadership strategies. Out of this symposium, the CAEP academic and leadership subsection was created. There were also recommendations for CAEP to lead a thoughtful approach to leadership skill development.

The practice of EM requires a unique set of competencies to manage undifferentiated complex conditions 24 hours per day. Situational awareness is one of these key non-technical skills discussed by Lowe et al. (2016). These authors described how situational awareness aids in monitoring ever-changing situations, making decisions on the fly, and taking a leadership role in which EM physicians communicate and coordinate their actions within a team. Situational awareness contributes to decision-making skills in the information-poor environment of the ED, framing some of the unique leadership skills of EM physicians. Lateef (2018) noted that clinical leadership skills that enable EM physicians to be resilient and bounce back day after day are also increasingly being turned into more broad leadership roles. It is increasingly common to see emergency physicians involved in an institution's or hospital's leadership and governance roles. According to Lateef, this may reflect their visibility as an integral and respected member of the

medical community or their familiarity with various administrative issues throughout the hospital due to their system-wide exposure.

Over the last decade, many more women have been entering the specialty of EM; however, women are still under-represented in EM leadership positions. Guptill et al. (2018) investigated this situation, conducting a series of semi-structured interviews with women EM leaders. Four major themes emerged from the study: (a) women leaders made an intentional decision to pursue opportunities to influence EM (a sense of justice); (b) women sought out natural mentors and sponsors to facilitate career development; (c) it was essential for women to plan out their work-life balance to support their leadership role; and (d) a sense of responsibility to help other women achieve excellence was an important focus for their work. Most of the respondents viewed that to be respected as a leader, it was first essential to have a mastery of clinical skills.

EM physicians, it is theorized, face unique challenges as leaders when dealing with the healthcare system. Rixon et al. (2020) conducted a Delphi study to investigate common leadership challenges of Australian directors of emergency medicine (DEM). The four most frequent were: (a) administrative overload, (b) overcrowding, (c) managing challenging colleagues, and (d) engaging with hospital executives. This list of challenges directed Rixon et al. to suggest that DEM should work to develop non-clinical leadership skills. Engaging with hospital executives was seen as particularly challenging and required new skills for an emergency clinician to handle these engagements. It was noted that executives' apparent ignorance of clinical pressures in the ED added greatly to EM physician leaders' stress. The study provided evidence for the need to facilitate leadership development programs to face the challenges of the hybridity of the DEM role.

Chapter Summary

In my thesis, I studied the qualities of EM physicians who support their work as leaders and how SHA can better support or learn from and leverage their knowledge and skills. To understand the uniqueness of EM physician leadership, one must understand the current concepts of physician leadership and how they relate to the healthcare system. In this literature review, I investigated the teaching of leadership skills in medical school and residency training programs. Despite formal recommendations from CanMEDS, the consensus in the scholarship was that leadership skills are not emphasized in current medical training programs. A review of the literature regarding graduated physicians was generally in agreement on the importance of physician leadership for the healthcare system, but literature sources were at odds about how to get there. The importance of physician leadership was contrasted with the lack of formal training programs, inconsistent compensation, and frustration with the lack of clearly defined roles. Some authors have called for expanding training programs and embedding physician leadership within the healthcare system. Also examined in this chapter was literature on EM physician leadership and some of the specific EM physician skills that are important in clinical work and may be beneficial in leadership roles, such as decision-making.

Chapter Three: Methodology

In this chapter, I discuss the methodology used in conducting my research, including some insight into action-oriented research and appreciative inquiry. I explain the engagement, data collection, and sampling methods for the study as well as the steps of data gathering and analysis, including study conduct, data analysis, and validity. I discuss ethical implications, proposed outputs, contribution, and application of the study results .in the final sections of the chapter.

Methodology

The methodology for this research was insider action-oriented research, and the process took an appreciative stance based on the principles of appreciative inquiry. I describe each in this section.

Action-Oriented Research

The methodology of this research project was insider action-oriented research (Coghlan & Brydon-Miller, 2018). Due to my professional role, I have an insider understanding of how the SHA works. Action research is grounded in one's everyday lived experiences, collaboration, and partnerships (Bradbury & Reason, 2003). Lewin (1946) conceived action research as a process to tackle challenges in organizational structures to generate practical and meaningful strategies for improvement or change. The process values the interplay between researcher and participant in design, methodology, and analysis. The goal of action research is not to gain knowledge for its own sake but to study and improve the concrete situation under scrutiny (Stern et al., 2014). Utilizing this approach mirrors the common reason emergency physicians, like myself, enter the world of leadership: to make things better.

This project was grounded in the action research engagement (ARE) model developed by Rowe et al. (2013). Stage one of the ARE model is to understand the organization and the key issues behind the inquiry. I am the Provincial Head of Emergency Medicine for the SHA and, therefore, have a close working relationship with the organization. I regularly attend provincial meetings, was involved in various aspects of the pandemic response, and am often called upon to speak for or represent EM caregivers. While I recognize my experiential knowledge as an EM leader, as an action researcher studying leadership, I also recognize the need for open exploration of the organization.

Stage two of the research process was an opportunity to explore relevant literature, engage participants to better understand the broader context, and build the trustworthiness of the project. Lincoln and Guba (1985) set out four criteria of trustworthiness: (a) credibility, (b) transferability, (c) dependability, and (d) confirmability, which I followed. The credibility of the project was enhanced by prolonged engagement with the participants, triangulation, and member checks. Transferability of the study was assured by the rigorous methods, while dependability was attested to by triangulation and examination of the process of the inquiry by me and the inquiry team. Finally, confirmability was supported by the addition of a second coder after the transcriptions were done. My reflective journal about the project also added to the strength of these four criteria. To engage the EM physician leaders who were the key stakeholders of the inquiry, I used semi-structured interviews and a focus group for data gathering and dialogue.

In stage three, analysis and reflection, I worked with my inquiry team to discuss results and reflect on expectations and findings, which helped develop my codes and recognize themes. In stage four, when stakeholders deliberated on outcomes of the action inquiry by evaluating

strategies for moving forward, I met numerous times with the sponsor of the project to discuss plans for future actions. The final stage, the beginning of implementation, was beyond the scope of this thesis and will require future action.

In my research journey, I engaged in first-, second-, and third-person action-oriented research (Coghlan & Brydon-Miller, 2018). The concept of first-person research, understanding my engagement with the world and what I was trying to achieve with the research, was important for me to investigate and comprehend (Hockley et al., 2013). I created a daily leadership journal (see Appendix A) and concentrated on my everyday behaviour, leadership activities, basic assumptions, and the interactions I had with others within my professional life. The second-person inquiry in my thesis project was a face-to-face dialogue with the other EM physician leaders. Using action-oriented research methods, I engaged EM physician leaders in an iterative process to develop questions and collect and analyze data.

In the third-person aspect of the study, I disseminate new knowledge beyond the confines of the system being studied. New knowledge can be turned into useful information for practice evolution and can be considered at a system level and can influence behaviours across networks or larger systems (Shani & Coghlan, 2018). For this project, I worked with the SHA to investigate opportunities for change and physician engagement and to disseminate this work to a larger audience.

Appreciative Inquiry

The process for this thesis took an appreciative stance based on the principles of appreciative inquiry. Appreciative inquiry is a strengths-based approach to examining and developing the best in human systems. Appreciative inquiry concentrates on a series of generative conversations (Cooperrider & Godwin, 2011) to see what is working well within an

organization. Bushe (2012) wrote that organizational studies needed to be more focused on evolution, emphasizing that appreciative inquiry is not just a "best of" story but a process to uncover the best way forward. In this sense, an appreciative stance is a point of view, allowing the participants and researcher to have an ongoing productive conversation. The emergency physicians I know are quite willing to talk about their successes and challenges as well as a desire to positively influence change, so this seemed to be the right approach for the group I was engaging. Appreciative inquiry is often seen as an intervention strategy; it can also be seen as a stance for inquiry, a way of joining with others to explore the world (Schall et al., 2004). Working from an appreciative stance allowed me to reflect on the work of EM physician leaders, learn from their practices, and generate new ideas.

Engagement Methods

The initial engagement method was a series of semi-structured interviews designed with my inquiry team to help understand pertinent issues and challenges within the role of EM physician leaders. I decided to use a semi-structured interview method so the interviews could follow my line of inquiry while also allowing the interviewees to incorporate their own lived experiences into the conversation beyond my pre-designed questions and notions. I used open-ended, semi-structured interview questions to encourage the participants to express their thoughts and experiences (Stroh, 2015). From their data, Rutledge and Sinclair (2013) surmised that emergency physicians have valuable perspectives on gaps in the system, and this knowledge has led to many breakthrough improvements. Given this knowledge, I chose to not limit the respondents to a structured process. The questions were designed so each interview would last about one hour.

I interviewed participants until I reached saturation. Although saturation is difficult to define in theory (Guest et al., 2006), I assessed saturation according to the descriptions in Fusch and Ness (2015), who stated that data saturation is when further coding is no longer feasible, and Guest et al. (2006), who stated that saturation is when new information produces little or no change to the codebook.

My second planned engagement method was a focus group of volunteers from the participants of the original semi-structured interviews. I had determined that a focus group engagement would be beneficial after the interviews so that I could ensure I had accurately captured the experiences of the EM physicians who participated. I used thematic coding to analyze the focus group discussions to verify and expand on the themes that I originally documented.

Data Collection Methods

For this project, I used three data collection methods: (a) personal journal reflections, (b) interviews, and (c) a focus group. In this section, I will review these methods and the rationale behind their use.

Personal Journal Reflections

Given that I was internal to the organization I was examining, I journaled a reflection of my leadership practices throughout this process (see Appendix A). As an emergency physician and a physician leader, I felt well positioned to examine the SHA, my own organization. Smyth and Holian (1999) affirmed that researchers who examine their own organization have a unique perspective on culture, history, and the people involved. They also acknowledged potential problems, such as researcher conflict of interest. It is of paramount importance for the researcher to maintain a transparent research process and amplify the voices of the participants. According

to Dearnley (2005), studying one's organization is a reflective practice. My personal reflections were an important part of the data-gathering process. I am a member of the SHA organization, but as provincial head of emergency medicine, with a strategic, academic and clinical role, I have a different lens than most frontline leaders, and reflective journaling helped me to understand how my experiences in my role might influence my research and analysis in this project.

I thought that my process throughout my leadership experiences and clinical work had been one of activity rather than reflection. EM clinical shifts are an environment of constant activity and decision-making. The job is defined by rapid life and death decisions, stated with confidence, based on minimal clinical background information. I initially found the data collection method of creating a personal journal somewhat challenging and unnatural. However, throughout my MALH program graduate studies, I learned the importance of self-reflection through the LEADS framework (Dickson & Van Aerde, 2018). Scharmer and Kaufer (2019) also attested that to be an effective leader, one must first understand the personal inner space from which one operates. I realized self-reflection was a process I had conducted informally in my past to make myself a better clinician. Contemplation of pivotal clinical decisions would occur for me at home, in a quiet backdrop of what-if ponderings and occasional self-doubt.

I realized if self-reflection could make me a better clinician, it could also make me a better leader. Gerstl-Pepin and Patrizio (2009) supported the value of a reflective journal as a way for a researcher to contemplate what they have done and think about their own thinking process. It also serves as a repository for a qualitative researcher's memories and reflections. Lincoln and Guba (1985) expressed that a reflective journal can add evidence to increase the trustworthiness of the study. Dibley (2011) argued that if a researcher can recognize their own personal view of the world, they are better able to interpret the behaviour and reflections of

others. The reflective journal can also be used as a type of academic scaffolding (Engin, 2011), as the writer learns and develops during the research project.

Despite my initial hesitation, the reflective journal became an important part of my data collection methods and leadership journey. My journal initially followed a structure of observation, reaction, judgement, and intervention but, over time, tended to be more free form, with personal reflections, rantings, and experiences of my leadership role. These writings were part of my personal look, think, act, and reflect cycle (Coghlan & Brydon-Miller, 2018). During the data gathering process, I compared the ideas from my reflective journal and my own leadership experience to what I was learning from the participants. It was not surprising to me that I had significant concordance with the ideas they expressed.

Semi-Structured Interviews

I chose a semi-structured interview approach to focus on specific issues that are important to physician leaders and allow the participants to expand liberally on those concepts. Rabionet (2009) attested that the semi-structured interview is a powerful tool to capture participants' voices and how they make meaning of their experiences. As a nascent qualitative researcher, I found this guidance helpful and followed the six steps described, including choosing the type of interview to use, establishing the ethical guidelines, crafting the interview protocol, and conducting the interviews. Rabionet admitted it is, at times, a struggle to analyze and report the data, and I found this admission reassuring that I was not the only one with the same difficulty.

To help with designing the interview framework, I considered Patton's (1999) suggestion that interview questions should align with specific purposes. I made sure I explored the knowledge, beliefs, and experiences of the participants as well as basic background

demographics. Counsel from Kvale (1996) encouraged me to write questions to prompt opinion or recollection followed by a probe, when needed, and to consider the value of silence to allow interviewees time to collect their thoughts and communicate at their own pace. Following the pattern of Doody and Noonan (2013), I discussed the interview guide with my inquiry team and supervisor. With the process of the semi-structured interviews, it was important to emphasize to the participants that there were no right or wrong answers, and I wanted to learn from their experiences. I did three pilot interviews with members of my inquiry team and MAL cohort members. Each time, I was able to take their advice to change and improve the interview guide.

Focus Groups

After the original series of semi-structured interviews were finished, a focus group was my next and final form of data gathering. Several physicians from the original group of interview participants volunteered to participate in two separate focus groups. The point of the focus groups was to stimulate discussion to help understand the meanings and norms that underlay the group's answers (Bloor et al., 2001; Krueger, 2014). The participants indicated that due to the pressure of clinical work and the pandemic, they could only schedule one hour for the focus group. To maximize the efficiency of the scheduled time and prior to the group meeting, I sent the participants a list of six themes I had identified from the original interviews. The focus groups were a free-form discussion platform using the six themes that had emerged from the original interviews as a framework. The framework was used to stimulate discussion, but each group followed their own pathway and exchanged views on their roles as EM physician leaders within the SHA. During each focus group, I was able to listen to the interactions between the participants, therefore expanding my knowledge of their beliefs about and experiences with physician leadership.

Project Participants

I worked closely with my thesis inquiry team to define the sample of project participants. We created a definition of an EM physician leader and working with that definition were able to identify a purposive sample. After that, a randomization technique was used to select participants for the study.

Inquiry Team

To help with the research project, I had an inquiry team with a research and quality improvement focus. I selected the team from academic members of the provincial ED, including (a) the research facilitator for the provincial ED, who has a PhD in cellular biology and over eight years of experience in post-doctoral research; (b) the research director for the department, who is a specialist ER physician with a master's in epidemiology; (c) an accomplished researcher in our department, who did the MALH at Royal Roads about a decade ago; and (d) an EM resident with a master's degree in healthcare quality from Queen's University. All members of this group have guided research in our department and meet monthly for our departmental research wall walks. The monthly wall walks are a semi-formal gathering of any research-interested members in the ED to discuss ongoing projects, grants, and new investigative ideas. They are also keenly aware of the challenges of physician leadership within the healthcare system and are interested in the topic. Each member of the inquiry team signed a letter of agreement and confidentiality (see Appendix B).

Sampling Technique

This study focused on EM physicians who are in medical leadership positions within the SHA. Noting that emergency physicians are in leadership positions seems, on the surface, a straightforward statement, but I needed to create a clear definition for the inclusion of

participants. While it was possible to find articles that articulated the attributes of a physician leader (Blanchard, 2018; Royal College of Physicians and Surgeons of Canada, n.d.-b), the exact definition of what is an EM physician leader was not readily found.

I worked closely with the inquiry team on creating a clear definition based on our intuitive knowledge and practical experience. We defined EM physicians as physicians with an EM specialist certification or physicians who focused most of their clinical practice or teaching within the discipline. We defined a physician leader as a physician working in a supervisory or formal leadership capacity with respect to the health authority, clinical practice, research, or medical education. We also included physicians engaged in non-formal leadership activities. These could include but were not exclusive to activities such as (a) leading instruction in a new technique, such as point-of-care ultrasound; (b) working to motivate or support peers, as in a wellness lead; or (c) working to achieve benefit for peers, such as mentoring younger physicians.

The definition for the project participants became: "Emergency physicians who work within the SHA in leadership roles, either formal or informal." Based on this definition, the inquiry team and I worked collaboratively to create a purposive sampling list. The final list used in the study included 35 EM physician leaders working within the SHA.

Once the final purposive list was established, I required a randomization technique to establish the order of contact of the potential interviewees. I assigned each potential participant a number and used the randomization technique of choosing numbers out of a hat, since each number would have an equal chance of being selected. All potential participants identified on the purposive list were assigned a random number up to 35, which was written on separate small identical pieces of paper. Each piece was then folded and put into an old top hat (see Figure 1). Three people were present at the number selection: a member of the inquiry team, an

administrative support person, and me. Each piece of paper was picked randomly by the administrative support person, verified by me, and written down by the member of the inquiry team. After each piece was chosen, the numbers were linked with the names on the original list by the administrative support person and the member of the inquiry team. In this manner, it was determined who we would contact for an interview from the first potential participant to the last. I was not aware of the final ranking list so I would not be aware in what order the invitations were being sent out. The research facilitator then sent out invitations to the potential participants following the randomization order.

