The Role of Champions in the Implementation of Patient Safety Practice Change

by

Stephanie D. Soo

A thesis submitted in conformity with the requirements for the degree of Master of Science

Graduate Department of Health Policy, Management and Evaluation
University of Toronto

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Abstract

Objectives: The concept of clinical champions has been widely promoted, yet empirically underdeveloped in health services literature. The objectives of this study are to investigate the role of the clinical champion and how it contributes to effective patient safety change.

Methods: Case study design was used to examine the role of champions in the implementation of rapid response teams in two hospitals. Central themes were derived through qualitative analysis of semi-structured interviews with key informants.

Results: Analysis revealed a typology of champions: clinical, managerial, and executive. Champions engaged in five core activities: disseminating knowledge, advocating, building relationships, navigating boundaries, and facilitating consensus. Individuals became champions by informal emergence or by formal appointment combined with informal emergence.

Conclusions: This study furthered understanding of patient safety champions by revealing types, activities, and modes of emergence. Findings will allow health care professionals to use an evidence-based approach to identifying and supporting champions.
This work is dedicated to my grandmother, Mah Mah.
Acknowledgements

This work is the culmination of the efforts of many individuals. To those of you named here and others, thank you all for your contributions to the completion of this thesis and degree program.

First and foremost, my sincere thanks go to my supervisor and greatest supporter, Whitney Berta. I have had the great fortune of having you not only as a supervisor, but also as a mentor and friend. Thank you for nurturing my sense of inquiry, exploration, and discovery. Most of all, thank you for your enduring optimism and encouragement.

Thanks also to my committee member, Ross Baker. I have profited enormously from your wealth of experience, your sharp insight, and your uncanny knack for always being right about everything.

To the participants of this study and the individuals who provided guidance on site selection, thank you for your contributions of time, effort, and honesty. Without you, this thesis would not have been possible.

Thanks to the many HPME staff and faculty who helped me to feel at home at the department. Rhonda Cockerill, Louise Lemieux-Charles and many others deserve special acknowledgement for working tirelessly to create a fertile and supportive learning environment in which to grow great students.

To my fellow HPMEers, cheerleaders, and commiserators, Kerry Kuluski, Jillian Watkins, Jonathan Lam, Kelley Ross, Jaclyn Beca and Chelsea Hellings.

Thanks to Jennifer Wong, Karen Leung, and Huang Iu who have all contributed in very tangible ways to the achievement of this milestone and to whom I owe a deep debt of gratitude.

A special thanks to Catherine Mah, my mini-professor and secret weapon. Thank you for your ruthless editorial eye, your interest in thinking the big thoughts with me, and for all those home-cooked meals. Without your unflagging support, my thesis would have undoubtedly been a much lesser work and me a lesser student.

And finally thanks to my family, whose encouragement, prayers, and gentle nagging have upheld me and seen me through to the finish line. To my mom, Lily, my dad, Raymond, my sister Kristen, and my grandparents, Poh Poh and Gung Gung. Your boundless support, exceptional generosity, and abiding love are my sustenance.
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List of Abbreviations

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CPOE</td>
<td>Computerized physician order entry</td>
</tr>
<tr>
<td>ICU</td>
<td>Intensive care unit</td>
</tr>
<tr>
<td>IHI</td>
<td>Institute for Healthcare Improvement</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine of the National Academies</td>
</tr>
<tr>
<td>MOHLTC</td>
<td>Ontario Ministry of Health and Long Term Care</td>
</tr>
<tr>
<td>MRP</td>
<td>Most responsible physician</td>
</tr>
<tr>
<td>RRT</td>
<td>Rapid Response Team</td>
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<td>RT</td>
<td>Respiratory therapist</td>
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Chapter 1 - Introduction

In 1999, the issue of patient safety was thrust into the spotlight by the release of the report *To Err is Human* by the Institute of Medicine of the National Academies (IOM). By revealing the troubling estimate that in the United States “at least 44,000 people, and perhaps as many as 98,000 people, die in hospitals each year as a result of medical errors that could have been prevented”, the report triggered a wave of patient safety initiatives and related research (Institute of Medicine 1999, 1). Now a decade later, patient safety continues to be a dominant agenda item for both healthcare professionals and researchers.

Despite an intensified research focus and concerted efforts to achieve high reliability health care, critics have charged that progress has been “frustratingly slow” (Leape and Berwick 2005, 2385). Although there have been many localized successes, significant system-wide improvements have yet to be seen. This is not to say that health care organizations have been insincere or sluggish in their efforts; at least 3900 organizations in the United States have voluntarily joined the Institute for Healthcare Improvement's (IHI) 5 Million Lives patient safety campaign and another 272 with Canada’s Safer Healthcare Now campaign. Achieving successful change can be difficult in any large organization (Kotter 1996) and especially challenging in organizations as large and complex as those that provide health care.

Improving patient safety requires change at multiple levels of the health care system, from entire organizational structures down to individual behaviours. The involvement of such diverse networks of systems and people nearly guarantees that implementation of change will be difficult. The implementation process is further complicated by barriers that are particular to patient safety change.

First, certain patient safety practices require changes in behaviour or high levels of task standardization that may limit the extent to which health care professionals can exercise discretion in their work. One example is mandatory error reporting (Devers, Pham, and Liu 2004). Resistance to mandatory error reporting and similar efforts to standardize the actions and behaviours of health care professionals arises because these changes are perceived as threats to individual autonomy and are inconsistent with longstanding traditions and values among medical professionals (Amalberti et al. 2005).
Second, concerns exist around the disclosure and reporting of medical errors. Although these activities are essential for improving patient safety, some fear that this disclosure will lead to the assignment of blame, an increase in malpractice issues, and the erosion of public confidence in the health care system (Leape and Berwick 2005).

Third, many patient safety interventions are team-based. Despite proven benefits, achieving multi-disciplinary collaboration and cooperation is complex in the health care environment, where professional fragmentation and heavy emphasis on individual performance are the norm (Classen and Kilbridge 2002).

These and other barriers to patient safety improvement are often rooted in the discord between change requirements and the cultures and values that have been established in educational curricula and reinforced in the health care workplace. Patient safety practice change requires not only procedural change, but also cultural and structural change. With such formidable barriers to overcome, it is no surprise that the rate of patient safety change has been slower than desired.

For radical change to be successful in an organization, certain conditions external and internal to the organization need to be met. In particular, organizations and the individuals within them must 1) be receptive to change and 2) have the capacity to change. These elements form the basis of organizational readiness for change. This construct has been conceptualized by investigating, collating, and synthesizing success factors and barriers to organizational change from research literature and expert interviews (Berta, Baker, and Banaszak-Holl 2005; Oakland and Tanner 2006). Those organizations which have more success factors in place are consequently ‘more ready’ to change. These readiness factors include dedicated resources for change initiatives, leadership that is visibly promotive of change, and cultures that reinforce desired behaviours. Specific to patient safety change, the IOM notes that organizations with strong safety leadership, a defined patient safety agenda, and a culture which promotes learning from mistakes are better equipped to enact changes to improve patient safety.

Considering the investments in resources, energy, and time that patient safety initiatives often require and the importance of these changes to quality of care, it is in the best interest of health care organizations to maximize their chances of success by having more success factors in place, in order to become more change ‘ready’.
In addition to the factors listed above, another recognized way that health care organizations can enhance their readiness to change is by ensuring the presence of clinical champions (Berta, Baker, and Banaszak-Holl 2005). These clinicians, dubbed “special people” by some authors, are thought by some to be a driving force behind the implementation of innovations in health care settings (Ash et al. 2003, 240). Their presence is frequently cited as a major success factor for a wide range of change initiatives. For example, a study of the adoption of safer alternatives to blood transfusion in hospitals found that “the presence of local clinicians who advocated or ‘championed’ a particular method [was] a significant influence on local practice” and that the absence of such a person was associated with poor adoption (Graham et al. 2002). A similar conclusion was drawn from an investigation of success factors for the implementation of computerized physician order entry (CPOE): “one CEO, when asked how he would do it differently next time, replied ‘I would get the clinical champions in place earlier...If you identify these people...these become the agents that are going to sell this change among their peers’” (Ash et al. 2003, 243). In its report To Err is Human, the IOM noted that champion presence was one of the factors that helped anesthesiology become one of the safest sectors of medicine and hence recommended clinician leadership and advocacy as a way to establish a system-wide culture of safety in healthcare overall (IOM 1999).

Although these examples portray changes vastly different in content and purpose, the presence of clinical champions was an important success factor in all. The apparent importance of champions in the implementation of successful patient safety change suggests that closer investigation of these individuals is a valuable research endeavor.

**Research Objectives and Aims**

Broadly, the objective of the proposed study is to explore and better understand the role of clinical champions in the implementation of patient safety change at acute care facilities. Within this overarching context of inquiry, lie three central research questions:

1. What are the core features of the clinical champion role in patient safety implementation?
2. What are the facilitators and barriers to the work of clinical champions?
3. Do clinicians become clinical champions through formal or informal processes, or both?
The aims of the proposed research are to better understand the role of “clinical champion”, champion work processes and challenges, and the processes by which clinicians become champions. From an academic perspective, this research will serve to fill a gap in patient safety implementation literature and will enrich the body of knowledge around change management roles in healthcare. By affording insights into how to support the work of clinical champions, the findings of this research may facilitate efforts on the part of health care workers to promote successful and sustained change.

Overview of Chapters

In Chapter 2, I provide the rationale for conducting this study by identifying research gaps and inadequacies in existing champion literature. I also outline the reasoning behind the choice of patient safety change initiative that was used to study champions.

In Chapter 3, I discuss the methods employed, including the justification of study design and the process of data collection and analysis.

In Chapters 4 through 7, I elaborate upon the study results in four parts. In Chapter 4, I describe the two hospital sites that were studied, provide demographic information about the study participants, and present the core features of the champion role. Chapters 5-7 contain the findings about facilitators, challenges, and champion emergence, respectively.

In Chapter 8, I provide a discussion and comparative analysis on the findings from each site. I also discuss how the findings relate to extant literature about product champions. I then explain some of the limitations of the research, the potential implications this study may have in practice, and the future directions for research and avenues of exploration generated from the study's findings.
Chapter 2 - Theoretical Background and Rationale

Champions have been documented as important contributors to successful change efforts in a variety of industries, including patient safety change in the healthcare sector. Given the role's reported significance in the change process, the concept of champions in the context of patient safety improvement initiatives is worthy of empirical study. Several factors motivating this line of inquiry are detailed below.

**Rationale for Study**

**Research gap**

Though there are exceptions, references to clinical champions as enablers of change in the healthcare sector typically appear in the literature in the forms discussed below.

References to clinical champions often take the form of case or field reports published as submissions in healthcare journals. Authors describe a specific change initiative or intervention that they helped to implement and report their experiential lessons learned and best practices, listing clinical champions as one of a number of success factors. These accounts are not based on scientific study. An example is an article by Harper, Baker, and Reif (2000) where the implementation of a community based primary care project is described and the presence of a physician champion is listed as one of the eight 'lessons learned'.

Clinical champions also appear as the topic of non-scholarly articles in trade publications for healthcare managers or administrators. These articles tend to feature anecdotal accounts and commentaries from healthcare executives about what they believe to be the benefits or features of clinical champions. An example of this form is a journalistic-style article by Larson (2006) which appears in the magazine, *Trustee*. Physician champions are discussed at length, with a sidebar detailing an individual hospital CEO’s definition as to what makes a clinical champion.

Mentions of clinical champions can further be found in peer-reviewed journal articles, which are authored by researchers who have used an inductive approach to try and uncover the facilitators and barriers to change after an implementation attempt has been made. Often through interviews, a number of challenges and success factors emerge, the latter of which include clinical champions. An example of this is a study done by Ash et al. (2003) in which
the facilitators to CPOE implementation were determined. Clinical champions were one of seven categories of key players in the implementation process.

There is a small handful of studies about healthcare champions, including a recent study by Damschroder et al. (2009) who looked at factors that influenced the number of physician-and non-physician champions involved in the implementation of infection prevention measures across number of hospitals. But save for this and a few others, there appears to be relatively little empirical research for which champions in healthcare contexts are the focus of study.

Whether the literature is based on scientific study or not, when clinical champions are listed together with several other important findings or lessons learned, the topic tends to be treated on a cursory level and is subject to no more than a few paragraphs of discussion. In anecdotal accounts or commentaries, where the topic of champions takes centre stage, the concept remains underdeveloped due to the lack of supporting research evidence. Thus, although the topic of clinical champions is often mentioned and represented in healthcare literature, the overall lack of rigorous and focused study leaves a research gap to be filled.

*Inconsistent terminology*

Compounding these difficulties with the literature is the inconsistent and confusing use of the term “champion”. Most authors hint at the same general idea of a champion being someone who strongly advocates for a change initiative, but no singular, formal definition is used consistently throughout the literature. Some use the term as a synonym for other titles such as ‘knowledge broker’ or ‘change agent’ whereas others consider champions to be distinct from these types of people. For example, in describing the roles involved in the uptake of evidence into clinical practice Locock et al. (2001) use the terms “product champion” and “opinion leader” interchangeably. Some authors are even more liberal and use the term “champion” to indicate any key person involved in a change initiative, whatever their contribution. This inconsistent usage engenders confusion and tends to weaken the meaning of these terms, each of which originated from management or sociology literature. A selection of these terms and their original definitions are given in the table below. Each term has been used synonymously with “champion” in health care research literature.
<table>
<thead>
<tr>
<th>Term</th>
<th>Original Definition and Source</th>
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<tbody>
<tr>
<td>Knowledge broker</td>
<td>A knowledge broker is generally understood to be an individual (or organization) who acts as a link “between different entities or individuals that otherwise would not have any relationship” so that knowledge can be shared and exchanged (Canadian Health Services Research Foundation 2003; Lomas 2007). This term has multiple origins and maps to literature on social networks (e.g. Marsden and Lin 1982), organizational learning, and knowledge management (e.g. Hargadon and Sutton 1997), and knowledge transfer (e.g. Oldham and McLean 1997).</td>
</tr>
<tr>
<td>Change agent</td>
<td>A change agent is an individual who works to influence a client’s decision about an innovation in a direction determined by a change agency. These individuals often come from outside the organization in which they are trying to achieve change and have been hired to manage the change process (Lippitt, Watson, and Westley 1958).</td>
</tr>
<tr>
<td>Opinion leader</td>
<td>An opinion leader is an individual who has the ability to informally influence others’ opinions, behaviours, or attitudes with relative frequency (Lazarsfeld and Katz 1955).</td>
</tr>
</tbody>
</table>

Nonetheless, some authors do employ these terms with more discretion and have attempted to offer definitional clarity. In a literature review of knowledge transfer concepts, Thompson, Estabrooks, and Degner acknowledge that the interchangeable use of terms borrowed from other disciplines has led to “confusion and ambiguity in exactness of concepts” and attempt to distinguish five knowledge transfer roles from each other: opinion leaders, facilitators, champions, linking agents, and change agents (2006, 692). Similarly, in a large-scale systematic review of innovation diffusion in service organizations, Greenhalgh et al. (2004) identify and differentiate champions, opinion leaders, and boundary spanners as different components that influence the spread of innovations. The authors also note that “there is very
little direct empirical evidence on how to identify, and systematically harness the energy of, organizational champions” (Greenhalgh et al 2004, 603).

Although the Thompson, Estabrooks, and Degner and Greenhalgh et al. reviews appear in health care research journals, the definitions and literature cited for the champion role are sourced entirely from business and management journals. Having familiarized themselves with previous champion research, these authors use a definition of champion cited from management research, where the concept first originated. Authors of later studies such as the one conducted by Damschroder et al. (2009), have based their conceptualization of champions upon these earlier reviews, and so too have borrowed a concept from the sphere of business and management to elucidate their findings.