Figure 1:

Top Hat with 35 Participant Numbers

Study Conduct

I discussed my study proposal with my thesis committee, who made suggestions and accepted the plan. I received ethical approval from the University of Saskatchewan, Saskatchewan Health Authority, and the Royal Roads University Research Ethics Board.

The start of the study was verbally communicated to my sponsor after all three ethics submissions were approved. The first stage was for me to create a criterion for what is meant by an EM leader. The criterion was created with input from the inquiry team and other emergency physicians with whom I conferred. For me, it was important to include not just formal leadership positions, such as department heads, but also informal leadership positions, such as mentors and clinical leaders within the SHA's EM community.

Invitations to participate in the interview process were sent out by the ED's research facilitator. I was not aware of the final prioritization list at this time so I would not be aware of who accepted or declined. The potential participants were e-mailed the Research Information Letter (Appendix C) and an invitation to participate (Appendix D); they were asked to reply to the research facilitator. Once we started to receive acceptances, the departmental administrative assistant booked times for the interviews to coordinate with my other duties and the participants' schedules. Consent was requested and documented at the outset of each interview (Appendix E), and I used the interview guide I developed for each interview (Appendix F).

Due to the COVID-19 pandemic, it was necessary to conduct all interviews on a virtual platform, Zoom. All the interviews were recorded on a separate digital recording device. Between September 9, 2020, and December 3, 2020, I booked and completed 11 interviews and had these transcribed by the Canadian Hub for Applied and Social Research at the University of Saskatchewan. Once I received the transcriptions, I did initial coding of the data to see if saturation had been attained. While I believed I had reached data saturation, two other EM physicians were booked for interviews, so I conducted these interviews to confirm if I had indeed reached saturation. At the end of the 13 interviews, I recognized we had reached saturation and finished that aspect of data gathering. All participants received an email to see whether they

wanted a copy of their interview. Most declined, and some did not answer; none of the participants asked to see their transcript.

Once the initial analysis of the interview transcripts was complete, I reflected on my learnings, focused on coding, and developed initial themes from the data. At that point, we moved on to the focus group method, with a subset of the interview participants. A randomization process was done (pulling names out of a hat) to list the prioritization for invitations. Focus group invitations were sent out by the research facilitator (Appendix G), and five EM physicians responded. Due to scheduling, it was impossible to schedule all five at one time, and when a sixth EM physician responded positively, we scheduled two focus groups of three participants each. Prior to the focus group meetings, I sent the participants a list of six themes that I had identified from the original data (Appendix H). I asked the participants to prioritize which topics they would like to discuss. Before each focus group began, participants provided a signed consent form (Appendix I).

The focus group discussions were free form, using the six topics as a framework. I was the moderator for the discussion. I made sure everyone was able to state their opinions on each topic and encouraged a free flow of information by the participants. The focus group discussions were recorded on a digital device and transcribed using the University of Saskatchewan transcription service. As previously done with the data from the interviews, after studying the transcripts, I then coded the data and developed themes, comparing and adding them to the themes that emerged from the interview data.

Following stage three of Rowe et al.'s (2013) ARE model, I analyzed and reflected on the data generated. These reflections were shared with my sponsor from time to time, when

available. Her insights into the project were helpful, and we discussed how the findings could be used for positive change in the SHA.

Throughout this thesis work and especially during the data gathering and write-up, I had regular and multiple discussions with members of my inquiry team. Most inquiry team members were busy emergency physicians. Therefore, many of the discussions were held informally and when possible, such as during a quiet period during a clinical shift in the ED. After the conversations and open philosophical discussions, I would do my best to remember and record them in my reflective journal the next day. Some of these ideas would be highlighted and added to a list of memos or ideas I was keeping. The research facilitator for the ED had greater availability and helped with arranging interviews, focus group preparation, and weekly discussions.

Data Analysis and Validity

My main data-generating resources were a series of semi-structured interviews followed by two focus groups. My journals also provided reflections for the analysis. I analyzed these resources using open coding, which is the process of assigning meaning to the qualitative data found in interviews and focus groups (Goulding, 2002; Strauss & Corbin, 1990). During the data collection, participants were very willing to express their honest opinions, providing some unexpected ideas and observations. This allowed me to analyze the data from a stance of an inductive thematic analysis (Percy et al., 2015), where I analyzed data from each participant individually, setting aside all pre-understanding before evaluating the data.

I was also guided by the steps of thematic analysis outlined by Braun and Clarke (2006, 2012, 2020). After the transcripts were complete, I re-read the data numerous times, noting any inaugural concepts. I settled on using Nvivo as a modality for coding. Nowell et al. (2017) stated

that using software can enable a researcher to work with complex schemes and large amounts of data. Even with my smaller set of data, I found using Nvivo made my coding process easier and portable. I went over the data numerous times, reading and re-reading the interviews, eventually assigning codes to discrete elements in the data. Once I had developed a list of codes, I reviewed the codes for patterns, variables, and ideas that addressed the original thesis question. During the coding, I also wrote memos to myself to highlight specific ideas. Once I had developed a list of codes, I reviewed it for patterns, which then led me to identify recurrent themes.

To ensure that my coding was done well and not overly influenced by my personal experience, I engaged a research assistant with skills in coding qualitative data to also code the data independently. Intercoder reliability is often recommended as good practice in qualitative analysis. O'Connor and Joffe (2020) discussed intercoder reliability and the benefits it can have for qualitative studies as a means of improving the analysis by provoking dialogue between researchers. After the research assistant coded the data and started to develop themes, we met for one hour to discuss our findings. Overall, we felt we were about 85% concordant in our coding frameworks. Through our conversations, we looked at our non-alignment and how we came to our independent decisions and were able to come to concordance on all relevant points.

Lincoln and Guba (1985) asserted that the concept of trustworthiness of a research study is important in evaluating its worth. They suggested different methods for establishing the credibility or trustworthiness of a study. Member checking is described in qualitative research to validate, verify, or assess the trustworthiness of qualitative results (Doyle, 2007; Lincoln & Guba, 1985). I offered all interview participants opportunities to see the transcripts of their interviews after they were completed and transcribed, and I organized focus groups to discuss the findings of the original interviews. In addition, the ideas and concepts generated by the data were

discussed with the inquiry team to see if the generated themes resonated with their own experience. Final themes were reviewed and checked, and a thematic map of the analysis was generated. The ongoing analysis generated specifics for each theme, which led to a final exploration of the information. From these various processes, I hoped to affirm the trustworthiness of the data. To develop a comprehensive understanding of what I was studying, it was important to use multiple methods or data sources (Patton, 1999). Using multiple sources of data, the process of triangulation is an approach to mitigate bias in qualitative research and add depth to the data (Fusch et al., 2018). This method of acquiring rich in-depth data also supports a direct link between triangulation and data saturation (Fusch et al., 2018).

My process of triangulation involved the original interviews, the focus group discussions, and my reflective journal. The use of focus groups and interviews is a method employed to enhance a broader understanding of the phenomenon being studied (Carter et al., 2014). The focus group information was evaluated using a constant comparison analysis (Onwuegbuzie et al., 2009). The data were organized into small units, then grouped into categories, and finally into broader themes. These themes were then compared to the themes that originated from the interviews.

Ethical Implications

This capstone project complied with the Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, & Social Sciences and Humanities Research Council of Canada's (Tri-Council; 2018) research standards and addressed the concepts of respect for persons, concern for welfare, and justice (p. 6). I also followed the research and ethics guidelines of Royal Roads University (2011), the University of Saskatchewan (2013), and the SHA (n.d.-b).

The participants in my study were EM physician leaders in leadership roles within the SHA. With respect to justice, the idea of power dynamics and imbalances had to be considered. In my position as provincial head of emergency medicine, I have a role that is recognized within the province. The participants do not have a reporting relationship to me, I do not have a clinical supervisory role, nor do I have the power to remove anyone from their duties. Nonetheless, the concept of my position having a power differential over the participants was there and had to be considered. All information about the study was disseminated through the inquiry team to ensure free choice by the participants. To thoroughly investigate how local physician leaders respond to the challenges of their role, I conducted the semi-structured interviews and focus groups myself.

It was important to respect the individual person and sensitivities of the physicians interviewed and respect their autonomy. All invitations were sent by the research facilitator of the department, a member of the inquiry team, to distance my position from the invitations and to ensure a neutral middle person was setting up the interview. I did not have knowledge of the prioritization of the ranking list and, therefore, did not know who was receiving the invitations, which removed my own biases from the selection process. Thus, the participants could deliberate on their participation in the absence of any duress or interaction with anyone other than the research facilitator, therefore ensuring free and informed consent across all stages of the study. Participants documented their consent by signing consent agreements (Appendices E and I) and expressing any wishes they had regarding anonymity. The interviews were recorded, but all personal information was kept anonymous through the deidentification of the transcripts. The fact that the interviews were audio-recorded was made explicit and clear in the consent form for the interviews (Appendix E). For the focus group sessions, the consent form stressed the importance of maintaining the confidentiality of fellow participants but did note that due to the

nature of a group, confidentiality could not be guaranteed (Appendix I). I also reminded each participant at the start of each interview that they were being recorded. After each phase of the study, I offered, through communication sent by the research facilitator, to share data with the participants to ensure accuracy and transparency. I also kept the participants abreast of the stages of the research if they had any questions. Participants had the opportunity to decline or withdraw at various stages, including at the beginning of the interviews and focus group sessions. Participants were able to withdraw up until the approval of the final transcripts, after which point they agreed that the data integration could proceed.

The concept of justice with regards to the Tri-Council (2018) research standards is also to ensure that participants in the study can potentially benefit from the results of the study. The leaders I interviewed are motivated to improve care within SHA. After I complete my thesis, I will promote positive change regarding physician leadership within SHA using the knowledge acquired from these frontline physician leaders.

I employed a series of strategies to protect the confidentiality of the data. The data were analyzed without names, and a number was assigned to participants to track their data. All interviews took place using Zoom booked through a university account, but all recordings were done on an external digital recording device. Once data were transcribed, all information was stored on an external password-protected USB, which is now stored in a locked cabinet in the office of the research director of the department, who is also one of the members of the inquiry team. These data will continue to be securely stored and destroyed after five years as per the ethics submission.

Proposed Outputs

As the initial output of my capstone project, I will write a thesis to complete my MALH degree. My sponsor, the COO of SHA, has a continuing interest in physician leadership and my project specifically. When my thesis is complete, they will be interested in reading the findings. We have discussed a potential future presentation to the board and the Provincial Physicians Advisory Council. I have also discussed my capstone with the Dean of the medical school at the University of Saskatchewan, and he is also interested in the prospective findings. While generating a thesis and presentations to provincial leaders is a welcome step in the process, my overall hope is to create a plan of practical value that can benefit the healthcare system and SHA specifically. One of the strategic goals of the SHA is to "establish physicians as leaders in the healthcare system" (SHA, 2018, p. 8). From this study, I have generated some recommendations that will focus on an improved understanding of physician leadership. The work with the SHA leaders will continue to see which of these can be implanted.

Contribution and Application

By identifying some criteria of what makes an effective EM physician leader and the perceived roadblocks, my capstone will have a positive effect on physician leadership in the Province of Saskatchewan. I hope the eventual beneficiaries will be the healthcare system and the community. I believe that with a better understanding of EM physician leadership, there will be a benefit for the SHA and the healthcare system.

The dissemination of my findings and contribution to new knowledge will be pursued by submission to a peer-reviewed journal such as the *Canadian Journal of Emergency Medicine*. The EM academic community has shown increasing interest in leadership (Rutledge & Sinclair, 2013; Sinclair et al., 2016). CAEP, for example, sponsored its inaugural leadership conference in

2020. I was involved in planning this conference and was a moderator for subsequent virtual leadership webinars in the spring of 2021. I will apply to present my findings to CAEP in a future leadership presentation.

Chapter Summary

In this chapter, I have described the methodology of my thesis, including the processes of data collection, a description of project participants, a summary of the study's conduct, the approach to data analysis, and consideration of the ethical issues. My review of the literature, the methodology, the methods of data collection, and the process of analysis have generated new knowledge regarding EM physician leadership. In the next chapter, I will discuss the findings and conclusions that evolved from this work.

Chapter Four: Inquiry Project Findings and Conclusions

In this chapter, I describe the participants' discussions of the benefits and challenges of being an emergency medicine (EM) physician in leadership and explain how the data generated from these discussions addressed the questions that guided my thesis.

My primary inquiry question was: What are the qualities of EM physicians that support their work as leaders and how can the SHA better support or learn from and leverage their knowledge and skills? Five sub-questions helped further focus the research and findings:

- How does EM physician leadership reflect the experience of EM clinical practice?
- Was mentorship or sponsorship important for personal development for EM physician leaders?
- How might the learned skill set of EM physicians benefit or challenge their development as physician leaders?
- How might broad clinical exposure to the healthcare system contribute to the strength of EM physician leadership?
- How do EM physicians define, recognize, and execute successful physician leadership?

In this chapter, I explain what I have learned from my research, link my conclusions with current academic literature, and outline the limitations of my capstone project.

Study Findings

For this inquiry, I interviewed 13 EM physicians in leadership roles within the SHA: eight men and five women, between 33 and 54 years of age, with a range of one to 23 years of physician leadership experience. The participants were in a variety of physician leadership positions supporting education, the ED, or the health authority. After conducting the semi-

structured interviews with 13 participants, I generated additional data from two focus groups. Six findings resulted from an analysis of the interview and focus group data:

1. EM physician leaders had similarities in their leadership journeys. Frustration with the current system was often a prime motivator for entering a leadership role, and EM physician leaders did not typically have formal leadership training.
2. EM physicians' clinical skills such as confident decision-making, relationship building through communication, and comfort with uncertainty supported their successful transition to leadership.
3. EM physician leaders perceived shiftwork as both a potential benefit and a challenge in their leadership role and felt it needed to be carefully managed to ensure personal wellness and success.
4. Participants were inspired to pursue leadership positions due to the uniquely broad clinical exposure to the healthcare system afforded by working in the ER.
5. Participants were not driven to take on leadership positions by financial remuneration but stated that the discrepancy between EM clinical and leadership compensation in the SHA was a point of stress.
6. Participants expressed that leadership positions were important to make larger-scale change than is possible in EM clinical practice alone.

The findings from the interviews and focus groups illustrated the passion the participants had regarding the relationship between EM and physician leadership and showed how those roles were interconnected. These findings will be discussed in detail in this section. No names or roles will be assigned to quotations referenced to protect the anonymity of participants, but their participant number will be noted.

Finding 1: EM Physician Leaders Had Similarities in Their Leadership Journeys. Frustration with the current system was often a prime motivator in entering a leadership role, and EM physician leaders did not typically have formal leadership training.

The study participants were asked about their journeys to leadership and if they had received any leadership mentorship. Their journeys to physician leadership varied, with chance or frustration with a current situation bringing many of the participants to their leadership roles. They viewed mentorship as important in their development as leaders, but experience with formal leadership mentoring was rare.

Many of the participants described their journey to a leadership position as informal and often coming from a desire to make a positive change: "I think if you're interested in change . . . you think, well where can I be effective or effectual in change? And inevitably that either requires activism or requires you to occupy a leadership position" (P-8). Many of the participants related stories of falling into leadership or picking up a leadership role because no one else would: "[Leadership] wasn't ever really something that I ever sought out or foresaw me doing. . . . I think I just found that I enjoyed problems we were facing and trying to solve them" (P-12); or as another stated, "But I thought, 'you know what, if I don't do it, nobody else will'" (P-5). That combination of willingness to take on a role when no one else would and wanting to make a positive change were the key combination of decision elements for many of the participants, and recurrent themes for many participants

All the participants gave examples of how informal mentorship relationships furthered their careers in leadership or led to conversations around leadership opportunities. P-1 stated, "So, there was a decent amount of mentorship, informal leadership. . . . It certainly wasn't formal mentorship; it was more kind of just seeing how somebody can get stuff done." P-13 also

discussed the lack of formal mentorship: “I would say, it was more growing into it. Like, in that role. Mentoring, I wouldn’t say—there was no formal mentorship.” One participant who did have a formal mentor spoke about how mentorship benefitted their development as a leader:

> [My advisor] really took me under his wing and is just a fantastic mentor in terms of respecting your interests within his program and helping me to grow, and really throwing opportunities at me. . . . I was six months in, and we published. (P-2)

One participant mentioned something that they felt was unique to EM physicians’ leadership journey:

> I think one of the things I’ve always thought of is that it’s most important to prove yourself as a clinician first and gain respect that way, and then that respect will translate into respect for your leadership positions as well. (P-2)

Participants described how it can be difficult for other physicians to respect individuals from a leadership point of view when they do not feel that the physician leader is competent in their clinical work. The participants also felt this situation could be an extra challenge for young physicians on a leadership journey who are still building up their clinical skills.

Finding 2: EM Physicians’ Clinical Skills Such as Confident Decision-Making, Relationship Building Through Communication, and Comfort with Uncertainty Supported Their Successful Transition to Leadership

Research participants shared their experiences as EM physicians and how those experiences influenced their time in leadership positions. They explored the learned skills in EM that supported or enabled their successful transition to leadership, including decision-making, communication, and comfort in chaotic situations. Conversely, some of these same EM skills and learned behaviours also posed challenges after the transition to leadership positions.

Participants Noted That Confident Decision-Making Was a Key Part of Their Skill Set. Participants noted that to survive clinically, confident decision-making was a key part of their skill set. They highlighted how crucial the ability to make decisions quickly, within time constraints, while seeing multiple patients with varying ailments was in the EM setting and was a skill that could be beneficial in leadership positions:

> I'm a professional decision-maker. This is what I do for a living—I make decisions, and I think that my ability to make decisions as an emergency medicine physician, and to decide to move in a direction, I think I'm probably better at it than most in leadership. (P-12)

Within the fast-paced atmosphere of EM, decisions must be made with limited information. A full view of the situation is rarely available: "A lot of people . . . are scared to make decisions based on limited information. . . I think [ER docs] are very good at information gathering and making decisions on limited information and continuing the process" (P-12). A topical example shared was the recent COVID-19 pandemic:

> [The COVID-19 pandemic] is a great example that emergency physicians are so practiced in making decisions with the best available evidence, but not necessarily all the evidence, is one of the reasons, again, why I think we're actually effective leaders. I think when we look at, especially in a pandemic, and we look at our leaders for the World Health Organization. If you wait for everything, you're gonna miss the crucial moment to act. (P-9)

Participants felt that EM physicians were well positioned for leadership roles during the pandemic because under current circumstances, leaders need to make decisions on topics or health concerns that are emerging without clear data or information.

Participants also talked about the ability to triage and the importance of that skill within healthcare leadership. They often connected the concept of triaging to thoughts of prioritization, time management, and effective decision making:

> [EM physicians] get the skill and practice of making decisions about priorities not just in the patient, but in the volume of patients in the ED all the time, and I think again, that helps us move on to our other roles and apply the same concepts: what's important and time-sensitive, what is important and not time-sensitive, what is not important but time-sensitive. (P-9)

In the ED, making patient triage and care prioritization decisions is continuous for the length of the shift. If a physician does not have the ability or the personality to constantly make those time-sensitive decisions, they would likely not feel comfortable in the role of an emergency physician. The participants felt that this practice of not only making decisions but deciding what is a priority was an excellent training ground for physician leadership.

Decision-making is something that EM physicians become good at, and participants felt it was an important skill set, not only in their clinical world but also in physician leadership. Those same participants also acknowledged that EM clinical decision-making was different from working as a physician leader in the administrative world. EM decision-making was collaborative but time-sensitive, rapid, and clearcut. Administrative decision-making in their view tended to be drawn out, with slower meetings to arrange future meetings, where time sensitivity was often supplanted by the need to get it right before a decision was made. As one participant explained, "In leadership, it's more important to speak to the group, get more opinions, give everyone a say and weigh it up a little bit, and then move forward" (P-4). The EM team makes quick decisions constantly, knowing that decisiveness and efficiency are crucial for

success. In the administrative world, EM physicians may feel as if they are in a slow-motion movie, checking in with everyone, organizing follow-up meetings, and then leaving the final decisions until later.

The EM Communication Skill of Nimble and Rapid Relationship Building Can Transfer Positively to Healthcare Leadership. Within EM, physicians are challenged to meet with numerous patients they have never seen before, create a connection, build rapport, and address concerns quickly. Participants reflected that this experience of nimble and rapid relationship building can transfer positively to healthcare leadership:

> We're dealing with people on the worst days of their lives, who are angry, frustrated, in pain, and our job is to make them feel heard and to listen and to try and help . . . To apply what I do in emergency medicine to leadership is just kinda, just a natural transition, I find. (P-12)

Physician leadership comes with its own set of unique stresses. It can be difficult in meetings to make a connection with other participants, who can be frustrated or angry, and need to have their grievances heard. EM physician communication, as described by the participants, is used to make rapid, genuine connections with distressed patients. That communication ability was also a skill used in the transition to physician leadership.

Many participants noted that communication and relationship building within the ED team was an even more important skill for leadership: "I have so many touchpoints with different people that it really keeps me in touch with the system, which is what's valuable to take back to a leadership role" (P-7). These touchpoints, as described by the participants, were helpful when referring patients to various specialties, as over time they got to know everyone in the hospital.

Constant communication with various departments also gave EM physicians an understanding of the stresses that physicians have in other specialities.

Comfort With Uncertainty Was Viewed as an EM Physician Skill Set That Transferred in a Positive Way to Leadership Roles. When reflecting on what they learned from their clinical experiences in the ED, participants also discussed being comfortable in the chaos of the ER. Uncertainty is part of the normal ER routine, and participants found it helpful to transfer their comfort with unpredictability to their leadership roles. One participant described it as "being comfortable with being uncomfortable" (P-8). EM physicians, through their clinical experience, have adapted to the periods of uncertainty, crisis, or self-doubt that can occur in a leadership role.

Finding 3: EM Physician Leaders Perceived Shiftwork as Both a Potential Benefit and a Challenge for Their Leadership Role and Felt it Needed to be Carefully Managed to Ensure Personal Wellness and Success

EM physicians have a 24-hour shift work schedule as their typical work pattern, with two-thirds of their working shifts either in the evening or the midnight hours. Participants discussed how shift work impacted their lives and their roles in physician leadership. Participants felt that EM physicians benefited from flexible availability and the possibility of enhanced work-life balance, but they also noted challenges when the rest of the administrative world is on a nine-to-five schedule.

Participants described how shift work allowed them to be available during the traditional workday during the week when leadership and organizational meetings often take place: "We can move our schedules around and work early day or a night and then make ourselves available

sometimes for those opportunistic kinds of meetings, means [sic] that we can actually develop momentum on things" (P-9).

Some participants mentioned an improved work-life balance that can occur with shift work if managed well. They highlighted the risk in trying to do everything, getting stretched too thinly, and not having any time for themselves and their families: "We're seen as people who are available, so we're often asked to be involved in things, so I think we get more opportunity. I think we just have to be careful about not taking on too much" (P-10). Taking opportunities can take a toll on personal time, and in the participants' experience, EM physicians must be strategic about what opportunities to take to avoid exhaustion and burnout:

> When you're working overnight or late at night, it's challenging because you've already worked your full day, and now the organization is just waking up and getting started. So, to be really present in the organization, I often find challenging because my schedule doesn't match theirs. (P-5)

One participant reflected that the pressure can also be internal. Self-perceived availability can lead to overworking or overbooking oneself: "There's always more opportunities to keep growing and taking on more. So, it's a bit of a struggle to draw a line and find some boundaries" (P-3). Participants contrasted the benefit of shift work, allowing them the availability to take part in leadership activities, with the risk of doing too much and having personal or family situations suffer.

Participants also noted that there could be repercussions if they could not attend daytime meetings. As one participant clearly stated,

> I've been told, "Just don't show up to some of these meetings, cause they just don't match your schedule," but then as soon as you do that, they say, "Well, you weren't present, so we just went ahead and made a decision." (P-6)

In other words, while shift work can mean physicians may be available during regular business hours, the perception of being free all the time can have adverse effects.

Finding 4: Participants Were Inspired to Pursue Leadership Positions Due to the Uniquely Broad Clinical Exposure to the Healthcare System Afforded by Working in the ER

All the participants expressed that EM physicians are exposed to a broad range of patients and interact with all types of specialties and health professionals in every clinical shift. The participants said this broad clinical exposure was eye-opening and an advantage to understanding the healthcare system.

The EM physicians also mentioned they are regularly exposed, through their patients, to the gaps in the healthcare system. Drawing from my own experiential evidence, I regularly see cases that illustrate this situation. On a recent clinical shift, I saw an elderly man recently diagnosed with cancer on a waiting list to see an oncologist. The triage note indicated that his reason for coming to the ER did not reflect his real concerns: fear, not knowing his fate, and his struggle to negotiate a medical system that can seem impenetrable. EM physicians encounter patients like this every day and are regularly exposed to the gaps and possible failings of the healthcare system. When patients have nowhere else to go, they go to the ER. It is the entry to the healthcare system for people without a family doctor, vulnerable populations such as people who are homeless, who are addicted to substances, who have trauma, and those who are acutely unwell.

Participants said their unique viewpoint challenged them to seek change beyond their own department and inspired them to pursue leadership positions:

> I think having an awareness and an understanding of . . . a patient's journey and how all the parts of the system fit together, actually make emergency physicians probably in some ways more natural in terms of coming up with leadership positions. . . . We are the entry, the exit, and the points in between for many people. (P-2)

Each shift, EM physicians encounter a variety of patients who feel society, or the healthcare system has abandoned them. Patients waiting for a CT scan to diagnose a potentially severe disease will come to the ER hoping for an earlier scan. Patients who cannot get into their family physician or who have lost touch with their specialist are regular attendees at the ER. When a patient is in a crisis, the ER is often the main point of entry to the healthcare system, and the participants were aware of their duty to those vulnerable patients:

> If you come to a hospital and you wanna see a doctor, there's only one place to go. In all of society at midnight tonight, if you need a doctor, there is only one place to go. It's a hospital emergency, . . . and because we have to do that, the brunt of system failures falls to us, and then consequently, the desire to change the system—those become more visible to us, abundant to us, and it's perhaps not surprising that because of that, then we are perhaps the greatest voices for change. (P-8)

In addition to seeing gaps in the healthcare system through individual patients, participants also described how their role as EM physicians gave them a unique lens on the challenges of the system: "It's just the breadth of everything that we see. I think it informs an understanding of what the social situation is in the city; . . . the chaos informs and helps us do our jobs better" (P-9). The ER is the entry point for most hospital admissions. During an EM

shift, any trauma in the district, psychotic break, or sports injury is filtered through the ER. When the system is straining and ambulances are filling the back hallway, the ER is the canary in the coal mine, illustrating the imperfections in the healthcare system. Participants emphasized that EM physicians are uniquely positioned, seeing the gaps both systemically and on an individual patient basis. This exposure shaped both their clinical experience and their desire and function as physician leaders.

Finding 5: Participants Were Not Driven to Take on Leadership Positions by Financial Remuneration but Stated That the Discrepancy Between EM Clinical and Leadership Compensation in the SHA Was a Point of Stress

While all the participants felt their leadership was important, loss of personal time due to the 24-hour nature of EM physician leadership and the pay differential between leadership and clinical roles led the participants to feel their contribution was not necessarily valued or respected. Remuneration for their leadership roles led to some of the participants questioning their decision to take on their physician leadership role. Before the pandemic, the leadership hourly rate for an EM specialist was $150.75, while the average clinical rate was $296.92. If an EM physician took a leadership role for 0.25 or 0.5 FTE and did that role for five years, the lost opportunity of income is significant (see Table 1). The participants gave the message that only those able to handle the change in pay rate would explore leadership positions.

Table 1:

Difference in Leadership and Clinical Income Potential at 0.5 FTE Based on 2019 SHA Wages

Position	Wage	Time Frame	Potential Wages after 1 year	Difference after 1 year	Potential Wages after 5 years	Difference after 5 years
Clinical	296.92	0.5FTE	$296,920	+$146,170	$1,484,600	
Leadership	150.75	0.5FTE (20 hrs/ week, 50 weeks per year)	$150,750	-$146,170	$753,750	-$730,850

Note: Information presented in this table was provided by the Director, Saskatoon/NE/NW, Practitioner Staff Affairs (personal communication, March 11, 2022).

Participants were adamant that financial remuneration was not a driving force in their decision to take on leadership positions. Rather than take on leadership for financial gain, they were eager to take on a physician leadership role that was an interesting challenge or contributed to making a positive impact on patient care. However, the discrepancy between EM clinical and leadership compensation in SHA was noted as a significant element or a barrier for some to enter leadership positions. As one participant expressed, “I’m quite sure that there’s some strong physician leaders that are reluctant to move into leadership positions because of financial cuts that they would have to take” (P-5).

Some participants were less concerned about the level of remuneration itself but interpreted the compensation differential as a sign of lack of respect for the role of a physician leader:

> So you want me to take on all this responsibility, to be involved and try and solve these problems for a huge system—huge, huge. I’m the busiest department in the city, I have

> the most patient interactions in the city, and you wanna pay me [pause] close to half what you're gonna pay a first-year emerg doc. (P-12)

The SHA pay for physician leadership is significantly less than doing an ER clinical shift, which had some participants questioning the prioritization of leadership: "Nowhere else would you take on the stress and the responsibility, and the additional hours, and make half of what you would if you hadn't taken on that role" (P-5). Participants described how as a clinical lead in the ER, they may get asked to solve problems on a 24-hour basis. In their EM leadership roles, participants have been called at 3 am to deal with specialists who would not answer their phones, radiology refusals to do a CT scan for a patient with a head injury, or bed shortages with ambulance stretchers lined up in the back hallway. Participants noted that this is a unique challenge with an EM leadership role:

> Leadership is a 24-hour-a-day job. I get phone calls in the middle of the night and texts in the middle of the night. When I'm on shift, I'm constantly still doing leadership roles or making extra calls for flow, disciplining residents. It just, it never stops, and it never leaves my plate. So, it's kind of challenging that you take a pay cut to do something that becomes all-consuming. (P-6)

The ER is open 24 hours per day, and hence, EM physician leadership can also be a 24-hour obligation. Even EM physicians who take on leadership roles outside the ER feel the strain of balancing their 24-hour clinical role and their leadership obligations. Participants regularly expressed surprise, frustration, or unhappiness with the gap between clinical and leadership pay:

> I don't want to talk about money, I hate talking about money, but it is probably the thing that's upset me the most in my leadership in the last couple of years, and I think it's less

> about the money, per se. I try to keep my focus on what are the things in life I value, and time is a big one. (P-12)

The pay differential also contributed to the risk of burnout for EM physician leaders. In addition to financial remuneration, many participants noted that time is an important commodity in their lives and a key decision point when deciding whether to take on leadership roles. Personal time can be compromised when taking on a physician leadership role. Due to the pay differential for physician leaders in the SHA, some participants noted that they are forced to continue or increase their clinical responsibilities when in leadership positions to meet their financial goals, which created some negative feelings: "And it's not right that you're asking me to take a $150-an-hour pay cut to do a job that's harder and more responsibility" (P-12). This pay differential often prompted the participants to use their spare or family time to do extra clinical shifts. It was noted that while this is the experience of the EM physician leaders in the SHA, it could be different for other jurisdictions across the country.

Finding 6: Participants Expressed That Leadership Positions Were Important to Make Larger-Scale Change Than is Possible in EM Clinical Practice Alone

I encouraged the participants to reflect on their personal experiences and asked them to describe successful physician leadership. Some participants acknowledged that this was not an easy task: "One of the really frustrating things about medical leadership is that our outcome measures are sometimes really hard to pin down" (P-12).

There were a variety of viewpoints defining successful physician leadership, focusing on four key concepts: (a) a higher systems-level approach to change; (b) ability to help more people; (c) leadership of a large, engaged team; and (d) a strong vision for the future. Participants consistently expressed the opinion that leadership positions were important to making larger-

scale change than is possible in EM clinical practice. They noted that leadership was an opportunity to make change to the system beyond the patient in front of them and beyond their department: "I do [my leadership position] because I do feel that I can help change the system . . . if we do something proactively, as preventative medicine, we can make a bigger change. That's why I do leadership" (P-13). It was often noted that when patients are frustrated with the care they are getting, they attend the ER for a second opinion or last hope. These frustrated patients expose EM physicians to the gaps in the healthcare system and may influence their decision to enter physician leadership roles to effect systemic change.

Along with larger system-level change, successful leadership was noted as impacting more individuals. Traditionally, physicians are instilled with the idea that their primary function is to look after the singular patient in front of them. Anything that gets in the way of that key role is often seen as negative. In my experience as an EM physician, I have often heard that when a physician takes on a leadership or administrative role, they are referred to as entering the *dark side*. However, research participants recognized a benefit of leadership as being able to have a wider impact on more patients. Rather than working with a finite number of patients on each shift, participants explained how leadership can open possibilities to make change for more individuals within the larger healthcare system:

> That's the best thing I get out of medical leadership, is that ability to really make a big difference for a whole lot of people. . . . You know it in your heart, that you've done right by everyone, and you've made things better. (P-12)

Participants were also passionate about leadership as a way of striving for positive change and continuously motivated by a passion for positive health outcomes:

> I think the best leaders amongst us—are the ones who, it's not because they wanna be a leader, it's because they have a vision and something matters, . . . the driver isn't the leadership. That's the side-effect of being passionate and moving something to happen, making something better. (P-9)

Passion for improvement of patient care on a broader scale did lead some of the participants to their leadership roles. Some of the participants admitted to taking on a leadership role reluctantly, but they were also inspired by the concept of making things better for the patients they see suffering every day.