**Historical origins of champions**

The idea was first proposed in 1963 by Schon who identified the role of the product champion by studying patterns of weaponry innovation in the military. He contended that for an innovation to overcome the natural resistance shown by individuals and organizations someone must emerge to adopt the idea as his or her own and endorse it relentlessly through social networks. This emergent leader was the innovation’s “champion.” According to Schon, champions are not optional: “where radical innovation is concerned, the emergence of a champion is required … the new idea either finds a champion or dies” (1963, 84). The demand for champions is complicated by the fact that they are special and rare people who must go beyond the daily requirements of their jobs and risk position and prestige in order to push for innovations of uncertain success. Indeed, Schon suggests that there is a heroic quality to champions.

Other innovation diffusion researchers followed Schon’s lead and began to study product champions in depth. A sizeable body of champion research now exists in the management literature and includes studies of their personalities, influence tactics, effects on product outcomes, political strategies, and leadership behaviour.

After an extensive study of champions and non-champions, Howell and Higgins developed the following definition:

Champions are the individuals who emerge to take creative ideas (which they may or may not have generated) and bring them to life. They make a decisive contribution to the innovation process by actively and enthusiastically promoting
the innovation, building support, overcoming resistance, and ensuring that the innovation is implemented. (Howell and Higgins 1990a, 40)

To this definition, Markham and Aiman-Smith (2001) add that a champion is an individual who recognizes the potential of a new technology and adopts it as his or her own to promote. The role is an informal one; champions go beyond what their job requires, personally committing to the project of pushing an innovation forwards and risking position and prestige to ensure its success (Howell and Higgins 1990b).

Although product champions have been reasonably well covered in management research, there remains a paucity of champion research in health care contexts. Indeed, like many other concepts and terms, the concept of champion has been appropriated into health care from the realm of management research. Adoption on the part of health care researchers of the management-defined champion construct appears to have been made on the a priori assumption that clinical champions are equivalent to product champions in terms of who they are and what they do. This assumption has never been empirically explored or tested in either management or health care literature. Although it is expected that certain research findings about product champions also hold true for clinical champions, there may be important differences in the role of champions in health care settings. Given that champions are so widely promoted in health care circles as a key to implementation success, the original concept from management research may require modification and, at very least, requires more rigorous examination in order to ascertain its relevance and usefulness to health care settings and the context of patient safety change.

Champions in context

Some suggestions as to why there may be differences between clinical champions of patient safety change and the product champions studied in management literature are discussed below.

First, a clinical champion’s role may differ from a product champion’s based on the innovation climate of the sector in which each works. Many if not most of the champions studied by innovation diffusion researchers work for goods or technology-based firms, where innovation is essential for organizational growth and survival. Although new products and technologies are indeed important for the health care sector also, acute care facilities are first
and foremost service-based, not goods-based, organizations. Product champions have been found to be innovation-minded individuals who thrive in an organizational environment that “grows through innovation, operates flexibly and exploits new product and market opportunities” (Howell 2005, 115). As informal leaders who go beyond their formal job description and take risks, product champions operate best in organizations that offer role flexibility and that are open to risk and change. In contrast, clinical champions work in acute care facilities which, due to the nature of health care provision, may be more focused on permanence and stability and smooth, efficient operation than on change and innovation. The differences between the organizational environments of market-oriented, goods-based sectors and not-for-profit, service-based health care facilities may lead to appreciable differences between the champions that exist in either sector. Indeed, to date the role of champions in the service sector has been left unexamined and has been identified as a “critical unresolved issue” in champion research (Markham & Aiman-Smith 2001, 48-49).

A second reason why clinical champions may differ from product champions is the unique nature of their social working environment. The social environment of an organization, including collective norms and the connectedness of communication networks, has an effect on the rate of innovation adoption and, perhaps by extension, the role of the champion (Rogers 2003). Due to the wide mix of professionals, the social system of a hospital is quite unlike that of any other sector and may present challenges not faced by champions elsewhere. For instance, although product champions must overcome their colleagues’ resistance to innovation, the population with which clinical champions work may be particularly difficult or resistant; as a group, physicians have often been criticized as being overly resistant to change (Poses 1999). It has been reasoned that the principles of self-regulation, collegiality, and autonomy are so deeply ingrained in medical culture that changes that have the potential to threaten these ideals (which include some patient safety initiatives) may be met with strong resistance (Lawton and Parker 2002). Strong professional culture extends beyond physicians to other health care professionals, with each group having their own set of collective norms and beliefs (Marren, Feazell, and Paddock 2003). Thus, in addition to facing strong resistance, clinical champions may also need to use tactics sensitive to multiple professional cultures in order to win over their peers.

Product champions rely on networks of communication and personal relationships to build support for the innovations they adopt. Tight interconnectedness between communication
networks speeds the rate of adoption and may facilitate the work of product champions (Rogers, 2003; Markham 2001). In a clinical setting, champions may be faced with very fragmented networks of communication. Health care professionals have been known to work in silos, isolated by specialty or discipline, with little communication or transfer of knowledge between groups (Begun, Tornabeni, and White 2006). This segregation may make it more difficult for a clinical champion to foster strong personal relationships similar to those that product champions use to successfully convince others to change. Silos also exist in other industries, but paired with the unique professional cultures of health care workers, fragmented networks may pose special problems for champions. In the health care context, as compared to product champions, clinical champions may face stronger resistance, more fragmented communication networks, and greater boundaries between professional cultures.

Third, clinical champions may also differ from product champions because of the direction of the change they are promoting. The innovations adopted by product champions often start at a grassroots level and are promoted upwards throughout the organization (Schon 1963). Driven by his or her strong belief in the innovation, the champion emerges, unasked, to endorse it to peers and superiors. Product champions have been found to be risk-takers as they go beyond their formal job requirements to promote unsanctioned innovations (Schon 1963).

By contrast, for initiatives such as Safer Healthcare Now or 1 Million Lives, patient safety improvement practices are frequently initiated at the top of an organization and percolate downwards. Most often, hospital administrators make the decision to implement major patient safety innovations and may even assign formal implementation teams. Because the innovation is officially sanctioned, clinical champions who promote the change may face less personal risk than product champions. Additionally, in comparison to the informal, emergent product champions, it is feasible that involving clinical champions may be a formally designated part of the implementation plan.

The table below outlines some of the contextual factors which may lead to differences between product champions and clinical champions.

**Table 2. Contextual differences that may distinguish clinical champions from product champions.**

<table>
<thead>
<tr>
<th>Differentiating factor</th>
<th>For product champions</th>
<th>For clinical champions</th>
</tr>
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<tbody>
<tr>
<td>Innovation climate</td>
<td>Innovation-oriented, risk-taking organizations, which</td>
<td>Stability-oriented, risk-averse organizations, which</td>
</tr>
<tr>
<td>Sector</td>
<td>For-profit, goods-based organization</td>
<td>Not for profit, service-based organization</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Social working environment</td>
<td>Variable</td>
<td>Silos and professional fragmentation</td>
</tr>
<tr>
<td>Direction of change</td>
<td>Bottom-up</td>
<td>Top-down</td>
</tr>
</tbody>
</table>

Although these and other plausible suggestions can be offered as to why clinical champions are distinct from product champions, this is not to say that they share no similarities. The concept of champions was most likely imported into health care research because it seemed a fitting descriptor for a key role in the implementation of certain innovations. However, for the concept of clinical champions to be more useful to health care researchers and professionals, the role definition adopted from management research may require modification to suit health care contexts. Accordingly, this study explores the role of so-called champions or key actors in the implementation of patient safety implementation and then compares these findings to management research on product champions. This approach avoids making a priori assumptions about clinical champions, yet still incorporates the wealth of previous research on product champions.

Clinical champions are regarded as essential success factors for patient safety change; however, the extant literature reveals a lack of directed research, inconsistencies of meaning, and a presumptive adoption of management research. Mine is an exploratory study focusing on clinical champions working for patient safety change and will contribute clarity and contextual understanding.

**Rationale for selection of innovation**

For this study, I employed Rogers' widely accepted definition of an innovation as "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (2003, 12). Whether the idea is objectively new (such as a novel invention) is irrelevant, so long as it is new to the adopter.
To best explore the role of the clinical champion, I elected to study an innovation for which the role of the champion is likely to be prominent or especially important. Product champions focus their efforts on building support for an innovation and ensuring its implementation; thus the presence of a champion may be more critical to achieve success for an innovation that is difficult to implement than for one that is more easily adopted. The less important the champion’s role is, the less prominent it becomes, and, potentially, the more difficult it would be to study. Hence, to study clinical champions, an innovation that seemed complex or relatively difficult to implement was sought for study.

**Innovation attributes**

According to Rogers (2003), five perceived attributes of an innovation help to determine its relative rate of adoption (and by extension, implementation). These attributes are as follows: 1) relative advantage, the degree to which a potential adopter believes the innovation to be better than what came before it; 2) compatibility, the degree to which the innovation is seen to be harmonious with the potential adopter’s preexisting values and experiences; 3) complexity, the degree of difficulty of use and understanding the innovation is perceived to have; 4) trialibility, the degree to which the innovation can be experimented with on a small scale; and 5) observability, the degree to which the outcomes of an innovation can be seen. Based on a comprehensive review of innovation diffusion literature, Greenhalgh et al. (2004) adds additional secondary attributes to the list: 1) reinvention/fuzzy boundaries, the degree to which the innovation can be adapted or modified, 2) risk, the degree of uncertainty of outcome related to adoption, 3) task issues, the degree to which the innovation is relevant to the user’s work performance, 4) knowledge required to use it, the degree to which the knowledge required to use the innovation is codifiable and transferable, and 5) augmentation/support, the degree to which the innovation is augmented with support services (e.g. training).

Innovations that are perceived to be advantageous, compatible, non-complex, testable, and observable will be adopted more quickly than those without these perceived attributes. If the innovation is also modifiable, low risk, pertinent to the user’s work, requiring little knowledge to use, and supported by additional services, it is even more likely to be adopted.
The rapid response team (RRT) is an ideal patient safety innovation for studying the role of clinical champions as the innovation’s perceived attributes suggest that it is not one that is easily implemented.

**Rapid response teams**

An RRT is an on-call team of clinicians that operates outside of the intensive care unit (ICU) but within the hospital to provide critical care expertise to staff whose patients display signs of serious deterioration (Durkin 2006; DeVita et al. 2006). RRTs are also known as rapid response systems, medical emergency teams, critical care outreach, critical care response teams, and patient risk teams (DeVita et al. 2006). RRTs are similar to cardiac arrest or code blue teams in that they immediately respond to calls for assistance across the hospital; however, whereas calls to a code blue team are made after a critical event has occurred, calls to an RRT are initiated beforehand. RRTs are meant to prevent a phenomenon known as “failure to rescue,” defined as the failure to prevent a clinically significant deterioration (e.g. death) after the development of a complication in the patient’s condition (Agency for Healthcare Research and Quality). This phenomenon is associated with the failure of staff to recognize and act upon the early signs of patient deterioration, however it does not imply negligence or misconduct.

Failure to rescue has been attributed to three factors (Simmonds 2004):

1. Failure of staff to recognize the signs of physiological instability. On average, patients begin to exhibit signs of deterioration 6-8 hours before the occurrence of a critical event, however these symptoms often go undetected until the patient suffers a respiratory or cardiac arrest.

2. Failure in planning. This may take the form of insufficient treatment or incomplete assessment of the patient’s condition.

3. Failure of caregiver staff to communicate effectively with one another or with the patient. This breakdown may occur for any number of reasons, including the inability of staff to articulate the patient’s condition.

In hospitals with RRTs, staff are educated and encouraged to call the team if a patient fits a list of deterioration criteria. Often, these criteria are broad enough to include “being worried about a patient” or “having a gut feeling” that something is wrong. The ultimate goal of
RRTs are to reduce critical events (specifically, cardiac or respiratory arrests) and overall mortality in hospitals (Durkin 2007).

The composition and size of an RRT can vary widely between hospitals, but usually teams include critical care and/or advanced practice nurses, critical care physicians, and respiratory therapists (RTs) (Seckel 2005). Teams are usually based out of the intensive or critical care unit of a hospital.
The approach of the team can also vary, with the two most popular models being the physician-led step-down model and the nurse-led ramp up model (DeVita 2006). In the former model, the RRT physician attends to all calls along with the rest of the team. If the initial assessment of the patient reveals that the physician is not required, then he or she will withdraw, leaving the rest of the team to carry on with the patient. In the latter model, the RRT nurse and commonly a respiratory therapist are the first responders. Based on their initial assessment, they determine whether or not the RRT physician must be called in for assistance. If not, the nurse and respiratory therapist will assist the patient themselves. Although not yet empirically compared, each model has been said to have respective advantages and disadvantages. The nurse-led model may be more cost efficient and less intimidating for other nurses to call, whereas the physician-led model provides the highest level of care to all patients as quickly as possible (DeVita 2006).

RRTs have been endorsed by the IHI’s 5 Million Lives campaign and its Canadian counterpart, Safer Healthcare Now, as a way to prevent the deaths of patients who are deteriorating outside of the ICU. As such, RRTs are rapidly gaining popularity in hospitals.
across North America. The innovation has also been incorporated into the Ontario Ministry of Health and Long Term Care’s Critical Care Strategy (Ontario Ministry of Health and Long-Term Care 2007). As part of its multi-million dollar program to improve critical care services in Ontario, the Ministry is funding the implementation of intensivist-led RRTs in several hospitals across the province.

**RRT implementation challenges**

To date, there have been no empirical studies that have comprehensively reported the barriers to RRT implementation, but difficulties have been briefly mentioned in some RRT literature. These include “workload” and “turf issues” (Daly et al. 2007), “sub-optimal team dynamics” (Gosman et al. 2008), and “interpersonal conflicts” about roles and responsibilities (Thomas et al. 2007). The most comprehensive list of barriers to RRT implementation is authored by Devita et al. (2006) in the published results of the First Consensus Conference on Medical Emergency Teams. The list contains common barriers encountered by individuals who have sought to implement RRTs and includes problematic cultural norms, resource constraints, training ambiguities, and the tendency for clinicians to work in professional silos. This list is preliminary, contains little elaboration or explanation, and is acknowledged by the authors to be far from fully comprehensive.

Although RRT implementation challenges still require further exploration, those documented to date have can be mapped to several of Rogers' and Greenhalgh's perceived innovation attributes in order to illustrate why RRTs may be challenging to implement.

1. Reinvention or fuzzy boundaries. If an innovation can be modified or adapted to achieve innovation-system fit, it is easier to implement (Rogers 2003). Innovations can be thought of as possessing a ‘hard core’ of fixed, elemental components and a “soft periphery of flexible attributes that can be varied according to the organization or users’ needs (Denis et al. 2002). Many hospitals choose to adjust elements of the RRT (e.g. calling criteria, team composition) in order to suit their needs and capacities, however this modification is not always possible. For example, hospitals which are funded by the MOHLTC as part of the Critical Care Strategy are mandated to implement a pre-determined RRT model and to collect specific metrics. For these hospitals, the innovation is less easily re-invented.
2. Task issues. When innovations improve users’ work performance, they are more likely to be adopted and implemented (Greenhalgh 2004). In some hospitals, RRT staff are also responsible for patients in the ICU (non-dedicated teams). When the team members attend to calls, they must leave their patients under the care of other ICU staff. Although the RRTs are intended to assist the work performance of bedside nurses, they can have the opposite effect for ICU nurses who must take over additional patients. This workload and responsibility shift has been mentioned as an implementation barrier (Daly 2007; Devita 2006).

3. Complexity. Innovations that are perceived as simple to use and easy to understand are more readily adopted and, by extension, implemented than those perceived as more complex. RRTs are not difficult for bedside staff to use; staff call the team when they are concerned about a patient’s condition. Despite this procedural simplicity, the implementation process is complex. Unlike highly bounded, focalized innovations (e.g. appropriate patient hair removal to prevent surgical site infections) that are adopted and implemented on an individual (micro) level, RRTs operate on an organizational (macro) scale, servicing nearly all clinical areas of a hospital. In addition to staffing the team, determining calling criteria, and other preparatory tasks, authors recommend obtaining executive level support and educating the entire hospital about the innovation on an ongoing basis (Kirk 2006; Durkin 2006). The RRT’s scope of operation is broad enough that some clinicians and researchers prefer the term rapid response system.