The findings from the interviews and focus groups illustrated the passion the participants had regarding the relationship between EM and physician leadership, which showed how those roles were interconnected. Mentorship for physician leadership, informal in most cases, was an important concept. Participants described the importance of leadership mentoring, although only one participant received formal mentorship, whereas many had informal mentoring. Enabling factors for EM physicians in leadership were confident decision-making, being comfortable with uncertainty, and relationship building through communication. The participants discussed the positive and negative implications of their shift work schedules and how they influenced their role as physician leaders. The EM physicians have a broad understanding of the healthcare system that comes with working with all departments in the hospital daily. They also discussed their exposure to patients coming to the ER who have fallen through the gaps in the healthcare system and how this influenced a desire to be part of positive change. Remuneration for physician leadership in the SHA was discussed by the participants and was one of their concerns. Participants generally agreed that the pay differential between clinical and leadership roles showed a certain lack of respect for the importance of the leadership work they do. Finally, the

participants shared their views of success and how system improvement was a motivation for many to enter physician leadership roles.

Study Conclusions

The exploration of peer-reviewed literature in Chapter 2 gave some insight into the world of physician leadership. In that chapter, I explored leadership training for students and residents, the current state of physician leadership in the healthcare system, and EM physician leadership and its relation to system improvement.

From working in depth with the participants' data and the findings in the literature, I have developed five conclusions:

1. Emergency physicians entering physician leadership roles benefitted when they received formal mentoring and leadership training.
2. EM clinical skills, such as confident decision-making and thriving in uncertainty, contributed to successful physician leadership.
3. Shift work gave participants increased availability to engage in leadership roles but came with challenges to the individual.
4. Broad clinical exposure inspired EM physicians to take on leadership roles.
5. The pay differential between clinical and leadership work and the effect it had on EM physician leaders' overall income and available time gave the participants the impression that physician leadership was not valued by the SHA.

Conclusion 1: Emergency Physicians Entering Physician Leadership Roles Benefitted When They Received Formal Mentoring and Leadership Training

The participants described a variety of leadership journeys, but they generally lacked any formal leadership instruction. Mentorship, when received, was informal but welcomed, and the

one who received formal mentorship found benefit from it. In their CanMEDS standards document, the Royal College of Physicians and Surgeons of Canada (n.d.-a). identified leadership as one of the competencies that physicians require to meet the healthcare needs of the people they serve. Despite this, current literature attested that medical schools and residency programs do not prepare physicians for future leadership positions (Goldman et al., 2011; Rotenstein et al., 2018). It was a common theme that the participants took on leadership roles with little formal training and sometimes because they felt no one else would do it. Sinclair et al. (2016) confirmed this experience in their research, identifying that most EM leaders learned how to handle their position on the job and developed leadership strategies as they went along. Sinclair et al. identified a deficiency in preparing physicians for leadership and recommended leadership training for EM physicians entering leadership roles. The experiences of the participants generally reflected this lack of preparation, and various authors have lamented the lack of leadership training available to medical students or trainees (Danilewitz & McLean, 2016; Goldman et al., 2011; Lyon et al., 2019; McKimm, & Swanwick, 2011; Rotenstein et al., 2018). A lack of a formalized plan to engage physicians and a desire for a more coherent and organized leadership development program have also been highlighted by physician leaders within the SHA (Dickson & Van Aerde, 2021).

Mentoring has a long tradition in medical training and can be viewed as the essence of the field's apprentice style of learning. Guptill et al. (2018**)** stated that having a mentor or sponsor was key to navigating the initial steps of leadership. There were numerous examples in the literature where mentorship was endorsed as a beneficial activity for fostering leadership (Hernez-Broome & Hughes, 2004; Hobson & Sharp, 2005; McAlearney, 2005). Establishing a

formal leadership mentoring program has the potential to benefit these aspiring physician leaders.

Having a level of clinical confidence and being viewed as medically competent was also a unique requirement of physician leaders that was expressed by one of the participants:

> I think one of the things I've always thought of is that it's most important to prove yourself as a clinician first and gain respect that way. And then that respect will translate into respect for your leadership positions as well. (P-2)

This adds an extra level of stress and accountability for physician leaders. LaSalle (2004) agreed with this concept, noting that there was a need for EM leaders to establish both clinical and administrative credibility to be respected by their peers. Guptill et al. (2018**)** also noted this concept regarding women entering the world of EM leadership. For new clinicians, this adds an extra level of stress as they concentrate on becoming an expert in patient care.

Conclusion 2: Emergency Medicine Clinical Skills, Such as Confident Decision-Making and Thriving in Uncertainty, Contributed to Successful Physician Leadership

Through the interviews, it became clear that the participants felt certain aspects of EM contributed to successful physician leadership. Key themes were the concept of confident decision-making and being able to exist and thrive in chaotic situations.

The ability to make decisions quickly and within the time constraints of seeing multiple patients with varying ailments was seen as crucial for the ED and a transferable skill for leadership positions. Emergency physicians have developed a skill and comfort with decision-making with limited information. Lowe et al. (2016) explored situational awareness in EM and how that was a key technical skill for ED physicians, helping them to make decisions, take a leadership role, and coordinate their actions in a team. Fulop and Mark (2013) discussed the

context of decision-making in healthcare and described the ED as being turbulent, and in this domain, the decision model preferred is to act quickly and decisively. Testa and Mandvia (2020) described the decision-making as an EM physician as a *superpower* and how they develop that skill more than other physicians. In a typical shift, an EM physician can make dozens of critical decisions on limited information almost hourly. EM physicians learn not to fear making a wrong decision; they re-evaluate, course correct, and then move on. The process in leadership, in which decisions are often given the tincture of time before a final decision, can be exasperating for an EM physician acclimatized to the alternative.

EM physicians are surprised when others describe the ER as chaotic. During the data gathering for this thesis, participants described a comfort with the chaos, or as one participant said, “We enjoy making order out of chaos” (P-9). EM physicians experience a steady flow of patients, ambulance stretchers in the hallways, and constant interruptions as the norm. Lateef (2018) stated that the practice of EM required a unique set of competencies to manage undifferentiated, complex conditions 24 hours per day, and according to Chisholm et al. (2000), interruptions in an emergency shift can be constant and test the EM physician’s ability to do their work.

Decision-making in that situation is quite deliberate, and EM physicians move fast, think fast, and make multiple decisions hourly. Trying to make sense of how individuals make decisions has been the focus of some excellent work by Kurtz and Snowden (2003) and Snowden and Boone (2007). These authors described a framework for decision-making, identifying five types of decision-making contexts in which leaders can find themselves. EM physicians tend to live in the chaotic domain, where the leader’s role is to act, sense, and respond. The EM physician fits this role, looking for what works at the time, taking immediate action, and

providing clear and direct communication (Snowden & Boone, 2007). During the pandemic, frontline emergency physicians have taken on many leadership roles in the SHA. Leading in a crisis was something that the participants felt they excelled in: "Leading in crisis where you could just make a decision and people didn't have time to get upset about it. I think that crisis leadership matches more with ED physicians' natural tendencies and how they make decisions" (P-7) or said another way: "It is good leading during a time of crisis because you actually get things done" (Anonymous, personal communication, September 1, 2021). EM physicians are used to working in a collaborative healthcare team but are also used to definitive decisions made on a rapid basis. EM physicians' ability to communicate with consultants and better understand the larger healthcare system can also be influential in leadership positions. While the participants valued consensus and collaboration, they all came from an environment where it is important to get things done quickly, efficiently, and as accurately as possible.

The context of decision-making in the administrative world is different and, therefore, somewhat challenging to a new EM physician leader. In the complex world of administrative decision-making, it is important to support a variety of ideas at the beginning of a process to make it successful, especially in terms of a contentious issue or decision. This necessitates a change of leadership style for EM physicians. Adept leaders will learn how to identify the context they are working in and "learn to shift their decision-making styles" (Snowden & Boone, 2007, p. 7). EM physicians, at times, complain about the slow process of decision-making in an organization, which may reflect Snowden and Boone's (2007) notion of analysis paralysis, where "a group of experts hits a stalemate, unable to agree on any answers because of each individual's entrained thinking—or ego" (p. 4). Confident decision-making in a chaotic environment is a strength of EM physicians and can help them in a physician leadership role. Understanding and

adapting to the new rules of engagement of the administrative environment can add to the frustration of EM physician leaders, but it is an important skill to develop when entering this new leadership environment. For an EM physician leader entering this new environment, it is mandatory to understand and adapt to the concept of this different leadership paradigm. In the EM clinical world, physicians move fast and think fast, but with leadership decision-making, there is value in being paced and deliberate.

Conclusion 3: Shift Work Gave Participants Increased Availability to Engage in Leadership Roles but Came with Challenges to the Individual

Shift work was viewed as having both benefits and challenges for EM physicians who entered the world of physician leadership. Hospital Eds are open 24 hours per day, 365 days per year, and EM physicians engage in 24-hour shift work scheduling. The literature acknowledged that shift work has a negative influence on the health of individuals who follow these schedules of work. Shields (2002) found that shift work takes an emotional and physical toll on workers and has been associated with cardiovascular disease, hypertension, metabolic, gastrointestinal concerns, as well as mental health disorders such as anxiety and depression. Shift work was associated with impaired alertness and decreased performance due to sleep loss and circadian misalignment (Ganesan et al., 2019; Sun et al., 2021). Berger and Hobbs (2005) discussed the increase in medication errors in nurses working overnight shifts, while Wisetborisut et al. (2014) discussed how health professionals face an increased risk of burnout with increased years of shift work.

Most EM physicians adapt to the world of shift work; the problem comes when shift work meets the realm of nine-to-five. Shift work gave participants greater flexibility to be available during the traditional workday when organizational meetings often take place. This

flexibility allowed the participants greater opportunity to take on leadership positions. Taking advantage of this schedule flexibility must be carefully monitored by EM physicians, or the two competing schedules will put family, rest, and recuperative times at risk.

The problem for EM physician leaders as described by the participants was perceived availability by others as well as their own self-perceptions. The administrative schedule is not coordinated with the EM physician's schedule, and hence, there is often a comprehension gap. There is a lack of understanding that an EM physician's free schedule in the morning may be an indication of just getting off a midnight shift, or a free Monday signifies a full weekend just worked. If EM physicians were not careful or protective of their personal schedules, trying to accommodate all the administrative meetings while ignoring sleep patterns and rest requirements could negatively affect their free time, health, and family. There is also a subtle pressure to show up to daytime meetings, even if a physician is post-shift, to avoid the risk of a decision being made without their input.

My own experience speaks to these issues. Early in my tenure as Saskatoon departmental lead, I agreed to attend a meeting on a sensitive negotiation, two hours after finishing a midnight shift. Exhausted and not thinking clearly, I agreed to a policy I had previously opposed, creating years of downstream negative effects. There is no perfect system, but EM physician leaders must be careful to make sure the perceived advantages of a shift work schedule do not become a liability.

Shift work can be a detriment to a person's health. It was found, however, that a shift work schedule gave EM physicians flexibility in leadership roles and opportunities to attend meetings during the day. This advantage came with personal challenges, such as the need to monitor personal schedules to avoid over-committing, the risk of scheduled meetings after

midnight shifts or busy weekends, and a perception by others that EM physician leaders are always available. Physicians in other specialties face different time constraint challenges but not with the consistency of EM physicians, who can do up to one-third of their clinical time on overnight shifts. Shift work is a definite double-edged sword, allowing EM physician leaders to have increased availability to attend leadership roles but potentially at the risk of health, personal time, and normal functioning.

Conclusion 4: Broad Clinical Exposure Inspired EM Physicians to Take on Leadership Roles

By working clinically in the ED, EM physicians were afforded a system-wide lens that gave them insight and an advantage in physician leadership. They were inspired by this broad clinical exposure to take on leadership positions that provided them the opportunity to make larger-scale changes in the healthcare system beyond what is possible in clinical practice. Working clinically in the ED, it is not uncommon to speak to four or five different specialities each shift, referring patients for admission or arranging early follow-up for a patient going home. Speaking to all the different consultants quickly reveals the pressures that other departments are feeling and helps EM physicians develop personal relationships with other physicians with whom they consult.

Medical leadership is seen as a key ingredient to bridge the clinical and managerial worlds that structure the day-to-day functioning of healthcare organizations (Baker & Denis, 2011). Physician leadership initiatives can reduce clinical errors and mortality rates and shorten lengths of stay (Geerts et al., 2019). Sinclair et al. (2016) identified LEADS as the leadership model most applicable to the Canadian ED model. LEADS (Dickson & Van Aerde, 2018) emphasizes system transformation as one of the key pillars of leadership within the healthcare system. Emergency physicians, because of their unique position at the crossroads of the

healthcare system, are well placed as leaders to influence positive changes: “Emergency medicine lives at the intersection of acute, primary, and community care, where transitions and handovers can be difficult and confusing to patients and caregivers” (Rutledge & Sinclair, 2013, p. 71).

EM physicians, based on their daily clinical experience, often see patients who feel they are unable to get the medical care they need anywhere else (Atkinson & Innes, 2021). Lateef (2018) pointed out that emergency physicians work in the frontline and are familiar with positive practices and system challenges from a bigger and wider perspective than most physicians. Kelen et al. (2021) pointed out that the ED is the canary in the coal mine in terms of bed block and system pressure. In 2013, Rutledge and Sinclair supported the need for emergency physicians to take on leadership roles, as they had first-hand knowledge of gaps within the medical system.

Working for improvement in the healthcare system gave EM physician leaders purpose and satisfaction in their work. However, personal burnout is a real concern for EM providers, and various authors have attested that working for improvement in the medical system is a way to avoid personal burnout and maintain personal well-being (Rixon et al., 2020; Testa & Mandvia, 2020). Improvement in personal well-being also helps maintains ER staff morale and ultimately patient care.

Working in the ED gave EM physicians a wide lens into how the medical system works. Many patients come to the ER seeking help or a second opinion, which also gave the participants a view of the failures and challenges in the healthcare system. This broad clinical exposure inspired EM physicians to take on leadership roles to facilitate change.

Conclusion 5: The Pay Differential Between Clinical and Leadership Work and the Effect it Had on EM Physician Leaders' Overall Income and Available Time Gave the Participants the Impression That Physician Leadership Was Not Valued by the SHA

It was found among the participants that compensation for physician leadership positions was not a driving force in accepting leadership positions, but it was a factor in burnout, happiness, and the decision to remain in leadership roles long term. Overall, participants interpreted the pay differential between clinical and leadership work as a symbol of its lack of value as viewed by the SHA. Traditionally, there was an expectation that physicians would take on leadership roles with minimal remuneration as part of their professional obligations (Snell et al., 2016). For instance, early leadership roles I took on in my career came with responsibility and expectations but no compensation. Participants indicated that it is still a common experience to take on extra roles, "at the side of their desk," for no compensation, and interpreted this as a lack of respect for the role.

Increasingly, the literature attested that physician leadership will be important for improvement in patient care and the healthcare system (Collins-Nakai, 2006; Ham, 2003). The question is: Why would a physician take on a leadership career path for a significant decrease in earnings? The participants discussed the discrepancy between EM clinical remuneration and leadership compensation and felt it could be a barrier for many to enter leadership positions. The participants gave the message that only those able to handle the change in pay rate would explore leadership positions.

Physician leadership will have a significant role in transforming the healthcare system (Baker & Dennis, 2011; Van Aerde, 2015; Weiss, 2011). The work to accomplish this transformation is increasingly complex and associated with long and sometimes unpaid hours

(Van Aerde, 2015). Participants in my study concurred, stating they worked significantly harder in their leadership roles than clinically. Clinical roles were compensated better and were viewed as easier and without the stress of a 24-hour-per-day obligation that EM clinical leadership could bring. Leadership roles outside the ER were also considered all-consuming, and it was interpreted as odd that physicians needed to take a pay cut for important leadership roles. Snell et al. (2016) backed this view and noted one of the difficulties in recruiting physician leaders was that medicine was one of the very few professions where the higher the leadership role you take, the less potential compensation.

Beyond financial remuneration, leadership roles encroached on participants' personal time. A struggle to maintain work-life balance is one of the biggest challenges in taking on medical leadership roles (Shanafelt & Noseworthy, 2017; Van Aerde, 2015). The participants discussed the many hours they put into their physician leadership roles and the stress they felt when personal and family time was compromised.

Contracted leadership roles in the SHA are described in portions of a full-time equivalent position (FTE), based on a 40-hour work week. An FTE of 0.25, for example, would translate into 10 hours per week for leadership work. These time estimates are rarely accurate: participants' data indicated that EM physician leadership roles can be a 24-hour job, and Snell et al. (2016) noted that the participants in their study worked at least 20 additional hours per week to fulfill their leadership commitments. If physician leaders are truly to be valued and respected, the hours contracted should be an honest reflection of the hours expected and delivered.

Physician leaders are in a unique position, as they are expected and needed to maintain a clinical practice. They maintain a clinical practice to meet patient care needs in their area of

expertise. As well, physician leaders are often reticent to abandon the primary reason they went into medicine—to care for and help the people around them.

As noted, many leadership roles have an expectation of extra hours to fulfill the job commitment. This is stressful for a physician in a leadership role, as these extra uncompensated hours required for leadership take time away from the primary patient care function of the physician. There is added stress on the physician leader as they reduce their patient care duties to meet the increasing time demands of a leadership role.

Snell et al. (2016) noted dissatisfaction in physician leadership roles was due to various features, such as a feeling of lack of respect or recognition, long hours, and dissatisfaction with remuneration. Financial remuneration was not a driving force in the participants' decision to take on leadership positions, but the remuneration rate for leadership was a point of stress and viewed as a symbol of a lack of respect for their leadership roles. The pay discrepancy between clinical and leadership pay prompted the participants to do extra clinical shifts to partially make up the difference. As well, the extra hours required for leadership positions took time away from family, clinical practice, and other non-work priorities. This created a feeling within the participants that there was a lack of respect from the SHA for the work they did in their leadership positions, and these feelings could jeopardize current and future leaders from taking on leadership opportunities.

Scope and Limitations of The Inquiry

The scope of this study was the investigation of EM physician leaders within the SHA. The study design required a clear definition of what an EM physician leader was. A review of the literature did not find such a definition; therefore, the inquiry team and I created a definition

using our shared knowledge and experience. In order not to lose the participation of any up-and-coming leaders, the team's definition included both formal and informal physician leadership.

The pandemic had a profound effect on physician leadership and engagement within the SHA (Dickson & Van Aerde, 2021). Some aspects of this project were hindered by the COVID-19 pandemic. All research methods had to be conducted by Zoom and not in person. It is possible that in-person interviews may have been better, but I believe the discussions in the interviews and focus groups flowed well, and some interviews would have been conducted remotely either way because of participants' distribution around the province. In fact, I believe that there were certain benefits because of interviewing participants during the COVID-19 pandemic. Many of the participants referenced the pandemic and used examples of COVID-19 leadership when talking about their experiences. EM leaders are routinely asked to lead during a crisis, without having all the answers and facing significant risks, so conducting interviews during the pandemic was coincidental but highlighted some of the elements of EM physician leadership.

I engaged in action research within my organization, which had benefits and challenges. One challenge was the possible power-over scenario of me conducting the interviews and focus groups. I am the Provincial Head of Emergency Medicine but have no hiring or clinical oversight of the physicians. One thought was to have a research assistant conduct the interviews, but they would not have had the personal insight or understanding of the challenges or strengths that these EM leaders face. My mitigation strategies included discussing with the inquiry team if they had any reservations with my plan to conduct the interviews, which they did not. I also asked a third party to recruit the participants so they could decline without me being aware, and before each interview, I discussed and acknowledged with every participant my positionality and asked each

participant directly if they agreed to and felt comfortable being interviewed by me. After the data gathering, I discussed my findings with the inquiry team to see if they identified any bias or spurious results that could be a consequence of my positionality, and they felt there were none. With these mitigation strategies in place, I believe the benefits of conducting the interviews personally outweighed the risks and did not compromise any of the results.

Chapter Summary

My research was focused on EM physician leaders, the challenges, and successes they have experienced in their leadership roles. The conclusions drawn from the findings concentrated on leadership mentoring, EM clinical skills, shift work, broad clinical exposure, and remuneration of leadership roles. In Chapter 5, I will discuss the recommendations that have been developed from the research findings and conclusions and how they can be used as a guideline for strategies to strengthen EM physician leadership.

Chapter Five: Inquiry Implications

In this chapter, I review my inquiry question and the conclusions generated from my data gathering, and I provide recommendations based on conclusions from my inquiry and the available literature. I discuss the challenges of engaging my organizational partner, the SHA, during the time of COVID-19 and the potential difficulty of implementing the recommendations during this time, and I conclude by describing the contributions of this thesis to the existing literature and opportunities for further inquiry.

My goal in conducting this inquiry was to investigate the relationship between emergency medicine (EM) practice and physician leadership. I asked what qualities of EM physician clinical practice support their work as health system leaders, and how can the SHA better support or learn from and leverage their knowledge and skills? Sub-questions, which guided the semi-structured interviews for the participants, were as follows:

- Was mentorship or sponsorship important for personal development for EM physician leaders?
- How does EM physician leadership reflect the experience of EM clinical practice?
- How might the learned skill set of emergency physicians benefit or challenge their development as medical leaders?
- How might broad clinical exposure to the healthcare system contribute to the strength of EM physician leadership?
- How do emergency physicians define, recognize, and execute successful physician leadership?

From this work came a series of conclusions described in Chapter 4, which led to the four recommendations presented in this report.

Study Recommendations

I have drawn four actionable recommendations from my five conclusions:

1. Recruit EM physicians for leadership positions to bring EM decision-making skills into a variety of healthcare administrative roles and support the strategic success of the health authority.
2. Leverage the distinctive practical knowledge EM physicians have gained from broad clinical exposure to the healthcare system by offering leadership positions to EM physicians.
3. Ensure that compensation for physician leadership positions is commensurate with the value of physician leadership roles, and work with physician leaders to create an acceptable compensation package.
4. Establish a formal, scheduled, compensated mentorship program for new EM physician leaders.

Recommendation 1: Recruit EM Physicians for Leadership Positions to Bring EM Decision-Making Skills into a Variety of Healthcare Administrative Roles and Support the Strategic Success of the Health Authority

I recommend that the SHA promote and utilize the unique decision-making skills of EM physicians in leadership positions. Snowden and Boone (2007) discussed the need for effective and efficient decision-making in chaotic situations. Testa and Mandvia (2020) described decision-making as an EM physician's superpower, and participants in the study emphasized how EM physicians make decisions quickly and efficiently for the benefit of individual patients and to keep the department moving. I recommend harnessing this specific EM physician skill by recruiting EM physicians for leadership positions to help advance initiatives and bring EM

decision-making skills into a variety of healthcare administrative roles. Our recent experience with COVID-19 was an example of how the situation in the healthcare system can change almost daily and how efficient decision-making is important to strategic success. During the COVID-19 crisis, many front-line healthcare leaders in the SHA were EM physicians who approached the crisis with their efficient skills and decision-making ability. EM physicians could be recruited for leadership positions to help advance initiatives and bring EM insights and decision-making abilities into a variety of healthcare administrative roles.

Utilizing the decision-making skills of EM physicians could benefit the SHA, but EM physicians may also have to understand and be counselled on how different types of decision-making are used in different circumstances. To support the success of EM physicians in leadership roles, the SHA should work to understand the challenges of EM physicians when they need to adapt to the new decision-making paradigm within administration and consider the stresses EM physicians may experience when working in the slower-paced world of administration compared with clinical environments. Similarly, it may be useful for EM physicians to understand that failure to achieve strategic goals or the government not listening to their advice are part of being a senior leader.

Recommendation 2: Leverage the Distinctive Practical Knowledge EM Physicians Have Gained From Broad Clinical Exposure to the Healthcare System by Offering Leadership Positions to EM Physicians

EM physicians have practical knowledge of the entire healthcare system gained from their clinical experience. Building on this front-line knowledge expressed by the participants and the academic literature on physician leadership, described in Chapter 2, I suggest that the SHA search out EM physicians with an interest in pursuing leadership roles to take on leadership

positions within the organization to utilize the distinctive practical knowledge they have gained through their broad clinical exposure to the healthcare system. To set the healthcare system up for future success, I suggest that the SHA influence partners to establish a leadership training curriculum in medical school and EM residency training. EM physicians engaged in healthcare leadership within the SHA could use their wide knowledge of the healthcare system to help break down the entrenched healthcare silos and use their experience to solve issues they encounter daily in the ED.

During the last two years, many EM physicians within the SHA did take on extra leadership roles required for the pandemic response. Within these roles, the EM physicians were able to use their skills to benefit the SHA and helped organize a robust response to our current health crisis. I suggest that the SHA continue to leverage the skills and system-wide lens of EM physician leaders.

Recommendation 3: Ensure That Compensation for Physician Leadership Positions is Commensurate with the Value of Physician Leadership Roles and Work with Physician Leaders to Create an Acceptable Compensation Package

For the participants in my research sample, remuneration was not a primary consideration for accepting a leadership role, but it was a factor in burnout, happiness, and the decision to remain in leadership roles long term. Participants had the impression, from the pay differential between clinical and leadership work and the effect of this differential had on their overall income and available time, that the SHA does not value their leadership.

It is important that physician leaders receive appropriate compensation to encourage young physician leaders to take on leadership positions and support senior leaders to continue in their roles. While EM physicians explore leadership positions to make a difference, and not

expressly for financial gain, the financial sacrifices that come with taking on such roles may dissuade potential leaders from taking on higher positions (Snell et al., 2016). Beyond just financial considerations, the attention leadership positions demand can also limit physicians' ability to have meaningful time away from work and achieve work-life balance (Shanafelt & Noseworthy, 2017; Van Aerde, 2015).

I recommend for the SHA to work with physician leaders to create a mutually acceptable compensation package that acknowledges the excess time required for leadership roles, decreased financial earnings in contrast to clinical work, and leadership job stresses that can lead to burnout. EM physician leaders determined that the pre-COVID-19 pay for leadership was about half of their clinical pay (Director, Saskatoon/NE/NW, Practitioner Staff Affairs, personal communication, March 11, 2022). The evidence generated by this study was consistent with an approach of changing and locking leadership pay rates to three-quarters of clinical pay, associated with annual compensation reviews, with an eventual goal of equivalence to clinical pay. This is a suggested approach, but any collaborative review of leadership compensation would be viewed as positive by EM physician leaders.

A compensation package that sets a realistic number of hours expected of EM physician leaders would also promote a worthwhile culture change. Participants expressed that leadership contracts should reflect real hours worked rather than a pre-determined partial FTE. EM physician leadership roles can be a 24-hour-per-day job, but in many instances, leadership contracts significantly underestimate the time commitment of physician leaders (Snell et al., 2016). A leadership role should accurately reflect the expected time commitment to that role as expressed by the contracted FTE. The time commitment required or worked could be monitored by the SHA on a regularly scheduled basis, and if the expected assignments are determined to

take more time than described, then the contract could be reviewed and changed. The SHA needs to support physician leaders in having these conversations and seek transparency in the time commitments and remuneration of their leadership.

The participants expressed that while money and time were important considerations in their remuneration package, they would also welcome other ways of the SHA expressing the value of their work. Part of this recommendation is to explore the development and initiation of alternate payment plans as one approach that could ameliorate the discrepancies in compensation for physician leadership activities. Other methods of compensation or incentives could be considered for leadership roles so that physician leaders do not feel the need to increase their clinical load to sustain their financial stability for their families. This could include money for continuing medical education, official recognition by the College of Medicine and the SHA, or increased time off as compensation for excess time spent on leadership roles.

While some of the recommendations are within the scope of the SHA, the concept of remuneration for physician leaders is solidly within the hands of the province. The Government of Saskatchewan compensated pandemic physician leads at a higher rate than the regular pre-pandemic rate for physician leadership; however, the government reverted to the 2019 rate as of April 1, 2022 (see Table 1).

Recommendation 4: Establish a Formal, Scheduled, Compensated Mentorship Program for New EM Leaders

Many participants identified that they came into their leadership roles with little or no formal leadership training. Current leadership mentorship for EM physician leaders within the SHA is informal and inconsistent, which presents an opportunity for growth in the sector. There

is value in the SHA establishing a clearly defined mentorship program for any new EM physician taking on or interested in a leadership role.

Participants expressed that EM physicians would benefit from the opportunity to access mentorship programs around leadership opportunities. Scholars have stated that mentorship specifically focused on physician leaders will require dedicated resources and investment but will benefit both the physician leader and the health system (Guptill et al., 2018; Hernez-Broome & Hughes, 2004; Hobson & Sharp, 2005; McAlearney, 2005; Warren & Carnall, 2011).

Several of the women participants in the study expressed the desire for specific mentorship support from other women leaders. The young women leaders I interviewed thought they did not have the same built-in support networks as young men leaders might have. A developed mentorship program could address this perceived gap. Guptill et al. (2018**)** explored women in EM leadership positions and stated that having a mentor or sponsor was key to navigating the initial steps of leadership.

When the participants discussed any mentorship, they had received, they supported the concept of a formal program as being the most valuable. Scholars concurred with this concept. For leadership mentorship to be successful, a structured program with a formal framework and outlined criteria is optimal (Karcher et al., 2006; Messmer, 2003; Padhi, 2019). The program could collaborate with experienced physician leaders who already work within the system to set up a formal mentorship program. For example, new EM physician leaders could be paired with experienced leaders, ***present or past***, who are either members of the provincial ED or if unavailable, members of another department willing to share their experiences and skills. The formal program could include meetings on a pre-determined regular schedule, a focus on leadership skills, roadblocks encountered in the new leader's portfolio, objectives, timelines,

goals, and an open discussion examining solutions. The mentoring system should have a scheduled conclusion, as it is essential that the mentoring portion of any leadership program is clearly defined (Messmer, 2003). A report-out from both mentor and mentee will be important for monitoring results (Messmer, 2003) to create an iterative process for improvement. Past mentees could also be actively engaged in the mentorship process after they leave the mentee role and act as potential mentors in the future.

A study carried out for the SHA and University of Saskatchewan College of Medicine recommended a LEADS-based personal learning plan tied to strategic priorities and personal development needs (College of Medicine and Saskatchewan Health Authority, 2022). In this study, the authors further emphasized the need for a structured and formalized program for physician leadership development.

A focus on personal wellness should also be incorporated as a formal recognized aspect of the mentorship contract, as physician leaders tend to dedicate more hours than allotted for their leadership role (Snell et al., 2016). In addition to making systemic changes to reduce overwork, concentrating on time management and personal wellness could help new leaders mitigate the risk of burning out. Personal resilience strategies alone do not prevent burnout (Taylor, 2019; Vercio et al., 2021). However, personal resilience strategies may have a positive effect to help leaders guard their own personal safety, retain their leadership role, and potentially avoid a leadership gap that would need to be filled with even less prepared up-and-coming leaders.

The importance of mentorship can be demonstrated by allotting protected time or remuneration, or both, for participants. To be successful, the program requires protected time in both the mentor's and mentee's contracts. If meetings are outside the contracted hours, the

program should allot reasonable compensation to the participants. Support for mentors could also come in the form of annual stipends, mentorship development opportunities, and public recognition (Hernez-Broome & Hughes, 2004).

Organizational Implications

I conducted my inquiry into EM physician leadership within the SHA to explore concepts of EM physician leadership and to create recommendations that could be helpful for the physician leaders themselves, the health system, and patient care in Saskatchewan. During the last two years, I have met with my inquiry team regularly and with my sponsor on occasion to discuss the thesis and the recommendations. In my role as provincial head, I have continued the process of doing a yearly academic review of all emergency faculty in the province. When meeting with any EM physician leaders, they often want to discuss their leadership roles. During these faculty interviews, we discussed their challenges and successes regarding their leadership roles, sense of achievement, perceived failures, or dissatisfaction in the role. Through my role as Provincial Head, I will continue to support EM physician leaders after the current inquiry work is done.

The SHA has shown interest in physician leadership. In January 2022, working with the College of Medicine, the organization engaged two experts in the LEADS framework to develop a Provincial Department Head (PDH) Leadership and Accountability Initiative. I believe the PDH initiative is an indication that physician leadership is important to the SHA, and it gives me confidence that the recommendations from this thesis can be discussed in the future.

Our current situation in the healthcare system has many stresses, and experts have theorized that the effects of the COVID-19 pandemic may continue for some time in the future. The pandemic has exacerbated other health system stresses, with frontline staff feeling the

effects of mental health stress (Chirico et al., 2021; Galbraith et al., 2021; Spoorthy et al., 2020) and even local physician leaders in the SHA needing to take a break (Vescera, 2022). It is fair to say that many frontline workers and healthcare leaders are working at capacity, so new programs or new recommendations may overtax an already overburdened system. My resolution will be to introduce these recommendations to my sponsor later this year. While right now may not be the time to follow through on these recommendations due to ongoing system pressures, there may never be a right time. Strengthening EM physician leadership will add support to the healthcare system of the Province of Saskatchewan in general, creating a positive impact.

Next Steps

My study has theorized that EM physician leaders can have a positive effect on the healthcare system. Scholars have advanced the theory that effective physician leadership is important to transform the health system and improve patient outcomes (Baker & Denis, 2011; Geerts et al., 2019; Spurgeon et al., 2015). I plan to continue to try to advance the aspects of my thesis forward by teaching leadership both locally and nationally.

In my data gathering, I worked from an appreciative stance to generate new ideas to redefine elements of the relationship between EM physician leaders and the SHA (Trullen & Torbert, 2016). Through this work, I aim to secure a new understanding of EM physician leaders, the beneficial role they can play in the health system, and how the health system can support these same leaders. This work will continue with my interactions with CAEP and other EM physician leaders to continue this discussion nationally.

The next step for my thesis is to communicate with my sponsor to decide a reasonable time to present and investigate the viability of my recommendations. The steps for implementation will be a collaborative process with the leadership of the SHA. This may include

a formal presentation to the SHA leadership detailing my findings, further consultations with the SHA, and receiving their valuable feedback on the recommendations. My hope is that recommendations within the SHA's control could be studied and implemented as appropriate. For example, regarding the recommendations for a formal mentorship program for new EM physician leaders, a framework for a pilot project could be created after engagement and collaboration with the SHA leadership. The framework could include a list of potential mentors and mentees, an appropriate budget, and a timeline for several new EM leaders to begin at a pre-set starting point. As with any pilot project, approaches to measurement and evaluation should be discussed and implemented. These could include both qualitative methods, such as interviews with the new EM leaders who are involved in the program, and quantitative metrics, such as retention of EM physician leaders within their roles.