4. Compatibility. The degree to which an innovation is thought to be compatible with an organization’s socio-cultural values and beliefs affects its rate of adoption and ease of implementation (Rogers 2003). Although not made explicit, implementation barriers listed in RRT literature hint that the innovation may be somewhat incompatible with the cultural norms of hospitals and health care professionals. Reported difficulties have included so-called “turf battles” and concerns over “patient ownership” (Daly 2007; DeVita 2006). Presumably, this refers to the fear that an RRT member may try to “take over” a patient from other staff, infringing on the well established “sanctity” of the physician-patient relationship (DeVita 2006, 2471). Similarly related to the idea of patient ownership, some RRT nurses in non-dedicated teams have expressed concern about “abandoning” their own patients to attend to calls (Thomas 2007, 24). Reports of sub-optimal team dynamics and interpersonal conflict may be related to the fact that RRTs require interdisciplinary collaboration, yet operate in an environment where
there is a “tendency to work in professional silos” (Devita 2006, 2471). These incompatibilities have not yet been explicitly stated or studied, however, based on the types of difficulties reported, RRTs seem to challenge traditional medical and patient care norms.

The RRT innovation is composed of a group of interdisciplinary individuals who must integrate themselves into the system-wide fabric of an organization. Unlike a novel software tool or a new clinical procedure, the RRT is an human-centric innovation whose success may very well depend largely on interpersonal interactions. The innovation and implementation complexity suggests that there may be a need for individuals to push for the innovation within their organization. Indeed, this view is supported by the IHI which notes the importance of strong senior leadership during RRT implementation (IHI 2006) and by the findings of the First Consensus Conference which identified the “lack of champions committed to a rapid response system” as a barrier to implementation (Devita 2006, 2471). With leadership so crucial a factor to implementation success, the rapid response team is an ideal patient safety innovation for studying the role of clinical champions.

**Rapid response teams in context**

In 2004, the IHI launched its 100,000 Lives Campaign, which was intended to support the improvement of care and to reduce levels of morbidity and mortality in hospitals in the US (IHI 2009). RRTs were one of the six patient safety interventions promoted as part of the campaign. Closely modeled after 100,000 Lives, the Canadian counterpart campaign Safer Healthcare Now (SHN) was launched in 2005 and also included RRTs as an endorsed intervention (SHN 2010). Both were voluntary campaigns. Participating hospitals did not receive funding, but gained access to a number of resources including intervention how-to guides, connections to mentor hospitals and inclusion within a community of practice, measurement tools, and recognition for participation. Additionally, by becoming part of the campaign, organizations publically signaled a commitment to improvement and change.

In 2006, the Ontario Ministry of Health and Long Term Care (MOHLTC) announced a $90 million commitment to renew and improve critical care services across the province (MOHLTC 2010). The strategy was ultimately borne out of the SARS tragedy, which had demonstrated a crucial lack of capacity in critical care units across the province. Following the outbreak, in 2004 the Ontario Critical Care Steering Committee was struck in order to developing
suggestions as to how to improve adult critical care services in Ontario. Included among the committee’s recommendations was the provision of stable funding support for rapid response teams (Bell and Robinson 2005). The RRT intervention and six other recommended critical care initiatives from the report were taken up by the MOHLTC and form the Ontario Critical Care Strategy.

A number of Ontario hospitals were approached by the MOHLTC and were offered funding to support the implementation of rapid response teams. Participating hospitals had to meet pre-determined implementation timelines and standards, which had been developed by the MOHLTC following a demonstration project. These included participation in bi-weekly teleconferences by the RRT leads and the adoption of the intensivist-led RRT model. Twenty-seven Ontario hospitals, including the two organizations that participated in this study, received MOHLTC funding to implement RRTs.

**Reiteration of research questions**

The RRT is an ideal choice for studying the role of champions because its implementation success has been linked to the involvement of champions and because a number of RRTs have been implemented in the Toronto area, forming an appropriate sampling frame from which to select. The purpose of this study is to better understand the role of clinical champions in the implementation of rapid response teams, a complex patient safety change, at two acute care facilities. This study will address the following three in the context of RRT implementation.

1. What are the core features of the clinical champion role in patient safety implementation?
2. What are the facilitators and barriers to the work of clinical champions?
3. Do clinicians become clinical champions through formal or informal processes, or both?

It is important to re-emphasize that because of the dearth of focused research on clinical champions and the lack of existing theoretical frameworks, an exploratory study, such as the one described here, is likely the most appropriate next step for advancing this body of research.
Chapter 3 - Methods

**Ethics**

Ethics approval was obtained through the University of Toronto Health Sciences Research Ethics Board. Additional ethics approval was required and obtained through the Research Ethics Board of one of the hospital sites.

**Study Design**

The project took the form of an exploratory case study conducted in two Toronto-based acute care facilities which recently implemented a major patient safety initiative. It was hypothesized that the role played by clinical champions in the implementation process was likely to be influenced by contextual conditions such as the culture of the organization. As such, a case study was an appropriate choice of method since it allowed for the consideration of the contextual conditions that surround the phenomena of interest (Yin 2003).

A multi-case design was used as it has several advantages over single case designs, including the following:

- In general, the multiple case study design is considered to be superior to the single case study in terms of robustness and the generation of compelling evidence (Yin 2003).
- The use of two cases was meant to help identify whether contextual effects on the role and emergence of clinical champions existed within the health care sector. A single case study would only allow comparisons to be made between clinical champions of the health care sector and product champions of the goods based sector.
- Findings that were consistent between different contexts will be more generalizable outside the study. In case study research, asking the same questions in multiple contexts is a type of study replication that addresses the issue of external validity.

Two cases were studied. Each “case” was situated in a Toronto-based acute care facility and consisted of the implementation of an RRT, a major patient safety practice change. The individual clinical champions working on the implementation formed embedded subunits of analysis within each case. This multiple-case embedded study design was ideal, as it allowed for the understanding of the wider implementation “story” of the organization as well as a
focused look at particular people of interest (in this case, champions and the people they worked with). Because the central research questions focused on the role of clinical champions and not, for example, on individual traits like personality, it was important not to isolate the investigation of champions from the implementation process in which they were participants. By embedding champions as subunits, they were situated in the broader organizational environment instead of isolated from it, making it possible to explore their role and how they coordinated with others and contributed to the implementation process.

The organization of each case can be pictorially represented as follows.

**Figure 2. Conceptual structure of case study design**

**Site Selection**

According to innovation diffusion research, several internal characteristics of organizations are related to innovativeness. For organizations, “innovativeness” usually refers to the innovation process, with an emphasis on implementation (Rogers 2003). These organizational characteristics, such as size or centralization, influence the innovation climate or context within which champions work to promote innovations. Choosing acute care facilities with different key organizational characteristics, and thus different innovation climates, made it possible to discern how the role of the clinical champion differs or stays the same depending on the innovation context.

In order to vary the context according to innovativeness, the following organizational characteristics were used to select the settings for the case study.
• Dedicated and flexible patient safety resources. The availability of additional resources dedicated to patient safety was used as an analog to organizational slack, which is the amount of uncommitted resources that are available to an organization. The greater the degree of organizational slack, the more innovative the organization (Rogers 2003). Hospitals with more flexibility over the use of resources for patient safety initiatives may display greater patient safety innovativeness than those with fewer, less flexible resources.

• Maturity of patient safety strategy. Facilities which have implemented patient safety innovations in the past may be more innovative or better equipped to implement changes than those with less experience. For example, staff who have implemented patient safety changes in the past might be more accustomed to change processes, and thus might be more receptive to further innovations.

• Teaching status. A tertiary teaching hospital may provide a much different implementation context compared to a community hospital. It has been suggested that the latter environment may be better suited to innovation diffusion due to the stronger sense of collegiality and “we’re all in this together” mentality experienced by staff and clinicians in a community hospital (Wolf et al. 2006, 309).

Variation of these characteristics were achieved by selecting an academic tertiary hospital and a community hospital that differed in terms of their experience and level of investment towards patient safety initiatives. Experts who were familiar with RRT initiatives in Canada were consulted to facilitate site selection. Given the above parameters, they were asked to suggest a community hospital and an academic teaching hospital in the Toronto area that would be appropriate for study. For the sake of clarity and anonymity, the community hospital chosen for this study will be referred to as "Pinecrest Community Hospital" or "Pinecrest" and the academic teaching hospital will be referred to as "Metropolitan Academic Hospital" or "Metropolitan".

**Sampling**

Participants were determined via a snowball sampling approach, whereby one informant is asked to identify other potential informants. For each site, initial contact was made with the
patient safety officer or the senior person responsible for the RRT. This individual was interviewed and was also asked to identify the key individuals involved in the RRT implementation process and, in particular, clinical leaders. Those who were identified by the senior clinical person were then contacted and asked to participate in the study. These participants were then asked to identify the people who they thought had played a major role in the RRT implementation. If any new names were listed, those individuals were subsequently contacted to participate.

**Data Collection**

Data were obtained through thirteen semi-structured interviews. The interview guide was piloted with a rapid response team leader at an additional hospital and readjusted accordingly thereafter. Each participant in the study took part in an interview that lasted between 45 and 80 minutes at his or her place of work. All interviews were conducted in person by the lead investigator. Interviews were digitally recorded and later transcribed.

During the interview, participants were asked to describe and discuss in detail 1) their role in the implementation of the RRT at their organization and 2) the facilitators and barriers they encountered while fulfilling their role. They were also asked to name other individuals who were fundamental to the implementation process and to describe their respective roles. As probes, the terms change agent, champion, and opinion leader were introduced without definitions. Participants were asked whether these terms were ever used at the organization and, if so, who they were used to describe and why.

Participants who held senior positions were asked to comment on how the RRT fit into the organization’s broader patient safety strategy or organizational mission.

Basic demographic information (e.g. age, sex, number of years with organization, etc.) was collected for each participant.

Interviews were conducted over two periods: December 2007-January 2008 at Pinecrest and September 2008 at Metropolitan.

All individuals who were contacted agreed to participate in the study.

**Data Analysis**
Interviews were recorded and transcribed. Data analysis occurred concurrently and subsequently to data collection. Interviews were analyzed using an inductive coding strategy derived from grounded theory methods (Strauss and Corbin 1990). Coding occurred at three levels:

- **I – Level I coding**, also called open coding or substantive coding. Data were analyzed line by line and codes were applied according to the substance or content of the text. Codes were either constructed by the researcher based on concepts in the data or are derived from the words used by interviewees themselves (in vivo codes). This fine-grained analysis at the unit of lines, sentences, and paragraphs ensured thorough examination of the data.

- **II- Level II coding**, also called axial coding or categorization. At this level, the constant comparative method was used so that all data are compared with other data. This comparison of data led to the emergence of clusters or categories into which level I codes could be grouped.

- **III – Level III coding**, known as selective coding. At this level of analysis, central themes were identified and the data and previous codes were reexamined with these themes in mind. Themes and categories were integrated with one another in order to create a holistic understanding of the phenomenon of interest.

Peer-nomination and self-nomination were used to identify champions during data analysis. Because this was an exploratory study, no definition of the term champion was supplied to participants. Instead, participants were asked to qualify in detail why they thought of themselves or others as champions.

Whoever was identified as a champion was accepted as such for the purposes of the study. If there emerged clearly dissenting opinions about whether or not someone was a champion, this disagreement was considered data and incorporated into the analysis. Peer-nomination has been used extensively in previous product champion research (e.g. Howell 1990). Self-nomination was also deemed valid for the purposes of the study. No quantification was used in the identification process (i.e. the number of people identifying someone as a champion was not considered). Because the study assumed no a priori definition of the term champion, the concept of accuracy (i.e. the degree of closeness to a particular standard) was not
an issue. The methods used to identify champions aligned with the study’s objective of uncovering the participants’ own conceptualizations of what it meant to be a champion.

Microsoft Excel was used to aid analysis. Each case was analyzed as a singular entity (within-site analysis) at these three levels of analysis. Following individual case analysis, comparative analysis between cases (cross-site analysis) was conducted and finally, a synthesis of these different analyses was then completed.

In order to ensure reliability and reduce bias, peer-checking and double-coding were employed. Data collection, coding, and further analysis were conducted in consultation with the research team. A second investigator analyzed all transcripts and the results were compared to those of the lead investigator (investigator triangulation). This inter-coder reliability check served to reduce bias, and also led to definitional clarity of codes and themes. Discrepancies and disagreements between results indicated codes or themes that needed to be revised and re-clarified. To check for internal consistency, the lead investigator recoded a set of transcripts a few days after initial coding. The combination of inter- and intra- coding agreement and peer-checking/consultation ensured analytical reliability and thorough conceptualization of codes and themes.

After the analysis of the interview data was complete, the resulting interpretation was compared to extant management literature on champions. This comparison allowed for the identification of similarities and differences between clinical champions and product champions.
Chapter 4 - Results Part I: Core Features of the Champion Role

Site Descriptions

Pinecrest Community Hospital

Organizational profile. Pinecrest Community Hospital is a community hospital located in the Greater Toronto Area. The organization is relatively young and was formed in the late nineties through the merger of two existing hospitals. The organization is large, with over 700 beds across two distinct geographical sites, both of which are currently undergoing either physical expansion or redevelopment. The organization puts particular strategic emphasis on patient-centeredness and innovation.

Participants described Pinecrest as an organization which was known for employing a distributive leadership model. Informal leadership and innovation were encouraged, and staff had the propensity to engage in learning experiences and take on additional responsibilities for the sake of learning and interest, without compensation:

“There’s a sense of culture at Pinecrest where leadership is encouraged and change is encouraged. And a lot of people working here feel like, “Okay. That will be interesting to me. So whether or not I’m getting paid, it’s cool. I’ll do it. I want to be an RRT nurse because it makes my week more interesting. I learn something from it. I get to do something different. People listen to me in a different way. I develop my leadership skills, my teaching skills. I put it on my CV. It’s a great thing. I’ll do it.” (P07, 481)

Participants also described the organization as "tight knit" and suggested that "people here communicate between groups better than they may in other organizations of a similar size" (P04, 1208). Because of its community hospital status, participants noted that physicians are colleagues of the hospital, not employees or staff. There are no interns or residents, and during evening shifts, intensivists may not be present in the building. Given this time-variable staff mix, nursing care at Pinecrest was described as highly protocol driven:

Because we’re a community hospital, we work a lot on protocol, so that when something happens, we have the room to act...We have protocols around this, that, and the other thing... So you don’t have to call anybody before you do the intervention. (P04, 445)
Participants contrasted this to teaching hospitals whereby "you call the intern or the resident or whatever, and they do everything. If a patient in a teaching hospital has a code, the intern or resident does everything. If a patient here has a code, and the physician's not there, we go ahead and defibrillate...because who else is going to do it?" (P07, 445)

Finally, participants described Pinecrest as having latitude and flexibility with respect to acquiring funds for new initiatives as compared to teaching hospitals:

At a teaching hospital, it takes you forever to change something because it's gotta go through this committee, that committee, the other committee. And here we can just say, "We want to do a trial of this".... So we do it. And as a community hospital, we can just do that. Just get your director on board and find some money and go ahead and do it. Whereas in a teaching hospital [groans]! (P07, 514)

Overall, Pinecrest was described as an organization with a culture of change, in which there was a close sense of community, flexibility for innovation, and where staff at all levels felt encouraged to engage in leadership and learning activities.

**RRT implementation history.** In 2003, Participant P01, who was then one of Pinecrest’s hospital directors, attended a session on pre-code teams at an IHI conference. Convinced of the intervention’s merits, she introduced the idea to the organization in late 2003, but was unable to gain organizational support for the concept. She asked the organization’s Vice President of Quality to allow four staff members of the ICU to attend another IHI conference so that they might also learn about pre-code teams. The request was granted, and in Spring 2004, four members of the ICU (ICU manager, clinical leader, physician, frontline staff person) attended an IHI conference focused on critical care. The team came back enthused and eager to implement an RRT at Pinecrest.