Implications for Future Inquiry

The significance of physician leadership to help transform the healthcare system has been increasingly discussed, but there has been minimal research conducted on EM physician leaders. Based on research with local EM leaders in this thesis process, I have made recommendations that focus on how EM leaders can support the healthcare system and what supports EM leadership may need for success. Larger initiatives to this effect are already in motion. CAEP has a leadership division in their academic section, and for the last few years, this group has worked to provide support and education for EM leaders. A plan was advanced initially to focus on a yearly in-person leadership conference for emergency physicians, with the inaugural conference occurring in February 2020 (CAEP, 2020). This conference had a small attendance, but participants viewed it as a success. The focus during the conference was to highlight established EM physician leaders and to teach leadership skills to new EM leaders.

Over the past two years, it became necessary to pivot from an in-person conference to virtual learning. I have been involved in the planning and presentation of two Virtual Leader Series that were put on by CAEP and attended by EM physician leaders from across the country. The next virtual learning series will be focused on developing a leadership learning curriculum for EM physician leaders, with the curriculum possibly based on the LEADS framework. I am leading some of this work along with Dr. Huma Ali, a Royal Roads Master of Arts in Leadership, Health specialization graduate. Our plan is to take what we have learned from our time at Royal Roads University, including what I have gleaned from writing this thesis, and use the information to help guide the learning goals for the educational series and new EM leaders.

The most recent annual CAEP conference was held in Quebec City in May 2022. The conference had a leadership track where EM leadership was discussed. My input was requested, and I presented some of the information from this inquiry. I will also continue to teach EM trainees in leadership, both formally and informally, something I have been doing for the last decade.

I plan to continue investigative work in the future. The semi-structured interviews that were a central method in my thesis research raised many more questions about physician leadership in general and EM physician leadership specifically. During the past two years, we have seen physician leaders in the SHA and across the country devote a huge amount of time and energy to a pandemic response to keep our patients and other citizens safe, and front-line EM staff and physician leaders are experiencing increasing levels of stress (Canadian Medical Association, 2022). Despite this, some provinces have ignored evidence-based recommendations made by physicians and public health (Peiris, 2021), and on social media and elsewhere, physician leaders have been vilified (Hall Jamieson, 2021; Pazzanese, 2020). There is also

evidence of increasing levels of violence being directed toward EM physicians and staff (Goldman, 2022).

Future research might focus on what contributes to success or burnout for EM physician leaders and how we can enhance or mitigate those factors. For the pandemic response, many physicians, including emergency leaders, were pulled out of their clinical work to focus on leadership. An interesting area of inquiry will be whether, at the end of the pandemic, these EM leaders continue a leadership pathway or if they return to focus solely on emergency patient care duties. Further, what will happen to our healthcare system if EM physician leaders stay in these leadership roles include questions such as: Can they influence administrative processes to increase efficiency or change the culture around physician leadership? By contrast, what would the impact be if there were a mass exodus from physician leadership positions? Could the result be a potential leadership vacuum and a loss of administrative momentum?

Throughout the process of data gathering, analysis, and developing findings and conclusions, I have learned a lot about EM physician leadership and advanced recommendations that I hope will be considered by the SHA. EM physicians are passionate and dedicated leaders of the healthcare system and have skills to offer that can benefit the SHA and our patient population.

References

Atkinson, P., & Innes, G. (2021). Patient care accountability frameworks: The key to success for our healthcare system. *Canadian Journal of Emergency Medicine, 23*(3), 274–276.

Baker, G. R., & Denis, J. L. (2011). Medical leadership in health care systems: from professional authority to organizational leadership. *Public Money & Management, 31*(5), 355–362.

Bamford, C. (2011). Mentoring in the twenty-first century. *Leadership in Health Services, 24*(2), 150–163. https://doi.org/10.1108/17511871111125710

Berger, A. M., & Hobbs, B. B. (2006). Impact of shift work on the health and safety of nurses and patients. *Clinical Journal of Oncology Nursing, 10*(4), 465–471. https://doi.org/10.1188/06.CJON.465-471

Blanchard, J. R. (2018, August 17). From clinician to leader, the road to a better fit. *Physician Leadership.* https://www.physicianleaders.org/news/clinician-leader-road-better-fit

Bloor, M., Frankland, J., Thomas, M., & Robson, K. (2001) *Focus groups in social research.* Sage.

Blumenthal, D. M., Bernard, K., Bohnen, J., & Bohmer, R. (2012). Addressing the leadership gap in medicine: Residents' need for systematic leadership development training. *Academic Medicine, 87*(4), 513–522.

Bradbury, H., & Reason, P. (2003). Action research: An opportunity for revitalizing research purpose and practices. *Qualitative Social Work, 2*(2), 155–175.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57–71). American Psychological Association. https://doi.org/10.1037/13620-004

Braun, V., & Clarke, V. (2020). One size fits all? What counts as quality practice in (reflexive) thematic analysis? *Qualitative Research in Psychology*, *18*(3), 328–352. https://doi.org/10.1080/14780887.2020.1769238

Bushe, G. (2012). Foundations of appreciative inquiry: History, criticism, and potential. *AI Practitioner*, *14*(1), 8–20.

Canadian Association of Emergency. (2020). *CAEP leadership development conference*. https://caep.ca/periodicals/Volume_21_Issue_6/Vol_21_Issue_6_Back_Matter.pdf

Canadian College of Health Leaders. (n.d.). *LEADS framework.* Retrieved June 15, 2022, from https://leadscanada.net/site/about/about-us/framework?nav=sidebar

Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council. (2018, December). *Tri-Council policy statement: Ethical conduct for research involving humans (TCPS 2, 2018).* https://ethics.gc.ca/eng/documents/tcps2-2018-en-interactive-final.pdf

Canadian Medical Association. (2022, March 23). *Physician burnout nearly doubles during pandemic.* https://www.cma.ca/news-releases-and-statements/physician-burnout-nearly-doubles-during-pandemic

Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014, September). The use of triangulation in qualitative research. *Oncology Nursing Forum, 41*(5), 545–547. https://doi.org/10.1188/14.ONF.545-547

Chan, M. K., Dickson, G., Keegan, D., Matlow, A., Busari, J., & Van Aerde, J. A. (2022). Tale of two frameworks: Charting a path to lifelong learning for physician leaders through CanMEDS and LEADS. *Leadership in Health Services, 35*(1), 1751–1879.

Chirico, F., Nucera, G., & Magnavita, N. (2021). Protecting the mental health of healthcare workers during the COVID-19 emergency. *BJPsych International*, *18*(1-2). http://dx.doi.org/10.1192/bji.2020.39

Chisholm, C. D., Collison, E. K., Nelson, D. R., & Cordell, W. H. (2000). Emergency department workplace interruptions are emergency physicians "interrupt-driven" and "multitasking"? *Academic Emergency Medicine, 7*(11), 1239–1243.

CMAjoule. (n.d.-a). *Physician leadership institute course catalogue*. Canadian Medical Association. Retrieved May 20, 2022, from https://joulecma.ca/sites/default/files/pdf/pli/PLI-in-house-flipbook-EN.pdf

CMAjoule. (n.d.-b). *The Physician Leadership Institute*. Retrieved May 20, 2022, from https://joulecma.ca/learning/physician-leadership-institute

Coghlan, D., & Brydon-Miller, M. (2018). *Doing action research in your own organization* (5th ed.). Sage.

College of Medicine and Saskatchewan Health Authority. (2022, June 30). *Position profile for provincial department head* [Unpublished manuscript]. Saskatchewan Health Authority.

Collins-Nakai, R., (2006). Leadership in medicine. *McGill Journal of Medicine, 9*(1), 68–73.

Cooperrider, D. L., & Godwin, L. (2011). Positive organization development: Innovation-inspired change in an economy and ecology of strengths. In K. Cameron & G. Spreitzer (Eds.), *Oxford handbook of positive organizational scholarship* (pp. 737–750). Oxford University Press.

Danilewitz, M., & McLean, L. (2016). A landscape analysis of leadership training in postgraduate medical education training programs at the University of Ottawa. *Canadian Medical Education Journal*, *7*(2), e32–e50. www.ncbi.nlm.nih.gov/pubmed/28344692

Dath, D, Chan, M.-K., & Abbott, C. (2015, March). *CanMEDS 2015: From manager to leader*. The Royal College of Physicians and Surgeons of Canada. https://www.royalcollege.ca/rcsite/documents/cbd/canmeds-2015-manager-to-leader-e.pdf

Dearnley, C. (2005). A reflection on the use of semi-structured interviews. *Nurse Researcher*, *13*(1), 19–28. https://doi.org/10.7748/nr2005.07.13.1.19.c5997

Denis, J. L., Black, C., & Langley, A. (2013). *Exploring the dynamics of physician engagement and leadership for health system improvement prospects for Canadians*. Institute of Health Policy, Management and Evaluation, University of Toronto.

Dibley, L. (2011). Analysing narrative data using McCormack's lenses. *Nurse Researcher*, *18*(3), 13–19. https://doi.org/10.7748/nr2011.04.18.3.13.c8458

Dickson, G., & Tholl, B. (2014). *Bringing leadership to life in health: LEADS in a caring environment*. Springer.

Dickson, G., & Van Aerde, J. (2018). Enabling physicians to lead: Canada's LEADS framework. *Leadership in Health Services, 31*(2), 183–194.

Dickson, G. & Van Aerde, J. (2021, December). *Saskatchewan physician engagement and leadership action research project*. https://physicianleaders.ca/spelaction.html

Doody, O., & Noonan, M. (2013). Preparing and conducting interviews to collect data. *Nurse Researcher*, *20*(5), 28–32. http://hdl.handle.net/10344/5588

Doyle, S. (2007). Member checking with older women: A framework for negotiating meaning. *Health Care for Women International*, *28*(10), 888–908.

Eagle, C. (2016, January). Physicians at the executive table. *Healthcare Management Forum*, *29*(1), 15–18.

Engin, M. (2011). Research diary: A tool for scaffolding. *International Journal of Qualitative Methods*, *10*(3), 296–306.

Fulop, L., & Mark, A. (2013). Relational leadership, decision-making and the messiness of context in healthcare. *Leadership*, *9*(2), 254–277.

Frank, J. R., Snell, L., & Sherbino, J. (Eds.). (2015). *CanMEDS 2015 physician competency framework*. Royal College of Physicians and Surgeons of Canada. https://canmeds.royalcollege.ca/uploads/en/framework/CanMEDS%202015%20Framework_EN_Reduced.pdf

Fusch, P., Fusch, G. E., & Ness, L. R. (2018). Denzin's paradigm shift: Revisiting triangulation in qualitative research. *Journal of Social Change*, *10*(1), 19–32. https://doi.org/10.5590/JOSC.2018.10.1.02

Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, *20*(9), 1408–1416. https://doi.org/10.46743/2160-3715/2015.2281

Galbraith, N., Boyda, D., McFeeters, D., & Hassan, T. (2021). The mental health of doctors during the COVID-19 pandemic. *BJPsych Bulletin*, *45*(2), 93–97.

Ganesan, S., Magee, M., Stone, J. E., Mulhall, M. D., Collins, A., Howard, M. E., Lockley, S. W., Rajaratnam, S. M. W., & Sletten, T. L. (2019). The impact of shift work on sleep, alertness and performance in healthcare workers. *Scientific Reports, 9*(1), 1–13. https://doi.org/10.1038/s41598-019-40914-x

Geerts, J. M., Goodall, A. H., & Agius, S. (2019, February). Evidence-based leadership development for physicians: A systematic literature review. *Social Science & Medicine, 246*, Article 112709. https://doi.org/10.1016/j.socscimed.2019.112709

Gerstl-Pepin, C., & Patrizio, K. (2009). Learning from Dumbledore's pensive: Metaphor as an aid in teaching reflexivity in qualitative research. *Qualitative Research, 9*(3), 299–308.

Goldman, B. (Host). (2022, February, 17). The violence problem [Audio podcast]. *White Coat, Black Art on CBC Radio*. https://chartable.com/podcasts/white-coat-black-art-on-cbc-radio/episodes/108457779-the-violence-problem

Goldman, E. F., Plack, M. M., Roche, C. N., Smith, J. P., & Turley, C. L. (2011). Learning clinical versus leadership competencies in the emergency department: Strategies, challenges, and supports of emergency medicine residents. *Journal of Graduate Medical Education*, *3*(3), 320–325.

Goulding, C. (2002). *Grounded theory: A practical guide for management, business and marketing researchers*. Sage Publications.

Grady, C. M., & Hinings, C. B. (2019). Turning the Titanic: Physicians as both leaders and managers in healthcare reform. *Leadership in Health Services, 32*(3), 338–347. https://doi.org/10.1108/LHS-09-2017-0058

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, *18*(1), 59–82.

Guptill, M., Reibling, E. T., & Clem, K. (2018). Deciding to lead: A qualitative study of women leaders in emergency medicine. *International Journal of Emergency Medicine*, *11*(1), 1–10.

Hall Jamieson, K. (2021, April 1). How to debunk misinformation about COVID, vaccines and masks. *Scientific American*. https://www.scientificamerican.com/article/how-to-debunk-misinformation-about-covid-vaccines-and-masks/

Ham, C. (2003). Improving the performance of health services: The role of clinical leadership. *The Lancet*, *361*(9373), 1978–1980.

Helman, A., Ovens, H., Campbell, S., & Innes, G. (2019, August). Episode 129 ED overcrowding and access block—Causes and solutions [Video]. *Emergency Medicine Cases*. https://emergencymedicinecases.com/ed-overcrowding-access-block-causes-solutions/

Hernez-Broome, G., & Hughes, R. (2004). Leadership development: Past, present, and future. *Human Resource Planning*, *27*(1), 24–32.

Hobson, A., & Sharp, C. (2005). Head to head: A systemic review of the research evidence on mentoring new head teachers. *School Leadership and Management*, *25*(1), 25–42. https://doi.org/10.1080/1363243052000317073

Hockley, J., Froggatt, K., & Heimerl, K. (2013). *Participatory research in palliative care: Actions and reflections*. Oxford University Press.

Karcher, M. J., Kuperminc, G. P., Portwood, S. G., Sipe, C. L., & Taylor, A. S. (2006). Mentoring programs: A framework to inform program development, research, and evaluation. *Journal of Community Psychology*, *34*(6), 709–725. https://doi.org/10.1002/jcop.20125

Kelen, G. D., Wolfe, R., D'Onofrio, G., Mills, A. M., Diercks, D., Stern, S. A., Wadman, M. C., & Sokolove, P. E. (2021, September 28). Emergency department crowding: The canary in the health care system. *NEJM Catalyst Innovations in Care Delivery, 2*(5). https://catalyst.nejm.org/doi/full/10.1056/CAT.21.0217

Kornacki, M. J. (2017, August 17). Three starting points for physician leadership. *NEJM Catalyst.* https://catalyst.nejm.org/three-starting-points-physician-leadership/

Krueger, R. A. (2014). *Focus groups: A practical guide for applied research*. Sage Publications.

Kurtz, C. F., & Snowden, D. J. (2003). The new dynamics of strategy: Sense-making in a complex and complicated world. *IBM Systems Journal, 42*(3), 462–483.

Kvale, S. (1996). *Interviews: An introduction to qualitative research interviewing.* Sage Publishing.

LaSalle, G. (2004). Leadership and the emergency department. *Emergency Medicine Clinics, 22*(1), 1–18.

Lateef, F. (2018). Grace under pressure: Leadership in emergency medicine. *Journal of Emergencies, Trauma and Shock, 11*(2), 73–79.

Lazar, H., Forest, P. G., Church, J., & Lavis, J. N. (Eds.). (2013). *Paradigm freeze: Why it is so hard to reform health care in Canada?* McGill-Queen's Press-MQUP.

Lewin, K. (1946). Action research and minority problems. *Journal of Social Issues, 2*(4), 34–46.

Lincoln, Y., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Lowe, D. J., Ireland, A. J., Ross, A., & Ker, J. (2016). Exploring situational awareness in emergency medicine: Developing a shared mental model to enhance training and assessment. *Postgraduate Medical Journal, 92*(1093), 653–658.

Lyons, O., McHardy, K., Bagg, W., & Wilkinson, T. (2019). Leadership development in New Zealand and Australian medica schools: needs analysis. *BMJ Leader, 3*(4), 123–128. http://dx.doi.org/10.1136/leader-2019-000147

Makary, M. (2013). *Unaccountable: What hospitals won't tell you and how transparency can revolutionize health care*. Bloomsbury Publishing.

McAlearney, A. (2005). Exploring mentoring and leadership development in health care organizations. *Career Development International, 10*, 493–586. https://doi.org/10.1108/13620430510620575

McKimm, J., Rankin, D., Poole, P., Swanwick, T., & Barrow, M. (2009). Developing medical leadership: A comparative review of approaches in the UK and New Zealand. *International Journal of Leadership in Public Services, 5*(3), 10–24. https://doi.org/10.1108/17479886200900019

McKimm, J., & Swanwick, T. (2011). Leadership development for clinicians: What are we trying to achieve? *The Clinical Teacher, 8*(3), 181–185. https://doi.org/10.1111/j.1743-498X.2011.00473.x

Messmer, M. (2003). Building an effective mentoring program. *Strategic Finance, 84*(8), 17–19. https://sfmagazine.com/wp-content/uploads/sfarchive/2003/02/CAREERS-Building-an-effective-mentoring-program.pdf

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*(1), https://doi.org/10.1177/1609406917733847

O'Connor, C., & Joffe, H. (2020). Intercoder reliability in qualitative research: Debates and practical guidelines. *International Journal of Qualitative Methods*, *19*. https://doi.org/10.1177/1609406919899220

Onwuegbuzie, A. J., Dickinson, W. B., Leech, N. L., & Zoran, A. G. (2009). A qualitative framework for collecting and analyzing data in focus group research. *International Journal of Qualitative Methods, 8*(3), 1–21.

Padhi, P. (2019, December 11). 7 ways to structure mentoring programs to improve their reach. *Training Industry*. https://trainingindustry.com/articles/strategy-alignment-and-planning/7-ways-to-structure-mentoring-programs-to-improve-their-reach/

Patton, M. Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Services Research*, *34*(5 Pt 2), 1189–1208. http://europepmc.org/backend/ptpmcrender.fcgi?accid=PMC1089059&blobtype=pdf

Pazzanese, C. (2020, May 8). Ubiquity of social media has made it easier to spread or even create COVID-19 falsehoods, making the work of public health officials harder. *Harvard Business Gazette*. https://news.harvard.edu/gazette/story/2020/05/social-media-used-to-spread-create-covid-19-falsehoods/

Peiris, S. (2021, October 25). Premier is embarrassing Saskatchewan by ignoring doctors during pandemic. *CBC News.* https://www.cbc.ca/news/canada/saskatoon/pandemic-response-saskatchewan-1.6223468

Percy, W. H., Kostere, K., & Kostere, S. (2015). Generic qualitative research in psychology. *The Qualitative Report, 20*(2), 76–85. https://doi.org/10.46743/2160-3715/2015.2097

Perry, J., Mobley, F., & Brubaker, M. (2017, December 15). Most doctors have little or no management training, and that's a problem. *Harvard Business Review*. https://hbr.org/2017/12/most-doctors-have-little-or-no-management-training-and-thats-a-problem

Provincial Health Authority Act, c. P-30.3 of the Statutes of Saskatchewan, 2017. https://pubsaskdev.blob.core.windows.net/pubsask-prod/104910/P30-3.pdf

Rabionet, S. E. (2009). How I learned to design and conduct semi-structured interviews: An ongoing and continuous journey. *The Qualitative Report*, *16*(2), 563–566. http://www.nova.edu/ssss/QR/QR16-2/rabionet.pdf

Reinertsen, J. (1998). Physicians as leaders in the improvement of health care systems. *Annals of Internal Medicine*, *128*(10), 833–838.

Rixon, A., Wilson, S., Hussain, S., Terziovski, M., Judkins, S., & White, P. (2020). Leadership challenges of directors of emergency medicine: An Australasian Delphi study. *Emergency Medicine Australasia*, *32*(2), 258–266.

Rotenstein, L., Sadu, R., & Jena, A. (2018, October 17). Why doctors need leadership training. *Harvard Business Review.* https://hbr.org/2018/10/why-doctors-need-leadership-training

Rowe, W. E. A., Graf, M., Agger-Gupta, N., Piggot-Irvine, E., & Harris, B. (2013). Action research engagement: Creating the foundations for organizational change. *ALARA Monograph Series (Action Learning Action Learning Association Inc.), (Monograph No. 5*), 44.

Royal College of Physicians and Surgeons of Canada. (n.d.-a). *CanMEDS: Better standards, better physicians, better care*. https://www.royalcollege.ca/rcsite/canmeds/canmeds-framework-e

Royal College of Physicians and Surgeons of Canada. (n.d.-b). *CanMEDS guide: Medical expert*. https://canmeds.royalcollege.ca/guide

Royal Roads University. (2011, February). *Royal Roads University research ethics policy*. http://research.royalroads.ca/sites/default/files/web_files/RRU_EthicsPolicy_16Feb2011r.pdf

Rutledge, T., & Sinclair, D. (2013). Your profession needs you (lessons in medical leadership). *Canadian Journal of Emergency Medicine*, *15*(2), 67–72.

Saskatchewan Health Authority. (n.d.-a). *Our organization*. Retrieved May 20, 2022, from https://www.saskhealthauthority.ca/our-organization

Saskatchewan Health Authority. (n.d.-b). *Research Ethics Board*. Retrieved May 20, 2022, from https://www.saskhealthauthority.ca/our-organization/our-direction/research/getting-started/research-ethics-board

Saskatchewan Health Authority. (2017). *Plan for 2018–2019*. Government of Saskatchewan.

Saskatchewan Health Authority. (2018). *Health system strategic plan 2018-2019* http://www.fact-sk.org/files/106275-HealthPlan1819.pdf

Saskatchewan Health Authority. (2020). *Health system strategic plan (2020-2021)* [Brochure. Government of Saskatchewan.

Schall, E., Ospina, S., Godsoe, B., & Dodge, J. (2004). Appreciative narratives as leadership research: Matching method to lens. In D. L. Cooperrider & M. Avital (Eds.), *Constructive discourse and human organization* (pp. 147–170). Emerald Group Publishing Limited.

Scharmer, O., & Kaufer, K. (2019). Awareness-based action research: Catching social reality creation in flight. In H. Bradbury (Eds.), *The SAGE handbook of action research* (3rd ed., pp. 199–210). SAGE Publications.

Schwartz, R., & Pogge, C. (2000). Physician leadership: Essential skills in a changing environment. *The American Journal of Surgery, 180*(3), 187–192.

Shanafelt, T. D., & Noseworthy, J. H. (2017, January). Executive leadership and physician well-being: Nine organizational strategies to promote engagement and reduce burnout. *Mayo Clinic Proceedings, 92*(1), 129–146.

Shani, A. B. R., & Coghlan, D. (2018). Enhancing action, research, and collaboration in organization development. *Organization Development Journal, 36*(3), 37–43. https://doi.org/10.1177/1476750319852147

Shields, M. (2002). Shift work and health. *Health Reports, 13*(4), 11–33.

Shortell, S. (2002). Developing individual leaders is not enough. *Journal of Health Services Research & Policy, 7*(4), 193–194. https://doi.org/10.1258/135581902320432705

Sinclair, D., Worthington, J., Joubert, G., Holroyd, B., Stempien, J., Letovsky, E., Rutledgem, T., LeBlanc, C., Pitters, C., McCallum, A., Carr, B., Gerace, R., Stiell, I. G., Artz, J. D., & Christenson, J. (2016). CAEP 2015 Academic Symposium: Leadership within the emergency medicine academic community and beyond. *Canadian Journal of Emergency Medicine, 18*(S1), S1–S9. https://doi.org/10.1017/cem.2016.9

Smyth, A., & Holian, R. (1999, July). *The credibility of the researcher who does research in their own organisation: The perils of participant observation*. Paper presented to the Association of Qualitative Research Conference: Issue of Rigour in Qualitative Research, Melbourne, July 6-10, 1999.

Snell, A. J., Dickson, G., Wirtzfeld, D., & Van Aerde, J. (2016). In their own words: Describing Canadian physician leadership. *Leadership in Health Services, 29*(3), 264–281.

Snowden, D. J., & Boone, M. E. (2007). A leader's framework for decision making. *Harvard Business Review, 85*(11), 68–76, 149.

Sonnenberg, M., (2018, June 19). Changing roles and skill sets for chief medical officers. *American Association for Physician Leadership.* https://www.physicianleaders.org/news/changing-roles-skill-sets-chief-medical-officers

Spoorthy, M. S., Pratapa, S. K., & Mahant, S. (2020). Mental health problems faced by healthcare workers due to the COVID-19 pandemic–A review. *Asian Journal of Psychiatry, 51,* Article 102119.

Spurgeon, P., Long, P., Clark, J., & Daly, F. (2015). Do we need medical leadership or medical engagement? *Leadership in Health Services*, *28*(3), 173–184.

Stead, V. (2005). Mentoring: A model for leadership development. *International Journal of Training and Development, 9*(3), 170–184.

Stern, T., Townsend, A., Rauch, F., & Schuster, A. (2014). *Action research, innovation, and change. International perspectives across disciplines*. Routledge.

Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques.* Sage Publications.

Straus, S., Johnson, M., Marquez, C., & Feldman, M. (2013). Characteristics of successful and failed mentoring relationships: A qualitative study across two academic health centers. *Academic Medicine: Journal of the Association of American Medical Colleges, 88*(1), 82–89. https://doi.org/10.1097/ACM.0b013e31827647a0

Stroh, D. P. (2015). *Systems thinking for social change.* Chelsea Green.

Sun, J., Stewart, P., Chiew, A., Becker, T., Siu, W., Varndell, W., & Chan, B. S. (2021). *Association between shift work and cognitive performance on the Trail Making Test in emergency department health officers*. Emergency Medicine Australasia.

Swanwick, T., & McKimm, J. (2011). What is clinical leadership… and why is it important? *The Clinical Teacher*, *8*(1), 22–26. https://doi.org/10.1111/j.1743-498X.2010.00423.x

Taylor, R. A. (2019). Contemporary issues: Resilience training alone is an incomplete intervention. *Nurse Education Today, 78*, 10–13. https://doi.org/0.1016/j.nedt.2019.03.014

Testa, N., & Mandvia, S., (2020, May 5). EM executives [Audio podcast]. *Emergency Medicine: Reviews & Perspectives.* https://www.emrap.org/episode/emrap2020may/emexecutives

Thoma, B., Poitras J., Penciner R., Sherbino, J., Holroyd, B., & Woods, R. (2015). Administration and leadership competencies: Establishment of a national consensus for emergency medicine. *Canadian Journal of Emergency Medicine, 17*(2), 107–114.

Totten, M. K., & Combes, J. R. (2015). Physicians key in value-driven environment. *Healthcare Executive, 30*(1), 70–72.

Trullen, J., & Torbert, B. (2016). First-, second-, and third-person research in practice. *Systems Thinker*. Available at https://thesystemsthinker.com/first-second-and-third-person-research-in-practice/

University of Saskatchewan. (2013, June 20). *Human research ethics policy*. https://policies.usask.ca/policies/research-and-scholarly-activities/human-research-ethics-policy.php

Van Aerde, J. (2015). Understanding physician leadership in Canada: Overview of a CSPE/CMA/CHI study. *The Canadian Journal of Physician Leadership, 1*(4), 30–32.

Van Aerde, J., & Dickson, G. (2017). *Accepting our responsibility: A blueprint for physician leadership in transforming Canada's health care system* (White paper). Canadian Society of Physician Leaders. https://physicianleaders.ca/assets/whitepapercspl0210.pdf

Vercio, C., Loo, L. K., Green, M., Kim, D. I., & Beck Dallaghan, G. L. (2021). Shifting focus from burnout and wellness toward individual and organizational resilience. *Teaching and Learning in Medicine, 33*(5), 568–576. https://dx.doi.org/10.1080/10401334.2021

Vescera, Z. (2022, February 17). SHA executive says fatigue was behind his decision to leave. *The Star Phoenix*. https://thestarphoenix.com/news/saskatchewan/sha-executive-says-fatigue-was-behind-his-decision-to-leave

Warren, O. J., & Carnall, R. (2011). Medical leadership: Why it's important, what is required, and how we develop it. *Postgraduate Medical Journal, 87*(1023), 27–32.

Weiss, R. (2011, Spring). The quest for physician engagement: Physician relationships are crucial in today's changing environment. *Marketing Health Services, 31*, 29–31

Wisetborisut, A., Angkurawaranon, C., Jiraporncharoen, W., Uaphanthasath, R., & Wiwatanadate, P. (2014). Shift work and burnout among health care workers. *Occupational Medicine, 64*(4), 279–286.

Woolworth, R. (2019, August 9). Great mentors focus on the whole person, not just their protégé's career. *Harvard Business Review*. https://hbr.org/2019/08/great-mentors-focus-on-the-whole-person-not-just-their-career

Appendix A: Daily Journal Template

Observations	What are the explicit (actual) and tacit experiences I encountered today in leading the _____ (described factually, as if each event was recorded on film)?
Reactions	How did I react emotionally to those experiences? What was I thinking as the event unfolded? (This is also known as Argyris's Left-hand column) How did I feel about the event(s)?
Judgements	What insights did I have and what judgements did I make based on those experiences and reactions?
Interventions	What action (or lack of action) did I take (or not take) in response to the event(s)?

Appendix B: Inquiry Team Member Letter of Agreement

In partial fulfillment of the requirement for a Master of Arts in Leadership Degree at Royal Roads University, James Stempien, will be conducting an inquiry study within the Saskatchewan Health Authority entitled: Understanding Physician Leadership Within the Saskatchewan Health Authority Through the Lens of Emergency Medicine Physician Leaders. The Student's credentials with Royal Roads University can be established by calling Dr. Catherine Etmanski, Director, School of Leadership, at [phone #] or email [email address].

Inquiry Team Member Role Description

As a volunteer Inquiry Team Member assisting the Student with this project, your role may include one or more of the following: providing advice on the relevance and wording of questions and letters of invitation and/or reviewing associated knowledge products to assist the Student. In the course of this activity, you may be privy to confidential inquiry data.

Confidentiality of Inquiry Data

In compliance with the Royal Roads University Research Ethics Policy, under which this inquiry project is being conducted, all personal identifiers and any other confidential information generated or accessed by the inquiry team advisor will only be used in the performance of the functions of this project, and must not be disclosed to anyone other than persons authorized to receive it, both during the inquiry period and beyond it. Recorded information in all formats is covered by this agreement. Personal identifiers include participant names, contact information, personally identifying turns of phrase or comments, and any other personally identifying information.

Bridging Student's Potential or Actual Ethical Conflict

In situations where potential participants in a work setting report directly to the Student, you, as a neutral third party with no supervisory relationship with either the Student or potential participants, may be asked to work closely with the Student to bridge this potential or actual conflict of interest in this study. Such requests may include asking the Inquiry Team Advisor to: send out the letter of invitation to potential participants, receive letters/emails of interest in participation from potential participants, independently make a selection of received participant requests based on criteria you and the Student will have worked out previously, formalize the logistics for the data-gathering method, including contacting the participants about the time and location of the interview or focus group with the selected participants (without the Student's presence or knowledge of which participants were chosen).

This strategy means that potential participants with a direct reporting relationship will be assured they can confidentially turn down the participation request from their supervisor James Stempien, as this process conceals from the Student which potential participants chose not to participate or simply were not selected by you, the third party, because they were out of the selection criteria range (they might have been a participant request coming after the number of participants sought, for example, interview request number 6 when only 5 participants are sought, or focus group request number 10 when up to 9 participants would be selected for a focus

group). Inquiry Team members asked to take on such 3rd party duties in this study will be under the direction of the Student and will be fully briefed by the Student as to how this process will work, including specific expectations, and the methods to be employed in conducting the elements of the inquiry with the Student's direct reports, and will be given every support possible by the Student, except where such support would reveal the identities of the actual participants.

Personal information will be collected, recorded, corrected, accessed, altered, used, disclosed, retained, secured and destroyed as directed by the Student, under direction of the Royal Roads Academic Supervisor.

Inquiry Team Members who are uncertain whether any information they may wish to share about the project they are working on is personal or confidential will verify this with James Stempien, the Student.

Statement of Informed Consent:

I have read and understand this agreement.

_____ _____ _____

Name (Please Print) Signature Date

Appendix C: Research Information Letter

Investigation of Physician Leadership within the SHA by interviewing emergency physician leaders.

My name is James Stempien and this research project is part of the requirement for a Masters' in Health Care Leadership at Royal Roads University. My credentials with Royal Roads University can be established by contacting Dr. Catherine Etmanski, Director, School of Leadership Studies: [email address] or [phone #].

Purpose of the study and sponsoring organization

The purpose of my research project is to understand the training, skills or support that help create strong physician leaders within the Saskatchewan Healthcare Authority, by looking through the lens of emergency medicine physician leaders.

Your participation and how information will be collected

The research will consist of a one hour semi structured interview that will ask specific questions of emergency physician leaders on their leadership experience. Also possibly participate in a one-hour focus group to confirm that the interview-based data is a accurate representation of the physician experience.

Benefits and risks to participation

The potential benefits would be to understand the training, skills or support that help create strong physician leaders within the Saskatchewan Healthcare Authority. There is no direct benefit to participants for completing the interview. Findings from the study will simply help emergency physicians develop a better understanding of leadership experience within their profession.