With this renewed energy, a project steering committee was struck and included the ICU staff who had attended the IHI conference as well as members from different stakeholder groups, including physicians, RTs, clinical educators, and pharmacists. Individuals with technical expertise relevant to the project (e.g. decision support, communications, etc.) were also asked to join. The member composition of the group was fluid and changed based on the stage of project planning and implementation. As some roles concluded, others began.

One of the first decisions made was to hire Participant P04 as the RRT Nurse Lead. Participant P04 then became part of the steering committee and assisted with the
implementation planning. The RRT was initially designed as a nurse-led step-up model. If a ward nurse called the RRT for help, the RRT-dedicated nurse and the on-call respiratory therapist would respond. Based on their initial assessment of the patient, the RRT nurse would then call the most-responsible physician (MRP) and then the ICU intensivist if needed. In addition to the RRT Nurse Lead, the team also had an RRT Physician Lead (Participant P05). The leads had both clinical and administrative responsibilities with regards to the team.

Pinecrest's organizational structure is such that the hospital is divided into eight departments (or divisions) known as "health systems". Each health system contains several units (or wards). The steering committee decided to pilot the RRT in the Medicine health system, and in mid-2005, the RRT was implemented in the Medicine health system on a 24/7 basis. After six to nine months of operation within the Medicine health system, the RRT began its hospital-wide rollout, whereby the RRT service was implemented in one health system at a time. The order of implementation in the remaining health systems was determined according to need. It took approximately nine months for the RRT to be implemented across the hospital.

In 2007 the organization accepted an offer made by the MOHLTC Critical Care Secretariat to join its province-wide RRT program. In accordance with the Ministry’s requirements, Pinecrest transitioned from the nurse-led step-up model that had been developed in-house to the intensivist-led step-down model that was compulsory to receive Ministry funding.

The RRT serves only one of Pinecrest's two geographically distinct sites. Additionally, during the initial decision to implement, pediatric and neonatal units were decided to be beyond the scope of the RRT’s expertise and are not served by the team.

The RRT at Pinecrest has been characterized as a great success by the participants interviewed. The organization’s focus is now on sustainability, incorporating RRT into quality improvement cycles, and leveraging what has been learned from the RRT into other new initiatives.

**Metropolitan Academic Hospital**

**Organizational profile.** The Metropolitan Academic Hospital is a tertiary academic teaching hospital located in an urban centre. The organization is well established and much older than Pinecrest; however, even with over 500 beds it is still smaller in size than Pinecrest.
The hospital has a strong academic tradition and is currently undergoing expansion to create a new health and health care research centre. The hospital serves a diverse population, and has historically placed particular emphasis on providing care for the poor or marginalized.

Participants noted that Metropolitan had a complex organizational structure whereby the hospital was divided into different programs and the critical care department was divided into four units, with each unit belonging to a different program. Within this complex structure, there appeared to be a certain degree of role and communication hierarchy:

> It's a fan out technique...we pick our chiefs of our departments very carefully and they are thought leaders. And then, depending on the size of the department, chiefs have division heads. So, if you're the chief of medicine you've got fourteen divisions, each division has a head and then each division has a group of people that are in it that the head looks after. So, that's the fan out. Chief of medicine, division heads, frontline staff. (M04, 502)

Participants described Metropolitan as having a strong culture of caring and support, where multidisciplinary work was highly encouraged. The patient safety culture of the organization was described as nascent but burgeoning. Formal commitment to patient safety and quality improvement had been recently made by including it in the organization's strategic plan and the hospital was said to be in the beginning stages of its patient safety "journey".

**RRT Implementation History.** In the spring of 2006, Metropolitan was approached by the Ontario MOHLTC and was invited to become one of the hospitals that would receive funding to implement an RRT as part of the Ministry’s Critical Care Strategy. Unlike Pinecrest, Metropolitan did not already have an RRT in place; however, several years prior to the MOHLTC offer, a nurse practitioner (Participant M03) who worked in one of the intensive care units began to do follow-up visits with her patients who had been discharged to the general wards as a way of trying to prevent readmissions. This fell within her skill set as a nurse practitioner, however it was an informal process that she conducted on her own accord and outside her official duties. Building off this idea of following patients out of the ICU, a working group was struck in order to strategize ways that the process could be implemented across the hospital in a formalized way. The group met regularly and generated several ideas and principles for a initiative that they hoped to move forwards, however due to a lack of funds to support the idea, the initiative was never actualized and the group disbanded.
After the initial offer from the MOHLTC was accepted, two RRT leads, a physician (Participant M01) and a nurse (Participant M03), were appointed by hospital executives, and a working group was struck to determine the specifics of the RRT, including details such as what the posters would look like and what kind of technology to use. The working group had interprofessional and multi-disciplinary representation and included physicians, frontline nurses, respiratory therapists, and nursing leadership. The group included an estimated 15 members and met approximately once a month. The design phase of the implementation lasted approximately six months and the RRT went live as a pilot during the winter of 2006, as per MOHLTC funding requirements. Service during the pilot phase was limited to Monday to Friday during the daytime. The RRT model was led by an intensivist and so followed the MOHLTC requirements, however Metropolitan additionally decided to add respiratory therapy services to the team. No ministry funding had been provided for an RT, but the respiratory therapy department agreed to lend its human resources to the team in order to ensure comprehensive and multidisciplinary service. After the team had been piloted for three months on this weekday basis, it then switched to a 24/7 service model.

Metropolitan is now turning its focus on how to drive RRT quality improvement by using data collected each time the RRT is called to determine how the RRT can improve its services and show the impact on clinical outcomes.
The figure below depicts the RRT implementation timelines at Pinecrest and Metropolitan.

![Timeline Diagram](image)

**FIGURE 3. RRT IMPLEMENTATION TIMELINE**

**Participant Information**

Over the course of the study, thirteen individuals were. Of these thirteen, six were peer- or self-identified as champions.

Seven participants were female and six were male. Participants were a nearly even mix of men and women and ranged in age their early thirties to late fifties. On average, participants at Metropolitan had spent 29 years working in healthcare and 17 years working at the hospital itself. At Pinecrest, participants had an average of 20 years experience in healthcare and 8 years with the organization. Participants at both sites were employed in a variety of positions in the organization, as detailed in the table below.

**TABLE 3. PARTICIPANT INFORMATION**

<table>
<thead>
<tr>
<th></th>
<th>Pinecrest</th>
<th>Metropolitan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of participants (n)</td>
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<td>6</td>
</tr>
<tr>
<td>Number of champions</td>
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<td>29</td>
</tr>
<tr>
<td>Average number of years in organization</td>
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<td>17</td>
</tr>
</tbody>
</table>
Positions held by participants

- Vice president
- Director
- Clinical educator
- Decision support consultant
- Intensivist
- RRT Nurse
- Manager

- 2 Vice presidents
- 2 Directors (including RRT nurse)
- Medical chief
- Intensivist

Beyond Clinicians: Types of Champions

The original focus of this study was clinical champions, however, over the course of participant interviews it became clear that additional champion types existed, each corresponding to different organizational roles. Individuals who were identified as champions leveraged their respective organizational positions and networks in order to carry out their champion work. The following typology of champions emerged from my analysis of the data: 1) executive champions who held senior leadership positions within the organization, 2) managerial champions who were responsible for managing clinical departments, wards, or units, and 3) clinical champions who were front-line clinicians responsible for patient care.

At Pinecrest, four champions were identified by participants in the study: one executive champion (Participant P01), one managerial champion (Participant P05), and two clinical champions (Participants P04 and P06). Out of the clinical champions, one was a physician who took on the position of RRT Physician Lead, and one was a nurse who was hired on as the RRT Nurse Lead after the decision to go forth with the RRT had been made.

At Metropolitan, two clinical champions - one physician and one nurse - were identified. The physician champion was appointed as the RRT Physician Lead and, similarly to Pinecrest, the nurse champion had been hired on as the RRT Nurse Lead after the decision to implement the RRT had been made.

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<tr>
<th>Type of Champion</th>
<th>Pinecrest</th>
<th>Metropolitan</th>
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<tbody>
<tr>
<td>Executive</td>
<td>1 (Participant P01)</td>
<td>None</td>
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<tr>
<td>Managerial</td>
<td>1 (Participant P06)</td>
<td>None</td>
</tr>
<tr>
<td>Clinical</td>
<td>2 (Participants P04, P05), one nurse and one physician</td>
<td>2 (Participants M01, M03), one nurse and one physician</td>
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Each type of champion leveraged their respective organizational positions and networks in order to forward the implementation process. For example, at Pinecrest, one senior executive leveraged her position of authority to send a group of staff to an international patient safety conference in order to convince them of the merits of RRTs and act as champions. At Metropolitan, one of the clinical champions was also a medical director and so reported to the chief medical and nursing officers. This position and reporting responsibility afforded him the ability to bring the concept of the RRT straight to senior executives, instead of having the invitation to be part of the Ministry's RRT initiative come through less direct channels.

**The Things that Champions Do**

All champions were involved in the development and/or execution of the RRT implementation plan and did "ground work" in the implementation process, including for example, arranging and leading meetings with stakeholders, determining RRT call processes and procedures, and developing organizational communication strategies. But beyond these tasks, it appeared that throughout the implementation process, the overarching goal of each champion was to convince others in the hospital to accept the innovation. To achieve this goal, champions at each organization engaged in a number of key activities: disseminating knowledge, advocating, building relationships, navigating boundaries, and facilitating consensus. These activities comprised the core features of the champion role and are described in further detail below.

**Disseminate Knowledge**

One major element of the champion role appeared to be education and knowledge dissemination. Champions spent a considerable amount of time both alerting individuals across the organization to the fact that the RRT was being implemented and educating their peers about the innovation itself.

Before the RRT went live at Pinecrest, the nurse champion (Participant P04) conducted an extensive education and awareness campaign whereby he went to each nursing unit in the hospital and gave detailed presentations about the RRT, its structure, its purpose, and how to use it.
There was nursing education. ... that was [P04's] job. ... to go out there and tell them about who he was, what the medical emergency team was. ... He went out and educated and made sure every single nurse in the organization knew what we were about, knew when you could call. (P06, 116)

However, participants noted that presentations and basic education efforts alone were not enough. To convince others of the merits of the RRT, the educational message had to be meaningful. Champions at Pinecrest achieved this by specifically tailoring each RRT presentation to the receiving audience:

... it was hard to convince people without the appropriate education. So that was a challenge. Just pulling together a presentation that was meaningful and then being able to change it for the groups. We had to make sure that we knew our audience. Presenting it to the floors – these are novice nurses and allied professionals - we had to make sure we turned it in such a way that was meaningful for them. ... We tailored every message for all the groups. (P06, 274)

In addition to meaningful messaging, champions took into account careful consideration of the messenger when embarking on knowledge dissemination efforts. At both organizations, champions involved in the implementation process communicated with his or her own professional group. At Pinecrest, just as the nurse champion had educated other nurses across the hospital, the executive champion, the managerial champion, and the physician champion educated other executives, unit managers, and physician groups, respectively. These presentations often occurred during lunch and learns or monthly meetings. This champion-to-peer communication strategy was thought by participants at Pinecrest to be one of the most effective ways of getting their message across to the rest of the hospital. A similar tactic was used at Metropolitan, whereby the physician champion educated and liaised with the physician groups and the nurse champion did the same with nursing groups.

At both organizations champions extended their knowledge dissemination efforts beyond the basic delivery of standard presentations and also participated fully in the development of additional educational and communications materials such as pamphlets, stickers and posters. At Metropolitan, the size of the hospital prompted the champions to take a diverse and multifaceted approach to knowledge dissemination.
We're a huge organization and we have 1700 nurses. So how is every nurse going to know, right? So, getting the educational program and the message out through multiple, multiple, multiple ways... We had posters. We had information sessions. We had emails. We put it in our "In Touch" with our daily newsletter that goes out. A lot of face-to-face. So, there were multiple ways. Did we get everybody? I think the word passed out fast enough. You can always sell a good thing, as I say. (M03, 488)

Knowledge dissemination, including education and awareness efforts and tailored messaging, formed a core component of the champion role. Champions understood the importance of delivering a meaningful, customized message, recognized the value of diverse dissemination tools, and put considerable effort into peer education as a means of convincing others to accept the innovation.

**Advocate**

Another way that champions worked to convince others was through advocacy. Champions used different tactics and strategies to spread positive messages about the RRT throughout the organization and defended the innovation from critics.

At Pinecrest, the executive champion (Participant P01) was the first person to begin championing the innovation. Upon learning about RRTs at an IHI conference, she was determined to see that the innovation was adopted. She recognized that data and facts had cachet for the senior leaders in the organization, and thus took an evidence-based approach in her advocacy efforts and spent time and effort gathering and synthesizing research evidence to support her argument for implementing the RRT.

In a different approach, the managerial champion at Pinecrest (Participant P06) advocated for the RRT by using irrefutable arguments and strategic framing. She appealed to others’ sense of “what’s right” and framed the RRT as a way to save lives (P06, 791).

And it was in the best interests of the patients... that’s a hard argument, right? Like you can’t say “No it's not.” An ICU nurse and an RT’s gonna go see a patient at 2 in the morning. Help me with why that wouldn’t be a good idea. And everybody recognized there’s no argument there. (P06 791)
By appealing to the best interest of patients and pitching the innovation as something that would prevent people from dying, the managerial champion made case for the RRT in a way that was difficult to argue. The nurse champion at Metropolitan (Participant M03) also used strategic framing, but instead of focusing on patient benefit, she promoted the RRT as a supportive resource for nurses because she know that at her organization, the "nurses on the floor were just happy to see [someone] lend them support" (M03 736).

Champions engaged in advocacy work both within and beyond their formal roles in the organization. For instance, the managerial champion at Pinecrest (Participant P06) described how she would promote the innovation to anybody who would listen:

"And I truly believed in what I was hearing and reading and became a huge advocate and champion. And anybody that would listen, I was blowing the MET horn, I was blowing the Safer Healthcare Now horn, the IHI horn. I was “You know you have to listen to this stuff. It’s good.”... Any time I had an interaction with somebody, this is what we talked about. Any time I had to go to a management meeting, I always got the floor for five minutes to talk about what we were doing with the medical emergency team. We shone the spotlight on it any venue we could have. (P06, 688)"

Advocating for the RRT became part of her formal duties as a manager, but it was also something she did outside of her managerial role. Additionally, champions’ advocacy efforts were not confined within the walls of the organization; after successfully implementing the RRT at Pinecrest, the nurse champion (Participant P04) went on to speak across the country about the benefits of RRTs.

**Build Relationships**

Champions facilitated successful implementation of the RRT by cultivating positive relationships across their organization, especially with key stakeholder groups and end-users.

At Pinecrest, the nurse champion (Participant P04) took special care to establish personal rapport with the nurses on the floor who would be the ones to call the RRT. Under his own initiative, he took himself out of the ICU and visited other units of the hospital in order to introduce himself and the concept of the RRT to nurses. While visiting, he would ask the nurses whether there were any patients that they were particularly concerned about. If so, he would assess the patient together with the bedside nurse, and then use that situation as an educational
opportunity to illustrate a case for when to call the RRT. The nurse champion engaged in this process before the RRT was launched across the hospital, but even after the RRT was operational, instead of sitting in the ICU between RRT calls, he continued to visit other units in order to familiarize himself with floor staff. Deemed “walking around” or “walking about” by other participants, this process helped the RRT nurse lead become the human face of the innovation.

Participants at Pinecrest attributed the positive relationships and rapport between the nurse champion and the floor nurses as one of the major success factors of implementation.

I think the relationship piece is the top lesson… Having a [name withheld] or a like person going out there to influence the change, to build the relationships, was probably our single biggest win. Simply because they knew who he was. They knew who the [team] was through him. It wasn’t just some stranger [who was] going to show up. (P06, 812)

The champions at Pinecrest, in particular the nurse champion, were skilled at building positive relationships and made special effort to do so, helping to ensure the success of the RRT implementation. One participant noted how even when not on clinical duty and doing presentations, the nurse champion consistently wore his scrubs as opposed to street clothes and how he was still able to grouse about upper management issues along with other nurses. These actions helped to ensure that he was perceived by other nurses as ‘one of their own’ and served to make him relatable and approachable.

At Metropolitan, the physician champion also strived to build and maintain positive relationships in order to implement the RRT. He recalled a situation at the very early stages of implementation, when the concept of the RRT was being introduced to the various groups in the hospital, he felt that he had left a negative first impression after his initial presentation to the Department of Medicine:

I went to the department of medicine meeting and it was the first time that I realized, very harshly, that messaging is very important and I was naive about the… physician view, even though I was a physician, but I had already been, you know, sort of enlightened… I talked about what this will do and what the difference between the current process is and what it could be and they saw this as a total intrusion on their capability of caring for the patients. "How dare you tell us that we don’t respond early enough to our deteriorating patients. We work very well within our team. You’re going to be a fifth wheel that will get in the way." The
other thing is that it’s all about choosing the words. The Ministry obviously had a mandate about what this was supposed to do: decrease cardiac arrests; decrease length of stay in the ICU for those patients who were identified early through CCRT, and - the words were - "mitigate unwarranted admissions". So, I knew what [the Ministry] meant by that, but I just can’t believe that I used those words in my presentation. Even though I’d talked to a lot of people... and the group that was sort of converted understood what I was saying, but the people I had to convince didn’t. One person in the audience [an oncologist] said, "So, essentially you are going to come around my ward and figure out who should be DNR and prevent them from coming to the ICU." So, it was a very - I don’t want to say hostile - but it was a difficult, difficult meeting. At this point, I had just been announced as the Medical Director. So, here’s the Medical Director of Quality and Safety and he’s already losing credibility in [their] eyes. So, it was a real slap in the face. (M01, 401)

After this initial meeting, instead of moving straight on, the physician champion recognized what had gone wrong and worked to re-establish his credibility and relationships with the Department of Medicine.

I spoke with the Chief of Staff after that and he said, "I think we’re going to have to revamp our sell" and I said, "I agree." So, I responded to all of their issues, went back to them and had another meeting and restated what their concerns were and revamped the process so that it seemed to address their issues,... and I apologized. (M01, 442)

Champions recognized that they represented the RRT to the rest of the organization and that, because the RRT was an innovation that consisted of a team of individuals, their own credibility reflected on to perceived merits of the innovation. They realized the importance positive relationships to successful RRT implementation and took personal initiative to ensure that they built and maintained these relationships throughout the implementation process.

**Navigate Boundaries**

A fourth champion activity, complementary to the others was boundary spanning. Champions demonstrated agility in navigating the boundaries within the hospital, whether they were between professional groups or between units. These boundaries were the divides, real or perceived, between different professions (e.g. between managers, nurses, physicians) or between different hospital units (e.g. medical, surgery, ICU). In order to navigate these boundaries,
champions relied on their communication skills, familiarity with the organization, and sense of political savvy.

Boundary spanning required champions to effectively communicate with members of other units and professional groups. As noted by the physician champion at Pinecrest (Participant P05), this was often a difficult task:

> I think it’s always a hard sell for a nurse to come to a group of physicians and tell them what the best way to treat patients [is]. Regardless of what you bring to them, they’re just gonna right away have a certain attitude towards that. They have a different attitude when the person who’s telling them the same information is a physician...
> There is that sort of resistance to hear it from somebody outside your group. (P05 612)

It appeared that successful cross-boundary communication required a different set of skills and attitude than communicating with members of one’s own group. The nurse champion at Pinecrest was identified as being particularly adept at communicating with physicians and commanding their respect, which struck participants as a particularly unique set of characteristics for a nurse: "He talked about MET to everyone. He’s very comfortable speaking with physicians and he doesn’t take any sh-- from them. So that was a good thing" (P07, 696).

In addition to spanning professional lines, the nurse champion was required to traverse unit boundaries in order to deliver educational presentations and form relationships in other units of the hospital.

Navigating the boundaries of the hospital required not only excellent communication skills on the part of the champion, but also familiar knowledge of the organization and the people in it. The executive champion who first brought the idea of the RRT back to Pinecrest was tasked with convincing the senior leadership team about the innovation. In addition to effectively communicating with different executive groups in the hospital, she was skilled at delicately “handling” particular groups and individuals whom she knew from experience were likely to oppose the innovation. Participants noted that the executive champion used her “managerial smarts” and familiarity with the organization to placate cynics of change and smooth the way for the RRT:

> [She] was very good with Dr. X. She could get around him. So that was part of her job... navigating Dr X, navigating the legal department, navigating all the different managers. Everybody was going
to get huffy… That’s just the way we are. She navigated all that... (P07, 773)

Participants at Metropolitan also noted that it was important that champions were part of the organization long enough to "know the landscape" of the hospital (M04 277), and indeed the both the nurse and physician champions of the RRT were required to traverse the whole hospital and engage with stakeholders from different units and professions in order to launch the RRT.

To be able to successfully convince others to adopt the RRT, champions at both organizations had to navigate the professional and unit boundaries of the hospital, an activity that required exceptional communication skills and a good understanding of the organization and the people within it.

Facilitate Consensus

A fifth champion activity which helped to convince others to accept the RRT was consensus building. Although individuals throughout Pinecrest and Metropolitan all tended to agree with the underlying principle of the RRT (that it was a supportive resource for floor staff which would help improve patient care) many took issue with particular details and processes of the team and the services. Champions worked to build consensus around the RRT by holding multiple stakeholder engagement meetings and using the feedback to shape the RRT so that it would fit the culture and norms of the organization.

The "hard core" of the RRT remained the same (that is, the core concept of an on-call team of critical care clinicians and the non-negotiable aspects of the intervention such as those set out by the MOHLTC); however, champions molded the "soft periphery" of the innovation, such as the team composition or call procedures, in order to win stakeholder buy-in and consensus.

At Pinecrest, the RRT implementation team met with resistance from hospital physicians around the scope of practice of the RRT and the particular interventions (or medical directives) that the team would be allowed to initiate. In order to even launch the RRT, the implementation team needed the other hospital physicians, whose patients received care in the RRT-serviced wards, to agree to and sign off on the RRT's medical directives. Originally, the implementation team wanted the RRT to have a wide ranging scope of practice that included therapeutic
interventions; however, this was met with resistance from the hospital's physicians who were concerned about RRT nurses initiating therapy without first speaking to a physician:

“There was resistance from the physicians with concerns about the nurses initiating therapy without talking to a doctor about them. ... I did present the initial medical directives to the medicine core team, before [the RRT] was even launched as a pilot, and it was at that stage that it was clear there that I wasn’t going to get consensus about allowing the team to be very aggressive as far as therapeutic measures (P05, 238)

After receiving this initial feedback, the physician champion at Pinecrest worked to scale back the scope of the RRT and then presented the revised directives to each physician group (e.g. surgery, family practice, etc.) for them to sign off. By incorporating stakeholder feedback into the design of the RRT and by holding multiple meetings and negotiations with each physician group, the physician champion was able to reach a point of consensus whereby the hospital physicians felt comfortable in supporting the RRT's scope of practice:

“I didn’t have any physicians refusing to sign the directives. I think some of the initial concerns were in what the medical directives were – the scope of them. So we limited them really to investigation for the most part. The medical directives allow the nurses to draw blood, order ECGs, x-rays, and then the only real therapeutic interventions in the directives is to start an IV and, if the person is hypotensive, start a bolus of 250 of saline. So that’s the limit of what they can do on their own (P05, 212)

Unlike Pinecrest which had the freedom to design its RRT as it saw fit, Metropolitan was required to adopt the MOHLTC-endorsed RRT model; however, the RRT implementation team still modified the design so that the RRT would align with the organization's values. The MOHLTC initiative did not include funding for a respiratory therapist as part of the team, but because stakeholders asserted that the RRT ought to reflect the interdisciplinary approach to patient care that was valued throughout the rest of the organization, the RRT implementation team worked to modify the design and incorporate a role for a respiratory therapist on the team, who was funded from within the hospital's existing budget.

In addition to modifying the composition of the team, the champions at Metropolitan drafted spent considerable time crafting policies and procedures that would meet with agreement across the hospital. When the RRT implementation team first introduced the RRT call process to the executive leaders for their approval, they were met with concerns around who would
remain responsible for the patient once the RRT was called and the idea of what was essentially a nurse-initiated medical consult:

[It was an] issue in the sense that it's not a process that we had ever done before. Nurses have initiated consults from peer to peer but have never initiated a peer to peer consult in which there was an associated physician who could intervene with that patient. So, the process is slightly different because the patient on the floor belongs to [the most responsible] physician [MRP]. The nurses caring for them says, not happy, something's going on, I'm going to initiate a consult to CCRT ... If the physician on the CCRT team initiates care [the most responsible] physician is left out of the loop, right, he's not aware and ultimately responsibility for that patient resides with the primary physician ... So that was a big hurdle to overcome at first. (M03, 382)

The champions at Metropolitan were able to build consensus around the RRT call process by fine-tuning the elements they could to fit the organization and by working with all stakeholders in order to get their approval.

So, what we convinced them was that let's set it up in a two-stage process. Nurses can call nurses for help. Since they can do that, then [they can call the RRT] and the RRT nurses will say, "We're on our way. Have you called the resident or the staff physician to let them know that you're patient is deteriorating?" If they say, "Yes", great. If they say "no", we say, "Please call them." When we arrive we say, "Is the resident around? Are they aware?" So, there would be multiple checkpoints ... The policy ended up reading that nurse will call nurse, if nurse feels that the RRT physician is needed, then they would call the RRT physician. If the RRT physician felt that therapy was warranted ... then they would communicate this as a suggestion to the MRP. So they agreed to that. I had to get a lot of compromise and formulizing [the policy] and everyone got involved ... Finally I brought the policy to the Medical Advisory Committee, to the Nursing Council, to the Professional Practice Executive Council, to senior management. I presented it to the Board. I presented it to the Community Advisory Committee of the Board. Like, it went everywhere to get approval. (M02 509)

Facilitating consensus was a time consuming process that involved a great deal of "back and forth" between champions and stakeholder groups, but it was essential champion activity which helped to ensure the successful implementation of the RRT throughout both organizations.
Chapter 5 - Results Part II: Facilitators

Champions reported a number of factors which facilitated their work as they endeavoured to ensure the successful implementation of the RRT. Facilitators were defined as things which helped or made it easier for champions to implement the RRT and convince others to accept the innovation. Facilitators that were common to Pinecrest and Metropolitan are presented first below, followed by the facilitators that were unique to champions at each organization.

Facilitators at Pinecrest and Metropolitan

The presence of other champions

One of the elements that helped facilitate the activities of champions as they worked to convince others to accept the RRT was the presence of other champions. The executive champion at Pinecrest who first introduced the RRT to the organization originally acted alone and described the difficulties she faced with this approach: "[I] tried, as a single voice, as a director back then, to influence a change within the organization and struggled trying to get anyone really to believe that this was a good thing, even including my own team" (P01, 70). Because of this difficulty, she sought to send an entire team of people to the next IHI conference so that they too might become enthused about rapid response teams. The team that attended the conference came back excited and willing to help with the implementation of the RRT and from this team the managerial champion emerged. The success of this second approach led to the insight that champions are unable to exist in isolation: "You cannot ever be a single champion because it just doesn’t sustain itself. So then the champion has to figure ways to develop other champions who are part of the cause" (P01, 291)

The presence of other champions was also cited as a facilitating factor at Metropolitan. The nurse champion described that, "the fact that it was a dual physician-nurse [-led team] helped, so [the physician champion] and I could bounce ideas off each other. Rather than a single person trying to move a large project forward having -two was helpful" (M03, 709).

Furthermore, it appeared that in addition to the presence of other champions, having a variety of champion types involved in the implementation was also a facilitating factor. Pinecrest had three types of champions (executive, managerial, and clinical) who were able to
work at different levels of the organization and contribute multiple perspectives. Although Metropolitan had two clinical champions and no managerial or executive champions, as the nurse champion (Participant M03) noted in the quote above, the fact that one of them was a nurse and the other a physician helped in generating different views and ideas.

The presence and variety of multiple champions allowed for the distribution of implementation work and champion activities, the sharing of ideas, and the creation of a mutual sense of excitement and passion for the successful implementation of the RRT.

The availability of resources

Another factor that facilitated the work of champions was the ready availability of resources, including equipment and staff time. For example, although the ICU clinical educator was not a formal member of the implementation team, her time was made available to provide assistance to the nurse champion when required. The educator sat down with the nurse champion and helped to determine what learning resources he would need in order to train other nurses to be on the RRT and educate bedside nurses across the hospital about how and when to call the RRT. She then sourced these materials, provided him with educational packages, and linked him with other educators and staff who could be of assistance.

At Metropolitan, implementation resources were also readily available, including many provided by the MOHTLC. The Ministry provided training courses for clinicians who were to be part of the RRT, hosted weekly or bi-weekly phone meetings as a forum for representatives from several different hospitals to share implementation best practices, and also offered educational materials and implementation guidelines for hospitals to use.

Another important resource made available to champions at both sites was time. A senior executive at Metropolitan noted that a champion without protected time wasn’t really a champion at all (M05, 641). The managerial champion at Pinecrest realized that “there was no way this is a corner-of-your-desk kind of operation” (P06, 852) and provided adequate protected time for the nurse champion to work towards successful implementation.

Supportive leadership

A third element that emerged as a facilitating factor for champions was the provision of supportive leadership from managers and the senior team. At Pinecrest, the nurse champion,
who was also the RRT nurse lead, was new to his formal leadership position and was said to have received strong mentorship and regular feedback from his peers and supervisors. More generally, the whole RRT implementation team received strong support from senior management. The managerial champion recalled telling the executive team that they were not yet ready to roll out the RRT as planned for a number of reasons. Instead of insisting that they proceed, senior management was understanding: “They believed in us. They said, ‘You know what? You’re the experts, you’re the ones who know.’” (P06, 857).

At Metropolitan, executive leadership was engaged with the implementation of the RRT and was able to identify to champions the potential challenges they might face and specific elements of the RRT that would need to be modified in order that the team fit the needs of the organization. The physician champion noted that it was helpful to have the senior leadership team endorse the RRT because it gave the initiative importance and ensured that people would listen. Indeed, senior leaders at Metropolitan recognized the weight their support carried throughout the hospital:

“You want to make sure there is executive sponsorship... so the people see that okay, [the physician champion] has corporate support on the work he's doing... So, we really tried to do that at an executive level because it's not to say that people won't commit to projects unless the executive does but it's more of a supportive role than a directive role....I wanted people to know that this was really good work.” (M05, 527)

Pinecrest experienced enhanced supportive leadership in the form of an executive champion. This individual not only supported the initiative and provided high level guidance, but she also introduced the initiative to her peers on an executive level and paved the way forwards for the RRT, thus making it easier for the other champions to carry out the implementation:

[The executive champion] smoothed the way, organized everything else... Nothing, nothing would have happened without [her]... She was the driving force. Absolutely. And the driving brain... she set it up so that there were few problems when we did initiate. She’s very ambitious. She’s very smart. And she’s very determined. And I think you don’t cross her either. And I think probably her [staff] knew that.” (P07 757)

At both organizations, supportive leadership helped to guide, clear obstacles, and lend credibility to the work champions were doing.
The nature of the innovation

The nature of the innovation itself was a facilitator to the work of champions. The rapid response team innovation possessed certain characteristics that champions at both organizations were able to leverage in order to better ensure successful implementation.