This study is considered minimal risk research. As such, there are few foreseeable risks for individuals choosing to interview. If at any time, the interview regarding your experience as an emergency physician leader elicits strong emotions, you may choose to withdraw from the study. You are also free to withdraw from the interview at any time prior to data analysis with no reason given. You only have to answer those questions that you are comfortable with. Your decision to participate, not participate, or withdraw from the study will have no effect on your employment, professional status, standing in the future, or how you will be treated.

The interviews and focus group is planned to be done in person with appropriate social/physical distancing. If health regulations change or any participant is uncomfortable with the approach a virtual platform will be used.

Inquiry team

The inquiry team includes; Dr Davis, Research director for the Emergency Department. Dr Thoma, Dr Trivedi and Dr Wilson-Gerwing, Research Facilitator for the Emergency Department.

Real or Perceived Conflict of Interest

There may be a perception of a potential conflict of interest due to my dual role as Provincial Head of Emergency Medicine and as RRU researcher. All participants will be fully informed of this dual role and their participation in the research will be strictly voluntary. I disclose this information here so that you can make a fully informed decision on whether or not to participate in this study.

Confidentiality, security of data, and retention period

I will work to protect your privacy throughout this study. All information I collect will be maintained in confidence with hard copies (e.g., consent forms) stored in a locked filing cabinet in my home office. Electronic data (such as transcripts or audio files) will be stored on a password protected computer on my home computer. Information will be audio recorded in hand-written format and, where appropriate, summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to any individual unless specific agreement has been obtained beforehand. All documentation will be kept strictly confidential. After the study is completed, all audio-recorded data (individual semi-structured interviews and focus groups) will be stored on a password protected USB in a locked cabinet in the locked office of Dr. Philip Davis. Dr. Davis is the Research Director, Department of Emergency Medicine, University of Saskatchewan. Data will be secure and backed up and eventually destroyed, in accordance with the data security system at the University of Saskatchewan. If someone has withdrawn prior to the data collection period any of their information will not be retained. Due to the nature of the group method it is not possible to keep identities of the participants anonymous from the researcher, or other participants. The participants will be will be asked to respect the confidential nature of the research and not share names or identifying comments outside the group.

Sharing results

In addition to submitting my final report to Royal Roads University in partial fulfillment for a Masters' Degree in Health Care Leadership, I will also be sharing my research findings with the Saskatchewan Health Authority. I may also submit the work to a peer reviewed journal. No names will be used at any time and all information will forever remain anonymous.

Procedure for withdrawing from the study

Your decision to participate in this study is completely voluntary and your refusal to participate will involve no penalty or loss of benefits to which you are entitled. In addition, you may withdraw from the study at any time prior to the point at which your data is entered and prepared for data analysis without penalty or loss of benefits. You are encouraged to contact the lead investigator (Dr Stempien) if you decide to discontinue participation. As a guideline you can withdraw at any time up to one month after your active participation in the study has ended

You are not required to participate in this research project. By replying directly to the e-mail request for participation or signing the in person consent form, you indicate that you have read and understand the information above and give your free and informed consent to participate in this project.

Please keep a copy of this information letter for your records.

Appendix D: Invitation to Participate in a Research Project

I am contacting you on behalf of Dr James Stempien, regarding participation in a research project.

Dear [Prospective Participant],

I would like to invite you to be part of a research project that is being conducted by Dr Stempien. This project is part of the requirement for his Masters' Degree in Leadership, at Royal Roads University. This project has been approved by the Saskatchewan Health Authority (SHA) and has been given the permission to contact potential participants for this purpose.

The purpose of this research is to investigate physician leadership within the SHA by interviewing emergency physician leaders. Through this to better understand and make recommendations for medical leadership for the SHA.

Your name was chosen as a prospective participant because you are an emergency medicine physician leader within the SHA.

This phase of the research project will consist of a semi-structured interview and possibly a focus group, and each is estimated to last approximately one hour.

The attached document contains further information about the study conduct and will enable you to make a fully informed decision on whether or not you wish to participate. Please review this information before responding.

You are not required to participate in this research project. If you do choose to participate, you are free to withdraw at any time up prior to data analysis with no reason given without prejudice.

I will hold your decision whether or not to participate in confidence and the researcher, James Stempien, or the SHA, will not know who has participated, who has not participated, and who has withdrawn.

I realize that due to your collegial relationship with Dr Stempien, you may feel compelled to participate in this research project. Please be aware that you are not required to participate and, should you choose to participate, your participation would be entirely voluntary. If you do choose to participate, you are free to withdraw at any time prior to data analysis without prejudice. If you do not wish to participate, simply do not reply to this request. Your decision to not participate will also be maintained in confidence. Your choice will not affect our relationship or your status in any way.

Please feel free to contact me at any time should you have additional questions regarding the project and its outcomes.

If you would like to participate in my research project, please contact me at:

Name: **[your name here]**
Email: **[your email address here]**
Telephone: **[your telephone number here]**

Sincerely,

[Your name here, or the person sending on your behalf]

Appendix E: Interview Consent Form

You are invited to participate in a research study entitled: Understanding Physician Leadership Within the Saskatchewan Health Authority Through the Lens of Emergency Medicine Physician Leaders

By signing this form, you agree that you are over the age of 19 and have read the information letter for this study. Your signature states that you are giving your voluntary and informed consent to participate in this project and have data I contribute used in the final report and any other knowledge outputs (articles, conference presentations, newsletters, etc.).

I consent to the audio recording of the semi-structured interview

I consent to the video recording of the focus group

I consent to quotations and excerpts expressed by me through the either above method be included in this study, provided that my identity is not disclosed

I consent to the material I have contributed to and/or generated thorough my participation in either above stated method be used in this study

I commit to respect the confidential nature of the focus group by not sharing identifying information about the other participants

Name: (Please Print): _____

Signed: _____

Date: _____

Appendix F: Interview Protocol and Questions

Emergency Physicians and Medical Leadership

Introduction –

Welcome – Thank you for taking part in this interview which is an inquiry about emergency physicians and medical leadership. This is the final project for my masters' degree so I really appreciate your help.

What experiences as an emergency physician, including experiences with physician training, the healthcare system, and decision making, contribute to emergency medicine leadership?

All the background information was in the consent form you were given and signed. Just to reiterate, all the information is confidential, all information will be anonymized when the transcription is done. If at any time you decide you want to withdraw or not answer any specific question that is fine and is up to you.

This is going to be recorded, on a voice recorder but not recorded over zoom.

This should take about 45 minutes

Do you have any questions before we get started?

Please state your name

1. Can you tell me a little about yourself, how old are you? what is your gender that you identify with, what are your preferred pronouns for this interview, What is your medical training? Your emergency medicine training, and how long have you been working as a doctor in EM?

2. What is your leadership position at this time?
    a. Is it a formal or informal position?
    b. How long have you had this current leadership role?

3. How do you get to this position? What is your leadership journey?
    a. When in your career did you first step into a role in medical leadership? Were there challenges because it was (early? Late into career?)

4. What led you to take on a role in medical leadership? Why did you go into leadership?
    a. Was leadership a choice or was it assigned?

5. What role did mentorship play in your development as a medical leader?
    a. Can you talk about how you still receive mentorship or how you mentor others in leadership?

6. In your opinion are there aspects of being an emergency physician that fit with a role in medical leadership?
    a. Most physicians are not shift workers, how does the fact the ER docs are shift workers positively or negatively affect your leadership role?
    b. Does the way you make decisions as an emergency physician have any effect, positive or negative on your role in medical leadership?
    c. As an emergency physician you have to learn how to create rapid, intense, short term relationships patients each shift, does this pattern of relationship building appear in your leadership work? If so is it something positive or negative
    d. Some emergency physicians describe a need to be creative, do you agree and does this have any ramifications?

7. In your role as an ER doctor you regularly interact with all the various specialities and elements of the healthcare system. How does that system wide experience shape your views or work as a medical leader?

8. We talked about how emergency department work can influence with medical leadership, I wanted to get more specific, what specific skills that you have as an emergency doctor has helped you out in your medical leadership role
    a. Tell me about any ER physician skills (or behaviours) that hinder your work as a physician leader?
    b. Tell me about any ER physician skills (or behaviours) the aid your work as a physician leader?
    c. Is there an ER physician personality or type?
    d. If there is how does it interplay, help or hinder medical leadership work?

9. The emergency department has been described as a chaotic environment. Tell me a little bit about your adaptation to an emergency department clinical role.
    a. What you have described, this adaptation, does it play any role in your leadership position?

10. At times we can learn from negative experiences, (intimidation/ harassment/ discrimination/ negative peer or patient interactions) in our career. Can you describe any negative experiences either in the ER or in your physician leadership role that has had an influence on your skills as a physician leader?

11. I wanted to talk about medical leadership and pay?
    a. Do you get paid for your leadership work?
    b. Did you work for free or off the side of your desk at one time in a medical leadership role and if so for how long?
    c. What role does $$$ have? In medical leadership positions?
    d. How much of an influence does money have in accepting a formal medical leadership?

12. How would you describe successful medical leadership?
    a. What would make the leadership around you even better? What would you like to see around you?

13. What do you enjoy about your job as a physician leader? What is struggle for you? What are you goals for your leadership roles.

14. We are just about finished, is there anything else about you being an emergency medicine physician and medical leader that you want to share that we haven't touched on?

Appendix G: Focus Group Invitation

Dr. Stempien would like to thank you for being one of the interview participants in his inquiry "Understanding Physician Leadership Within the Saskatchewan Health Authority Through the Lens of Emergency Medicine Physician Leaders".

To finish the data gathering portion of his study, he is arranging a focus group from a subset of the original participants to discuss key themes that were discovered in the coding of the data.

The focus group will be approximately one hour in length and will include 4 -5 emergency physicians.

You are being invited to participate in the focus group. Your participation is completely voluntary and the lead investigator will not know your response.

If you are willing to participate, please sign and return the attached consent form to me.

A time for the focus group will be arranged that will be convenient for the entire group.

Thank you for considering this invitation. I look forward to your response.

Tracy D. Wilson, PhD

Research Coordinator

Appendix H: Focus Group Guiding Structure

Thank them all for coming. I'll be recording this on a handheld recording device and anyone who wants to see the transcript of this focus group, I will send it to you.

I sent you all your transcript from your original semi-structured interview. There was no obligation to read it, but it was sent as a memory aid

This is the last data gathering activity in my masters' thesis looking at emergency medicine physician leadership. Up to now I've done 13 semi-structured interviews I'll collated the information and come up with some general themes. The idea behind the focus group is that I'll present the themes or patterns and we'll discuss if what I found makes sense to you and if you want to expand / clarify / disagree with what I found?

Various patterns came up about emergency physician leadership we'll discuss them one at a time.

Decision making – a recurrent theme inn the interviews was the ability of ER physicians to make decisions and an ability to take charge. ER physicians make decisions regularly in time sensitive environments. The participants agreed with this and felt that skill, set ER physician leaders apart from other physician leaders. During a meeting ER physicians are able to discuss professionally but also able to come to a decision and move the issue on. How do you feel about that type of summary and do you have examples that confirms of disagrees with this statement?

Availability – During the interviews I asked about shift work and if that made it easier to be a physician leader or not. There were various opinions, one theme that came out was availability. The shift work of ER physicians can create open time during the day and ER physicians are potentially more available for various administrative tasks or meetings. It was expressed that this also created challenges in work / life balance as ER physicians were perceived by others as always being available. Can you comment on this concept of ER physician availability for leadership work and how this affects you.

Communication – During the interviews it was expressed that to be an effective emergency physician you have to be a good communicator. ER physicians meet a series of patients that they have never seen before in the course of a shift, get their trust and try to understand their issues. This is done in spite of whatever stressful event has just occurred during the course of the clinical shift. There seems to be a certain ability to compartmentalize, thinking and to keep up with clear communication. It was expressed ER physicians communication skills translated well to the world of meetings and administration. Do you feel this is true or what is your interpretation?

Chaos and system engagement – One of the themes that came out in the interviews was ER physicians are comfortable with the clinical chaos of the emergency department environment. Complexity also exists in our medical system. Does the comfort or habituation to clinical complexity carry over into comfort with system complexity? Is it that comfort with

complexity or chaos help in adaptation to leadership work? Does the fact that emergency physicians are exposed to the full realm of our healthcare system allow better understanding and involvement?

Challenges – During the interviews it was discussed the various challenges of a physician leadership position. Some of these challenges are specific to emergency physicians. Some ideas expressed were the risk of early closure in administrative decisions, (because we want to get it done). The risk of working all night and then being obliged to go to a meeting. Or just wanting to make decisions when the rest of the meeting isn't ready for it. Do these ideas ring true for you and what challenges in leadership work have your faced?

Pay – Adequate financial renumeration or lack, is not something unique to ER physician leaders but it was something that was mentioned often in the interviews. For the healthcare system to attract excellent physician leaders pay needs to come into the conversation. How does pay affect your decision to take or keep a leadership position and what would you like to see in a perfect system?

From you own experience is there anything you would like to discuss or add about being an emergency physician in a leadership position?

April 2, 2021

The prioritization list as pre-determined by the focus group attendees

1. Decision making
2. Challenges
3. Availability (tied with next)
4. Communication
5. Chaos and system engagement
6. Pay

Appendix I: Focus Group Consent Form

You are invited to participate in a research study entitled: Understanding Physician Leadership Within the Saskatchewan Health Authority Through the Lens of Emergency Medicine Physician Leaders

Researcher(s): James Stempien, Department Head Emergency, [phone #], [email address]

Supervisor: Dr Alisa Harrison, Royal Roads University, [email address],

Purpose(s) and Objective(s) of the Research:

- Investigation of Physician Leadership within the SHA by interviewing emergency physician leaders

Procedures:

This section of the study will be a one-hour focus group interview to ask questions of emergency physician leaders on their leadership experience. The project will be fully explained by a trained Research Facilitator (RF). If you wish to participate the RF will ask you to sign the informed consent form for the project. After providing your consent, you will participate in a focus group on your experience as an emergency medicine physician leader. The focus group will be conducted by the lead investigator for the study, will be audio-recorded, and will be transcribed word for word by the Social Sciences Research Laboratory, University of Saskatchewan. The focus group will include other emergency medicine physician leaders and yourself and will last for about 45 – 60 minutes. Your name will not be associated with your focus group interview and no link will be possible between you and the comments on the transcript. The research team will take the information and search for themes/experiences regarding the positive and challenging elements of emergency physician leadership from the perspective of the focus group. Please feel free to ask questions at any time throughout the process.

Funded by:

This study is unfunded.

Potential Risks:

This study is considered minimal risk research. As such, there are few foreseeable risks for individuals choosing to participate in the focus group. If at any time, the interview regarding your experience as an emergency physician leader elicits strong emotions, you may choose to withdraw from the study. To reiterate, you only have to answer those questions that you are comfortable with and are free to withdraw from the focus group at any time with no reason

given.. Your decision to participate, not participate, or withdraw from the study will have no effect on your employment, professional standing in the future, or how you will be treated.

Potential Benefits:

Potential benefits include enhanced understanding of the training, skills or support needed to create strong physician leaders within the Saskatchewan Healthcare Authority. There is no direct benefit to participants for completing the interview. Findings from the study will simply help emergency physicians develop a better understanding of the leadership experience within their profession.

Confidentiality:

The Consent Forms will be stored separately from the focus group data, so that it will not be possible to associate a name with any given set of responses. You will not be asked to put your name or other identifying information on any of the material used.

All interview information that you provide will be stored in a strictly confidential and secure manner and used only for the purposes of improving physician leaders in the emergency medicine domain. All electronic data will be stored in a secure computer in the Department of Emergency Medicine, any physical data will be stored in a locked cabinet in the offices of the department Head of Emergency Medicine which are also only accessible through a locked door. After 5 years post-publication, all data physical or electronic will be destroyed beyond recognition.

The researcher will undertake to safeguard the confidentiality of the group discussion. But cannot guarantee that other members of the group will do so. Please respect the confidentiality of the other members of the group by not disclosing the contents of this discussion outside the group, and be aware that others may not respect your confidentiality. The data from this research project may be published and presented at conferences. The data will, however, be reported in aggregate form, so that it will not be possible to identify individuals. The findings will be part of my masters' thesis for Royal Roads University and if applicable may become part of a journal article submission to a relevant medical journal.

Right to Withdraw

Your participation is voluntary and you can participate in only those discussions that you are comfortable with. You may withdraw from the research project for any reason, without explanation or penalty of any sort. Should you wish to withdraw, you may leave the focus group meeting at any time; however, data that have already been collected cannot be withdrawn as it forms part of the context for information provided by other participants.

Follow up:

Once the study is complete if you want to see the results of the study, any resulting journal articles or the final master's thesis please contact Dr Stempien at [email address] or through the offices of the University of Saskatchewan Emergency Department

Questions or Concerns:

- Contact the researcher(s) using the information at the top of page 1;
- This research project has been approved on ethical grounds by the University of Saskatchewan Behavioural Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975.

Consent

Your signature below indicates that you have read and understand the description provided; I have had an opportunity to ask questions and my/our questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

_____	_____	_____
Name of Participant	*Signature*	*Date*

_____	_____
Researcher's Signature	*Date*

A copy of this consent will be left with you, and a copy will be taken by the researcher.