First, champions capitalized on the fact that the RRT was a patient safety intervention which could save lives on a very direct and immediate level. As mentioned in the section about advocacy, when trying to convince others to adopt the innovation, champions maintained that the RRT was in the patients’ best interests and that “it was the right thing to do” (P06, 474).

Second, the RRTs at both organizations did not require the rest of the hospital to give up anything. Concrete contribution from departments outside of the ICU were negligible. At both organizations the RRT did not require clinical staff outside of the critical care unit to do any additional work. General ward physicians and bedside nurses who called the RRT were expected to work collaboratively and cooperatively with the team, but this required no greater effort on their part beyond expected norms. Furthermore, the RRTs at both organizations did not require any extra money. At Pinecrest, the ICU was willing and able to fund the team within its existing operating budget. At Metropolitan, funding for the RRT was provided externally by the MOHLTC. When trying to convince others to accept and use the innovation, champions were able to capitalize on the idea that the RRT required little to nothing extra from stakeholders, but had much added benefit,

Third, the nature of the RRTs at both organizations was such that the team was made up of ICU clinicians. At Pinecrest, before the RRT was implemented, the staff of the ICU already had pre-existing relationships with different physicians and physician groups in the hospital, who were then already familiar with the advanced clinical skills and abilities of the ICU staff. The fact that the RRT was made up of ICU clinicians led other physicians to believe that their patients, if seen by the RRT, would be in good hands (P06, 569). At Pinecrest, physicians’ perception of the ICU staff as being advanced, experienced, high-level clinicians helped them to trust the RRT. This pre-existing trust and relationship was a potential facilitator in helping the acceptance of the innovation amongst physicians.

Finally, the RRT filled a clinical resource gap. At Pinecrest, there was a recognition that certain nursing staff would benefit from further clinical support. Groups that could have
especially benefited from a RRT included novice nurses who may have been unable to clearly articulate their concerns about a patient to a physician and nurses working night shifts who may not have had a full cadre of managers and physicians around to support them. Champions at Metropolitan also recognized the value of promoting the RRT as a clinical resource not only to nurses, but also to medical residents and trainees. In addition to directly helping very ill patients, the RRT also supported staff who may have felt under-supported or who still lacked enough experience to comfortably handle patients whom they felt were in compromised conditions. This aspect of the innovation allowed champions to brand the RRT as a supportive clinical resource to end users.

The tangible positive aspects and visible benefits of the RRT made it easier for champions to promote the initiative and convince others to accept the innovation. As the nurse champion at Metropolitan stated about the ease with which she convinced others to accept the RRT, “It's easy to sell a good product” (P03, 498).

**Facilitators Unique to Pinecrest Community Hospital**

**Organizational culture of change and innovation**

Champions at Pinecrest noted that the organizational culture at the hospital was a facilitating factor to the work they did to implement the RRT. Participants described the organization as having a culture of change and innovation. This culture seems to be attributable to an interplay between the organization’s history, values, and staff.

Some participants ascribed the culture of change to the fact that the organization had been formed via the merger of two hospitals, a process that required major upheavals and ongoing change: "I think that the culture [at Pinecrest] is a very good one as far as change. One – you sort of hate to say this, but – the merger of the hospitals has required this organization to be in change mode continuously for about the past 10 years or so" (P05, 637). Because of the nature of the merger and the fact that the organization was relatively young, staff members are accustomed to and expectant of change: "I think organizationally, they had had a lot of change, a lot of innovation … early on in the organization's lifespan, I think there was an expectation that things were going to ebb and flow" (P06, 789). This attitude of readiness for change seemed to be an important contributor to the overall organizational culture of change.
Participants also described the organization as highly innovative with a reputation for implementing new initiatives on a regular and frequent basis (P06 778). As with the merger, this emphasis on innovation contributed to staff’s familiarity with change.

*I think the culture of innovation helped everybody sort of say, “Oh yeah—this is a good thing. We’re going to try it. So nobody was saying, “Oh my God—what is this? This is new.” We were used to new things all the time. We were doing all kinds of weird and wacky things. So this was just another thing.* (P06, 778)

Innovation *is* highly valued by the organization and *is* publicly listed as a major strategic initiative on Pinecrest's website. Staff *are* strongly encouraged to be innovative by means of formal recognition. Teams and individuals who achieved improvements in patient care via innovative practices *are* recognized through the distribution of Excellence Awards. Participants noted that the team involved with the RRT initiative *had been* a recipient of a number of these awards (P06, 710).

Overall, participants described the organization as one with a “very accepting environment of innovation” (P06, 778) where staff members were generally “willing to accept change” (P05, 640). This organizational culture of change and innovation was said to be a facilitating factor during the RRT implementation process, notably when introducing the innovation to floor staff. One participant surmised that an organization that was not as innovative might have found the RRT initiative to be “hugely intrusive” (P06, 796).

**Tailored-to-fit intervention**

At Pinecrest the RRT was designed and modified in order to best fit the hospital, which helped ease the implementation process. Instead of adopting a pre-determined RRT model, the steering committee decided to design an RRT that would suit the organization. They employed a highly participative process by which individuals from across the hospital were invited to join the steering committee and contribute their content expertise to the development of the innovation. For example, educators temporarily joined the team, to help design and develop particular training materials. A health informatics specialist came on board to help determine which metrics to collect and how to collect them. The communications department was asked to help with developing pager codes, posters, stickers, and other dissemination material. And, as noted previously, the RRT was frequently adjusted in accordance with feedback from clinicians.
in the recipient units. The steering committee rejected the idea of implementing an innovation that was from a “cookie cutter mould” (P05, 750). Although there was more front-end work involved by not using a pre-determined package and starting from the ground up, having the RRT innovation tailored to perfectly fit the organization made the overall implementation process easier for champions to carry out.

**Strategic approach to implementation**

At Pinecrest, the strategic planning process and forethought that was used to develop the RRT initiative emerged as an important facilitator for champions in that it “smoothed the way” for them to do their work. In the words of one participant, the entire process was “planned like a war” (P07, 107). Each aspect of the RRT implementation process was strategized to ensure an efficient and high performing team and to maximize the chances of successful implementation.

First, a steering committee was formed to lead the RRT project from design through to implementation. In addition to planning and decision making, the committee was also responsible for doing the work required to actualize the RRT. The core of the committee was made up of a small group, mostly critical care staff, and included among others the nurse champion (who was the RRT nurse lead), the physician champion (who was the RRT physician lead), and the managerial champion who was the manager of the ICU. This mix of professionals was strategic in that it mirrored the key stakeholder groups within the organization, allowing members of the steering committee to act as both champions and liaisons with their respective professional groups. The steering group anticipated that this peer-to-peer communication strategy would be more effective than if a member were to try and liaise with a different professional group than that to which she or he belonged. Designing the committee to include the right mix of people was strategic in that it precluded the challenges that would have resulted had committee members tried to get buy-in as an 'outsider' to a particular professional group.

The composition of the rapid response team itself was also strategically designed. As previously mentioned, a number of different RRT models exist, including the model used by Metropolitan and endorsed by the MOHLTC whereby the team is led by a critical care physician who attends to all RRT calls (the intensivist-led step-down model). Instead of adopting this model, the steering committee at Pinecrest decided to implement a 24/7 "nurse-led ramp-up" RRT. This model was chosen for a number of reasons. First, the steering committee wanted an
identical RRT response both during the day and at night. Because the organization is a community hospital, late in the evening there may only be one or two physicians physically present in the hospital, thus critical care physicians would only be available to respond to calls during the day. Using a nurse-led model ensured that an RRT nurse would go out to every call, day or night. Second, the steering committee wanted to make the best use of scarce resources. They knew from experiences at other hospitals that not all calls required the attention of a critical care physician and could be more appropriately handled by a nurse and RT.

… It sort of has to do with your philosophy around efficiency and how this team is going to work in the larger scope of the world of health care when there are limited physician resources. And what we wanted was a team that would be physician extenders for us… To have a comprehensive assessment by an experienced nurse you can rely on to tell you about the acuity of this problem that’s come up was, we thought, a better way of running. (P05, 51)

Third, the steering committee predicted that bedside nurses would less hesitant to call a nurse-led RRT for help than a physician-led RRT. With a physician at the helm, there was a worry that nurses would be reluctant to call for fear of reprimand.

When the response is a nurse response … I think the ward nurses like that they’re talking to a colleague on the same level, that they’re getting education about things from a colleague. If [a physician] goes there and says the identical things that a nurse might say, it’s taken in a different way. It may not be looked at as education, as much as reprimand about how they behave and what they should be doing. So there’s a difference in how the information is received when it’s a physician who responds to the calls. (P05, 127)

The choice of RRT model was a strategic decision on the part of the steering committee in order to maximize both performance efficiency and the chances of successful uptake amongst end-users.

Another instance of the strategic approach taken by the steering committee was in determining the scope of medical tests and interventions (called medical directives) that could be done by the RRT nurse and RT. Originally, the steering committee was aiming for a wide scope of practice, but this approach was revised in order to preemptively reduce resistance from physicians who might be wary of allowing the RRT nurses such broad directives.
Initially I pushed for very broad and all encompassing medical directives and over time they got whittled down to a much more concise version ... We did that with the input from the physician representatives who said, “Why don’t we start small, because this way there’ll be less resistance. And once we’ve proven ourselves, we can ask for whatever we want afterwards.” Why not start out with something that’s non-threatening, that doesn’t look like you’re trying to take over. That looks very innocent, innocuous. Once you prove that you can create a benefit with that, then you can go back and say, “See, we know what we’re doing.” (P04, 280)

Along with the steering committee composition and the RRT model, the implementation plan was also strategically developed. The committee approached the implementation process under the assumption that the innovation would not be well received and then planned accordingly.

There was an assumption that nobody would like the idea, which was true. And there was an assumption that the floors that we were going to start on in medicine didn’t really want us there, which was true. There was an assumption that the physicians wouldn’t really like it and would be very wary of it ... which was true. So we started with all those assumptions and then we were very very careful. (P07 107)

These assumptions were based on what the committee had learned from the IHI conference, from available literature, and from communicating with those who had implemented RRTs in other organizations. The committee worked strategically by anticipating possible sources of resistance and then devising ways of working around them. To this end, they made the major strategic decision to implement the RRT via a slow, unit-based rollout, preceded by a great deal of advance notice and education. The RRT began by servicing only one general unit for several months. Staff in this pilot unit were strongly encouraged to provide feedback, which allowed the committee to resolve any issues with the RRT before moving on to the next unit. This slow approach also allowed them to collect data which was used to justify further expansion. Soon after the RRT was up and running, a few nurses in the pilot unit began to praise the innovation as “the best investment that [Pinecrest] has ever made” (P01, 187). Word soon spread and as the positive effects of the RRT became visible to the rest of the organization, staff in other units were reportedly eager to have the RRT become available to them as soon as possible.

The RRT implementation team worked “relentlessly” (P07, 777) before launching the RRT across the hospital, and the pre-planning and strategic foresight they employed mitigated
the potential challenges that champions could have faced. Although Metropolitan also appeared to take a strategic approach to the RRT implementation, none of the champions cited it as a facilitating factor to their work.

**Facilitators Unique to Metropolitan University Hospital**

*Previous experience with a similar innovation*

At Metropolitan, the nurse champion noted that support from the hospital and the critical care department was a facilitating factor to the work she did to implement the RRT: "There was general support in the organization… There wasn’t nay-saying by anyone, it was just a matter of how [to implement]. So, I think there was support both in the organization and the critical care department to move this forward" (M03, 711).

The director of the critical care department attributed this receptivity and generally supportive attitude to Metropolitan’s involvement with the development of the Ministry’s Critical Care Transformation Strategy as well as the critical care department’s previous unsuccessful attempt to implement a similar intervention, whereby critical care nurses would follow up with patients outside of the ICU:

*We had been working on this project three years before the RRT started from the government. We also influenced the Critical Care Transformation Strategy by feedback that we have from the teams here. But when [the RRT] arrived it was something that was expected and it was much easier to implement than somewhere where you have to start from scratch from everything. So, in terms of culture, in terms of needs assessment, in terms of partial response, it was already done. So, then when you have to complete response with the addition of a physician to the existing team it was something that was very easy to do. (M02, 539)*

Metropolitan’s initial attempt to implement a team to do critical care follow-up seemed to have ‘primed the pump’ for a full scale RRT and to have enhanced supportiveness and receptivity to the RRT, thereby facilitating the work of the RRT champions.

*Implementation-ready intervention*

The physician champion at Metropolitan attested that one of the most effective facilitators to his work was the fact that the RRT had come as a pre-bundled package from the MOHLTC: "Well, clearly the thing that made it the easiest was the fact that this was coming as
a package. Hospitals that want to start this from scratch have got a much bigger job" (M01, 820),

The MOHLTC Critical Care Transformation Strategy provided implementation guidelines, deliverable dates, educational resources, training for RRT clinicians, and most, importantly, funds to support the initiative:

The Critical Care Transformation Strategy ... developed a critical care response team programme with sort of a recipe: Here’s what we should do; here are the timelines; here’s when we expect you to go live; here’s where we expect you to put the pilot phase out; here’s when we expect you to implement; here are the accountabilities; and here’s a cheque... Very different than, let’s say, [Pinecrest] who predated all of this by creating a rapid response team or [another hospital] who had actually started the rapid response team predating the money. So, I actually think that from [Metropolitan's] point of view, it was much easier. There’s still all the politics and all of that and convincing, but it’s much easier because I didn’t have to convince physicians to be a part of the team without getting any remuneration for doing so, because the money was there. I didn’t have to convince the administration that I need you to fund 4.5 FTEs of a nurse to do this because the money [was there]. (M01, 277)

The provision of a "recipe" and additional external resources streamlined the implementation process at Metropolitan, and although the physician champion still engaged in champion activities such as navigating political boundaries, achieving the overall goal of convincing others to accept the innovation was made easier because of the Ministry's funding support.
Chapter 6 - Results Part III: Challenges

As outlined in Chapters 1 and 2, one of the original research questions for this thesis asked what facilitators and barriers champions faced in their work. Over the course of the research, however, it became evident that participants did not seem to identify with the word "barrier," and instead, they described what they perceived to be "challenges." Accordingly, the term “challenges” is used here to describe the factors that champions reported as impediments to their work. The single challenge that was common to champions at both organizations is presented first below, followed by descriptions of the unique challenges faced by champions at each organization.

Figure 4. Shared and unique champion challenges at Pinecrest and Metropolitan
Challenges at Pinecrest and Metropolitan

Physician resistance

Champions at both organizations cited physician resistance as one of the challenges they faced as they worked to implement the RRT. This resistance often manifested itself in the form of debate and disagreement during stakeholder engagement meetings.

At Pinecrest, participants referred to three sources of the physician resistance against the implementation of the RRT. First, the physicians were wary of the RRT as an ICU rescue mission and did not want ICU staff to come into their units and “save the day” (P01, 88). Physicians were said to take great pride in the care they delivered to their patients, and so feared having the care of their patients taken over by others or being kept out of the loop about their patients' conditions.

Second, physician resistance at Pinecrest was due in part to the fact that the RRT was nurse-led. Some physicians expressed concern about a nurse initiating therapy without first consulting a physician.

Third, participants felt that some physicians were resistant to the idea of the RRT because they did not feel that there was any reason for having such an intervention in the hospital: "I think they were a little bit hesitant and a little bit of the mindset that “OK maybe other organizations have these problems, but we don’t have them.” I don’t know for certain. I can’t speak to what other people think. But that was my perception" (P04, 328)

Participants seemed to think that some physicians believed that the issues that warranted an RRT did not exist at Pinecrest and hence pushed back against what was perceived to be an unnecessary intervention.

At Metropolitan, the physician champion reported that physicians were resistant or hesitant about the idea of the RRT because they also perceived the presence of the innovation as a negative reflection of their medical competency and did not want other clinicians taking over the care of their patients:

*I talked about what this will do and what the difference between the current process is and what it could be and they saw this as a total intrusion on their capability of caring for their patients, "How dare you tell us that we don’t respond early enough to our deteriorating patients. We work very well within our team. You’re going to be a fifth wheel that will get in the way." (M01, 411)*
At both organizations, champions overcame physician resistance by allaying their fears using careful messaging and explanation of what the RRT was meant and not meant to do, by modifying the RRT process and rules in order to reach consensus, and by making a concerted effort to foster positive working relationships with stakeholder groups.

**Challenges Unique to Pinecrest Community Hospital**

*Perceived divisions between professions and unit cultures*

Participants at Pinecrest noted that cultural divides between different professions and hospital units were a challenging factor in the RRT implementation process. Two sub-cultural divides were described: that between nurses and physicians and that between clinical staff in the ICU and clinical staff elsewhere in the hospital.

**Nurse-physician dynamics.** Participants referred to the relationship dynamic between physicians and nurses as one of the anticipated challenges that influenced the design of the rapid response team. Participants noted that, typically, when a physician communicates with a nurse about a patient, the message is often interpreted differently than if it is another nurse is delivering the same message. For example, the physician champion at Pinecrest (Participant P05) described situations where although the intent of the physician may have been to educate, the nurse construed the interaction as reprimand because of their relative professions.

Participants suggested that fear of reprimand may be a potential reason for why nurses sometimes hesitate to call physicians for help. They anticipated this to be a challenge for RRT implementation, and so to mitigate this perceived fear and to encourage nurses to call the RRT, the RRT steering committee decided to design the team so that a nurse and RT would be the first ones to respond to a call.

**ICU sub culture.** Not only did subcultures exist within professions, but they also existed within different parts of the hospitals. Participants described the ICU at Pinecrest as having a unique culture of its own due the nature of the work and the staff dynamics within the unit.

Although the whole organization possessed a culture of change and innovation, the staff in the ICU were identified as being particularly “high change adopters,” with a track record of rapidly adopting many patient safety initiatives (P03, 210).
Nurses in the ICU were also said to have more advanced clinical skills and a higher level of knowledge compared to some nursing staff elsewhere in the hospital. The ICU was described as a place that attracted clinicians with aggressive, type A personalities: "Well you have to understand it takes all of the most aggressive, type A kind of people everywhere in the organization. And they all gravitate towards the ICU, because they get to practice at a higher level, they get a higher level of knowledge…" (P04, 699).

Furthermore, the relationship dynamic between nurses and physicians within the ICU was said to be different than that elsewhere in the hospital. The relationship was described as being more collaborative and was characterized by more shared responsibility for the patient. Participants noted that in the ICU physicians listened to ICU nurses and accepted feedback from them and suggested that there seemed to be a greater sense of equality and role appreciation between the two professions compared to the rest of the hospital.

These staff characteristics and the clinician dynamics combined to form a unique unit culture. Participants painted a picture of the ICU as a place full of assertive, high-performing individuals, where collaboration and innovation were highly valued; however, they suggested that staff outside of the ICU may not have had a full understanding of ICU culture, work, and level of care:

> ICU nurses should actually have a different title because their role is so much different than nursing outside of the ICU. In community hospitals the number of things they’re responsible for is enormous, as it is in other areas. But I just don’t think that the other areas of the organization actually appreciate what goes on in ICU and how much of it is nursing driven and what difference in nursing level of care it represents. (P04, 706)

The differences and lack of mutual understanding between ICU staff and nursing staff in other units of the hospital seemed to translated into a perceived negative relationship dynamic between the ICU and ward nurses. Participants described the relationship between the ICU and the ward nurses using words and phrases like “hate” (P06, 414), “animosity” (P04, 711), and “bad blood” (P04, 717):

> And there’s also some inherent animosity, because [nurses in] most areas of the organization – and I think it’s true of most hospitals – have had bad experiences bringing a patient to the ICU... Bad blood between the ICU nurse and the nurse bringing the patient [to the ICU]. You know the nurse in ICU would either say “This patient’s not sick enough to be
here. You shouldn’t have brought them.” or they’d say, “This patient’s really sick! What the hell have you been doing all day?” Right, so there’s a lot of cattiness in nursing that doesn’t lead to teamwork and new ideas being accepted and communication and collaboration. (P04, 711)

To floor nurses, the ICU was said to be associated with a sense of failure and having to relinquish a patient who has deteriorated (P06, 370) as well as a sense of fear in that the ICU nurses had a reputation for scolding and being rude to floor nurses (P06, 379; P04, 717). Participants feared that this negative perception of the ICU would carry over to perceptions of the RRT and would prevent floor nurses from calling and trusting the RRT:

I think the nurses were resistant to calling anybody. They were resistant to somebody else coming and telling them what to do. And believe me, this goes back in time. The intensive care unit used to represent the end of particularly crappy day for a nurse. She’s been trying to take care of her patient and the patient has deteriorated to the point where they need intensive care, and she has to bring them to the intensive care unit. And the nurses in the ICU are accepting a very ill patient. They don’t have time to say to her, “Oh, good work. You really tired hard. I’m sure it was really difficult.”... Nor have they been cultured that way. They just grab the patient, throw them on the bed.... So the nurse leaves feeling less than adequate in her role. Historically those doors of the ICU frightened people. So there was that cultural barrier to overcome... (P06, 367)

It appeared that floor nurses, as with physicians, were initially resistant to the innovation due to suspicions of the RRT being an ICU rescue mission, whereby the RRT staff would “swoop down” and take over the patient, just as what was typically done in the ICU: "There was nurse resistance initially from the floor because they expected it was going to be a rescue mission with them looking stupid and ICU looking great" (P06, 330).

The RRT implementation team anticipated the negative perception of the ICU as a challenge to the implementation process and worked to change the perceptions in a number of ways. First, the RRT implementation team were very thoughtful as to who they hired to be the RRT nurse lead. The individual they hired, who went on to become the RRT nurse champion, was chosen based on a number of characteristics, including his perceived ability to overcome cultural differences and restore positive working relationships:

We recognized right away why they wouldn’t call... It’s because they hate us. They don’t like ICU nurses. So [the RRT nurse lead], when
we hired him as the lead RN, we hired him not just because he was an acute care nurse practitioner. We hired him because he was a good guy. He was an excellent communicator. He was excellent at building relationships. He was an excellent clinician. He had good relationships, not just with the nursing staff, but with the physician staff in the organization. (P06, 415)

Second, the RRT team itself was trained to explicitly address the concerns of the floor nurses and emphasize to them the importance of working collaboratively:

[The RRT nurse lead] did a very good job at saying to people, “We’re going to come out. We’re going to work with you. We’re not going to tell you what to do. We’re going to help you understand what to do.” We socialized the MET team and said to them, “Listen, when you go out there, you gotta put a smile on your face and keep saying to [the floor nurses], ‘Good job. Let’s keep trying this and that’” And it’s really changed the dynamic. Even nurses from the floor want to now come and work in the ICU. They see our team going out and say, “That’s cool.” (P06, 382)

One participant noted that for both physicians and nurses, “the resistance was in the non-knowing” (P06, 389). The individuals involved in the RRT implementation process were cognizant not only of the resistance they would face from different stakeholders in the hospital, but also of the underlying causes of the pushback. Their anticipation and understanding of the roots of resistance allowed them to work strategically and mitigate these challenges in a number of ways.

**Change fatigue**

Although the innovative organizational culture was cited as a facilitator to the RRT implementation, there also existed a “dark side” to the culture of change. The constancy and frequency of change in the organization seemed to engender cynicism among some staff members. The nurse champion at Pinecrest (Participant P04) reported that some people in the organization displayed what appeared to him to be resentment and skepticism towards change:

There were a lot of people who seemed to have the sort of perception that “This is just another thing being pushed on us. No one asked us about this... They’re always trying new things here. None of it works. This isn’t going to work either.” I think there’s a lot of that sort of jaded sentiment around it. (P04, 396)
Despite the organization’s culture of innovation and change, not all change initiatives may have been successful or welcome from the perspective of certain staff. Previous unsuccessful change attempts and unproductive or non-sustained innovations seemed to have left some staff feeling cynical of new initiatives. Amongst some, this skepticism manifested itself as resistance to change. When the RRT nurse lead first introduced the idea of the RRT to bedside nurses, he was met with apathetic, passive resistance:

Certainly there was a lot of resistance when I’d go out and try and meet with the staff and discuss this and educate them ... There would be people who wouldn’t even look at me in these meetings ... They’d sit there with their feet up, reading their magazine. Wouldn’t even make eye contact. (P04, 329)

Another challenge stemming from the fast-paced culture of innovation and change was burnout amongst those involved in the design and implementation of new initiatives. Participants described feelings of burnout and tiredness from pursuing so many change initiatives at once, even if those initiatives were successful (P01, 715; P06, 490; P07, 165). The organization was said to be often “biting off more than it could chew” in terms of innovations (P07, 167). Participants reported that enthusiasm and excitement for the innovation are what helped them overcome this challenge and sustain the energy needed to successfully implement the RRT.

Challenges Unique to Metropolitan University Hospital

The lack of an executive champion

At Metropolitan, the presence of an RRT executive champion was cited to be a factor that would have facilitated the implementation process. Although technically there was an executive sponsor who was ultimately responsible for the RRT initiative once it was adopted into the organization, there seemed to be no individual at the executive level who emerged as a champion at the very beginning stages of the implementation process: "What would have helped definitely from the beginning would have been senior [sponsorship]. That would have been helpful. Once we got [the RRT], you could see that they realized that there was appetite for this and they started promoting it more" (M01, 833).
Upon reflection, the physician champion at Metropolitan noted how important it was for him to engage and involve the executive team on the RRT implementation team or steering committee from the start:

_In retrospect, my learning was I should have had engaged senior leadership much earlier and had them aware of what was going on all along the way. But we actually, sort of, did it in a stepwise ground-up fashion. It worked in the end but it was a lot of grief, a lot of grief._

(M01, 533)

Unlike Pinecrest whose executive champion introduced the concept to the hospital, the executive team at Metropolitan was not as closely involved with the RRT during the early stages of the adoption and implementation process. The challenges that this created for the RRT implementation process highlighted the importance of engaged leadership as a facilitating factor.
Chapter 7 - Results Part IV: Becoming a champion

One of the research objectives of this study was to explore whether individuals became champions through an informal emergent process, a formal process of appointment, or a combination. Participant interviews revealed that champions came into their roles both through informal emergence and a combination of informal emergence and formal appointment.

At Pinecrest, two of the four champions emerged informally and two emerged via a mix of informal emergence and formal appointment.

Informal Emergence

In the informal emergence process, individuals learned about RRTs from an outside source and decided, under their own initiative and outside their formal organizational roles, to work towards adopting and implementing the RRT within their own organization.

For example, the executive champion at Pinecrest (Participant P01) learned about RRTs from a patient safety conference she attended and consequently attempted to bring the innovation back to the organization. Her efforts to do so fell outside of her day-to-day role and were motivated by a personal imperative to improve quality and patient safety within the organization. Similarly, the physician champion at Pinecrest (Participant P05) learned about RRTs from a critical care conference and, also outside the scope of his role as an ICU physician, attempted to bring it back to the organization on his own. For a period of time, these two champions were simultaneously working in parallel towards the same goal, but unbeknownst to each other.

These individuals engaged in champion activities absent or prior to any formal position on the RRT implementation team.

Informal Emergence Combined with Formal Appointment

In the combined process, individuals demonstrated some general champion-like qualities before becoming part of the RRT implementation process. They then applied for or were appointed to formal positions on the RRT implementation team or became part of the team because involvement fell within the scope of their existing position. After becoming part of the RRT implementation team, they became champions for the innovation.
For example, Pinecrest ran a formal job competition in order to hire their RRT Nurse Lead. The managerial champion (Participant P06) recognized that one of her ICU nurses (Participant P04) had both excellent communication and clinical skills and encouraged him to apply for the position. He was then hired on as the RRT Nurse Lead, and, in this formal position, became a full champion of the RRT implementation process.

The managerial champion herself (Participant P06) became a champion through the same combined process. She was one of the individuals who had been sent to the IHI conference by the executive champion at Pinecrest and who came back enthused and supportive of RRTs. Once the decision to adopt the RRT had been made, she became part of the implementation team because of her role as the ICU manager. She brought her enthusiasm and excitement for the innovation to the implementation team and consequently became an RRT implementation champion.

At Metropolitan, both the RRT physician and nurse leads became champions through the combined process of informal emergence and formal appointment. Before arriving at the organization, Participant M01 had developed a keen interest in patient safety within critical care, to the extent that he began taking patient safety focused educational courses. Upon being hired as an ICU physician he took it upon himself to advocate and educate his peers on patient safety: "I started selling the idea [of patient safety in critical care] and I’d have rounds and I’d meet with these people and I’d talk with this group, and really started saying ‘Look, it’s time to open our eyes. There’s a problem, but if we all get involved we can fix it'" (M01, 140).

Around the same time, the hospital had begun a job competition for a director position for patient safety and quality. Because of his visibility in the organization as a patient safety advocate, Participant M01 was an obvious candidate and was hired for the position. Given his new position and his clinical role as an ICU physician, he was a natural appointment for leading the RRT implementation team and he too then became a full champion for the RRT.

The nurse champion (Participant M03) also emerged through a combination of informal emergence and formal appointment. As previously noted, when she was working as an ICU nurse practitioner she took it upon herself to informally follow up with patients once they had been discharged from the ICU and was part of a working group that aimed to make this a process. She had also previously demonstrated interests that aligned with the RRT initiative and became a champion once on the implementation team:
When the Ministry came forward with the CCRT it just seemed a natural extension that I would go forward as the nurse lead on the team because I'd had the experience of doing it in an informal way as well as having sort of been on this group that had looked at trying to implement a similar process. And it was kind of an interest. I like program management. I like program development. So, on a more personal note it seemed to kind of fit. (M03, 81)

Champions Not Just In Name: The Ineffectiveness of Titular Appointment

At neither hospital did any of the identified champions become champions solely by formal appointment to the RRT implementation team, and not all implementation team members went on to become champions. Those who did had previously demonstrated qualities or skills that pre-disposed them to carrying out champion activities (for example, the communication skills required to be a good communicator or the interest and excitement to be a convincing advocate), then engaged in these activities once part of the RRT implementation team.

Furthermore, none of the identified champions had been given the formal title of "champion." Indeed, participants at both organizations recognized that the champion role was more complex than just a titular appointment and involved many additional factors including the provision of additional support and the thoughtful consideration of an individual's skills and interests.

The importance of additional support was illustrated by an example given by the managerial champion at Pinecrest. The word “champion” had been used by the organization in other contexts as a formal title or designation for certain clinical staff who had received extra training in a particular clinical area (e.g. wound care). These staff were expected to share this additional knowledge with others in their ward and ‘champion’ the issue; however, they reportedly did not receive enough support to successfully undertake their duties:

We do use that champion language, although usually it’s the poor sucker who’s at the bedside who’s given a course on pain or a course on skin or elder care or whatever. And they go back to the bedside and are the "champion" for their unit. But there's no support for that poor champion. There's this assumption that because you give somebody eight hours of a workshop on skin, that that person is automatically going to feel comfortable teaching, is going to know how to use the computer, is going to know how to make a poster, is going to know how to get a crowd together and say, “We have to do this”, and is going come up with an idea of doing skin rounds once a week. That stuff all takes a huge amount of energy, and a huge amount of time, and connection with other
forces that be. And that bedside nurse doesn’t have that. They need support from the manager, the clinical leader, the clinical educator to make those things happen. So, you have this champion, but you need to have these other people behind them who still have to do a whole lot of work, to go in and support in spreading the word. (P07, 637)

In this example, the participant identified several support needs that were not met, including the need for both ongoing content and communications training, the need for sufficient time allowance, and the need for linkages with others within the organization. Merely appointing someone as a champion was insufficient, and without adequate and sustained support, it became difficult for individuals to champion a cause successfully. In the case of the RRT implementation, the presence of other champions, the availability of resources, and strong mentorship and leadership came together to form a multifaceted support system that better equipped the RRT champions to carry out their task.

Metropolitan also formally appointed and referred to individuals as champions for initiatives other than the RRT, but gave specific consideration to the process by which people were chosen for appointment. As part of the Safer Healthcare Now campaign and their general commitment to improving quality of care, Metropolitan decided to implement several additional patient safety intervention strategies, including medication reconciliation, falls prevention, hand hygiene, and central line associated infection. For each intervention, senior leaders identified two "corporate champions," a physician champion and another clinical champion (e.g. nurse or pharmacist) with content expertise, to lead the team that would implement the initiative. The selection of each corporate champion was approved and signed off by a member of the executive team. These appointed champions were given a mandate and resources and had a number of formal responsibilities, including establishing team charters, calling and chairing team meetings, developing business cases for any additional resources, ensuring that the team was using rapid improvement cycles, and general project management. The identification and appointment of the champions appeared to be methodical and strategic:

They are chosen based on interest and skill and positioning within the organization. For medication reconciliation, the director of pharmacy has an interest, is very capable, and is a very strong stakeholder in implementing medication reconciliation. So that's how that person was chosen. To find the physician lead on that we held a consultation through the programs to identify a physician who had an interest in taking a leadership role on an improvement team. And so one
of our psychiatrists came forward and was very interested. Regardless, you want someone who is A) interested and who is going to stay with the project and B) who has the skill set. For example, a physician who is a good communicator, who can interact well, has good interpersonal skills ... you want someone who would be an ambassador for the other physicians ... (M06, 108)

These corporate champions were chosen based on skill, strategic positioning within the organization, and demonstrated interest. They were also supplied with protected time and additional resources to conduct the implementation work. These individuals were formally called "champions," but this process still seems to share similarities with the combined process of formal appointment to the implementation team and informal emergence through which the RRTs became champions.

Finally, it appeared that one of the most important factors for an individual to become a successful champion was sufficient passion or interest:

I think anyone with passion about the topic at hand can be a champion because when we're passionate about something then we will learn what we need to learn. We'll seek out the knowledge. We'll develop our own sort of knowledge and expertise if we're passionate about it. ...These are all intelligent people and they're in the healthcare, so if they're committed to patient safety and patient care, then they can be taught the tools. I don't think you have to be an expert in quality to be a champion on one of these teams. You have to be an expert in wanting to improve the quality. The bar is really, "are you passionate about improving care?" rather than that "have you taken courses on quality improvement?" because we can teach that. I don't know what the literature would say on that but my lived experience is that the most successful people are the ones who commit to the project at hand and they own it and they're excited about it and they put their own energy into it and it's infectious - other people get energized. (M05, 670)

Champions emerged both informally and through a combination of informal emergence and formal appointment. Not only did these successful champions possess a number of strategic characteristics, they were also well supported by others in the organization and held deep-seated passion for the cause at hand.
Chapter 8 - Discussion

This study revealed the following key findings about the role of champions in the implementation of RRTs at two urban hospitals.

RRT champions can be categorized into three types according to their organizational roles: executive champions, managerial champions, and clinical champions. Champions worked within and leveraged their respective positions in the organization in order to forward the implementation of the RRT.

Champions, regardless of type, engaged in five core activities, to varying degrees:

1. They disseminated knowledge. Champions communicated throughout their hospitals that RRTs would be implemented and educated their colleagues on the concept and processes around RRTs.
2. They advocated. Champions were passionate supporters of RRTs and promoted the innovation across their organizations.
3. They built relationships. Champions purposefully built positive working relationships with key RRT stakeholders and end-users.
4. They navigated boundaries. Champions were boundary-spanners and made conscious efforts to cross the real and perceived divides that exist between professions and hospital units.
5. They facilitated consensus. Champions worked to achieve agreement on the format and structure of the RRT with key stakeholder groups.

Champions faced a number of facilitators and challenges when working to implement RRTs in their organizations. Facilitating factors across both organizations included the presence of other champions, the ready availability of resources, and the presence of supportive leadership. The common challenge faced by champions at both organizations was physician resistance. Facilitators and challenges unique to each organization also existed.

In this study, individuals assumed the role of champion either by emerging informally or by displaying certain characteristics that led to their appointment to the RRT implementation team after which they became a champion for the innovation.

In order to help guide further discussion, these results can be combined into a proposed pictorial representation of the role of champions in the implementation of rapid response teams.
In the figure above, the three types of champions and their activities contribute to and exist as part of the process of RRT implementation. This process begins when the idea of the RRT is first introduced to the organization. At Pinecrest, the process was initiated when the senior leader, who later went on to become an executive champion, learned about RRTs from an external source and tried to bring the innovation back to her organization. At Metropolitan, change was initiated when the MOHLTC offered to fund an RRT within their hospital. After this point, champions either emerge informally or are formally appointed based on selection criteria. For the sake of comprehensiveness, all three champion types are represented in the figure, even through Metropolitan did not have a managerial or executive champion. The champions then engage in five core activities in order to convince others to adopt the innovation and achieve implementation success. As they work to reach this goal, they are subject to both facilitating and challenging factors.

Additionally, in the suggested model, all the features of the champion role are subject to the larger organizational context of the hospital in which the champions work. The study was designed such that the organizations were purposefully selected to vary across a number of characteristics. This allowed for a greater degree of confidence with respect to the generalizability of findings common to both places, but it also helped to illuminate potential contextual effects on findings.
Comparing Champions at Different Sites

Although champions at Metropolitan and Pinecrest shared many characteristics and the core features of their role were consistent across both sites, some divergent results also appeared. At each organization, champions differed in number, type, and modes of champion development and experienced unique facilitators and challenges. These differences can be examined in relation to the context created by the structure and culture of each organizations and the specific characteristics of the RRT implemented at each organization. The table below lists the differences between the two sites.

Table 5. Differences in findings between Metropolitan and Pinecrest

| Differences in number, type, and emergence of champions |
|-----------------|---------------------------------|-----------------|
| Number and types of champions | Pinecrest | Metropolitan |
| • Four champions | • Two champions |
| • Executive, managerial, and clinical champions | • Clinical champions |
| Champion emergence | Pinecrest | Metropolitan |
| • Informal emergence + formal appointment | • Informal emergence + formal appointment |
| • Informal emergence | |
| Facilitators | Pinecrest | Metropolitan |
| • Organizational culture of change and innovation | • Previous experience with a similar intervention |
| • Tailored-to-fit intervention | • Implementation-ready intervention |
| • Strategic approach to change | |
| Challenges | Pinecrest | Metropolitan |
| • Perceived divisions between professional and unit cultures | • Absence of an executive champion |
| • Change fatigue | |

Linkages to organizational culture and structure and to innovation characteristics
These differences in numbers and types of champions could be related to the organizational culture and structure at each hospital. For example, participants at Pinecrest noted that the hospital promoted the concept of distributive leadership to its staff. This particular leadership perspective holds that leadership is not necessarily a singular trait that is held by a particular individual, but a collection of behaviours and roles that can be shared and held by multiple parties at once (Barry 1991). In practice, Pinecrest was said to have operationalized this concept by encouraging all staff members to think of themselves as leaders, independent of formal leadership titles, and to seize opportunities for leadership roles (informal or formal). Management literature shows that product champions demonstrate strong leadership attributes as part of their role (Howell and Higgins 1990a); it is feasible that Pinecrest's promotion of distributed leadership may have helped to promote the emergence of numerous RRT champions from the executive, managerial, and clinical sectors of the organization.

Participants from Pinecrest also noted the organization's culture of innovation and inquiry. Staff were encouraged to pilot new initiatives and one participant suggested that there were fewer barriers to trialing pilot projects at Pinecrest as compared to typical academic hospitals. Participants also noted that staff at Pinecrest were encouraged to take on additional educational and learning opportunities, both informal and formal. The commitment to a vision that supports innovation and the provision of diverse career experiences have both been recognized in management research as factors that support product champion behaviour (Howell and Higgins, 1990b). Both these elements were reported by participants as ingrained into Pinecrest organizational culture and may also have contributed to the informal emergence and diversity of Pinecrest's RRT champions.

Differences in the number, types, and emergence of champions may have also been related to the characteristics of the innovation themselves. Pinecrest initiated its RRT from the ground up. The RRT implementation team needed to convince senior management to allow the initiative, to find the resources to staff and train the team, to design every aspect of the intervention, to pilot the RRT in order to prove that it worked, and to implement it throughout the hospital. The volume and breadth of work involved in this process may have necessitated the presence of more and more types of champions for success. In contrast, fewer champions and champion types emerged at Metropolitan, but the implementation process was relatively
less complicated, as the RRT implementation team received a pre-packaged intervention, complete with funding and implementation instructions.

**Differences in champion facilitators and challenges**

Several of the facilitators and challenges unique to champions at each site may have been related to the organizations' structural and cultural characteristics. At Pinecrest, champions cited the organization's culture of change and its strategic approach to change as facilitating factors. Challenges, on the other hand, included long-standing divisions between hospital units (e.g., between the ICU and the rest of the hospital) and professional silos (e.g., between physicians and nurses). Some Pinecrest champions also perceived a sense of change fatigue or apathy among staff, which they attributed to the organization's frequent state of flux. Champions at Metropolitan also linked facilitating factors with pre-existing organizational conditions; the fact that the hospital had previously attempted to implement a similar intervention was cited as a facilitator to the RRT implementation process.

Some of the unique facilitators experienced by champions at each site were linked to the characteristics of the RRT intervention itself. For example, champions at Pinecrest noted that their work was facilitated by the fact that the RRT had been designed to custom-fit the specific needs and requirements of the hospital, making the implementation process easier. Champions at Metropolitan noted that their implementation process was less daunting because they had received the intervention pre-packaged from the MOHLTC, with funding.

**Champions, context, and success**

Understanding the potential links between different contextual factors and champions could be beneficial for organizations that are looking to support or promote the role of champions in the implementation of innovations like RRTs. Adjustments in context could potentially enhance or mitigate facilitators and challenges or help to promote the emergence of champions. Some contextual effects, such as those tied to the innovation itself, might be more readily managed than those related to less mutable elements such as organizational structure or culture. The interaction between innovations and their adopting systems has been explored by Denis et al. (2002) in their study of innovation diffusion processes in healthcare organizations.
The authors propose that innovations are composed of a hard core, which consists of the fixed elements of an innovation, and a soft periphery, which consists of the aspects of an innovation that can be manipulated and changed to suit the adopting system. Rogers (2003) also comments that innovations are more easily implemented if they can be modified to fit the system in which they are being introduced.

The implementation team at Pinecrest took advantage of this idea by continually modifying the RRT to closely fit the needs of their organization; champions at Metropolitan noted that the pre-packaged guidelines and an 'implementation-ready' RRT actually facilitated their work. Taking these two findings into account, the concept of cores and peripheries suggests that providing champions with guidelines and standards for the hard core of the innovation, yet allowing them enough flexibility to mould the soft periphery to fit the organization might help to maximally facilitate their work and the overall implementation process. For RRTs, the hard core could be the idea of an on-call team that provides critical care expertise at the bedside throughout the hospital, whereas the soft periphery may consist of elements such as whether the team is nurse-led or physician-led, hours of operation, or who is eligible to call for help.

By their own standards, both Pinecrest and Metropolitan were successful in their implementation of RRTs, even as they took different approaches to the process. Pinecrest designed their RRT from the ground up and had a greater number and variety of champions compared to Metropolitan, which implemented a pre-packaged RRT and had on hand fewer champions and champion types. These approaches to RRT implementation were connected to larger, macro-contextual factors. Metropolitan was positioned in such a way that it was one of the earlier hospitals to be invited by the MOHLTC to receive a pre-packaged RRT. Pinecrest on the other hand was not invited to become part of the MOHLTC's RRT program until well after it had already implemented its own team.

This study was not designed to measure relative success or to determine whether one implementation approach was better than another, but it appeared that the approaches at Pinecrest and Metropolitan led to a state of equifinality, whereby the paths were different, but the end result was self-rated success. Further study could shed light on what larger contextual factors and organizational characteristics allow for a "recipe"-based implementation vs. a more tailored-to-fit approach and whether certain champion parameters lead to greater success.
Additionally, the greater policy context can have bearing on the implementation choices of organizations and, by extension, the emergence and work of champions, and should be acknowledged as appropriate in future study.

This two-case study allowed champions' commonalities and differences to become apparent between the two sites. By exploring these shared and divergent characteristics, the central features that make up the champion role as well as the organizational and innovation contexts in which champions operate are now better understood.

**Revisiting Product Champions**

One of the motivations behind this study was the fact that the term 'champions' had been adopted from management literature by health services researchers and practitioners, yet little research had been done as to whether champions operating in health care settings differed from champions working in other industries. The RRT champions in this study shared several characteristics with the champions described and defined in management literature, and as discussed in the above section, some of the suggested relationships between the study results and the organizational and innovation context at each site are supported by existing product champion research. Even so, this study revealed several differences between RRT champions and product champions. Returning to the original definition of champions in management literature, researchers have often defined a champion as someone who

- Recognizes an innovation as having great potential
- Adopts the innovation project as his or her own and commits to it personally
- Promotes the innovation actively and enthusiastically
- Builds support for the innovation throughout the organization
- Overcomes resistance to the innovation
- Ensures the innovation is implemented
- Accepts a certain degree of risk to support the innovation
- Acts informally

(Schon 1963; Howell and Higgins 1990a; Howell and Higgins 1990b; Markham 2001).

There is alignment between RRT champions and several elements of the product champion definition. For example, RRT champions and product champions both promote and
build support for the innovation and both personally commit to the innovation. However, there are also notable differences.

**Key differences between product champions and RRT champions**

First, not all champions in this study appeared to incur perceived or real professional risk (e.g. threats to their position, credibility, etc.) in their role as a champion. Second, not all RRT champions acted 'informally', that is, not all took on tasks and duties that were well beyond the scope of their professional role in a wholly informal manner. These differences may be linked to the timing of and manner in which some individuals became champions. As detailed in the Chapter 7, several of the individuals in this study became champions through a combination of informal emergence and formal appointment to the RRT implementation team. At the time of their appointment, the decision to adopt the RRT had been already been made and its implementation approved by upper management. This executive endorsement likely mitigated the risk that these champions may have felt or faced as they advocated for the innovation. Additionally, some of things they did as champions (e.g., disseminate knowledge) overlapped with their role on the implementation team and so could be conducted under the guise of their formal responsibilities.

The informally emergent RRT champions, however, began to champion the RRT from the very beginning of the innovation process, before most executive leaders became aware of the innovation and before any formal decision to adopt it had been made. During this time, these champions supported the RRT informally and outside their normal scope of practice and may have exposed themselves to a certain degree of risk or liability by doing so. These early-adopting, informally emergent champions seem to more closely resemble the risk-taking product champions defined in management literature.

<table>
<thead>
<tr>
<th><strong>Product champion trait or feature</strong></th>
<th><strong>RRT champion?</strong></th>
</tr>
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<tbody>
<tr>
<td>Recognizes an innovation as having great potential</td>
<td>Yes</td>
</tr>
<tr>
<td>Adopts the innovation project as his or her own and commits to it personally</td>
<td>Yes</td>
</tr>
<tr>
<td>Promotes the innovation actively and enthusiastically</td>
<td>Yes</td>
</tr>
</tbody>
</table>
What distinguishes an RRT champion?

Researchers who have studied product champions assert that 1) the informal nature of champions' roles and 2) the risk involved are specifically what makes champions "distinctive" and "helps to differentiate the champion from mere team members or managers acting in their roles..." (Markham 1998, 495; Markham and Aiman-Smith 2001, 45). The fact that not all the champions in this study appeared to be informal risk-takers seems to suggest that study participants, when identifying champions, possessed an alternate conceptualization of the features which distinguish an RRT champion from implementation team members.

Based on participants’ descriptions of RRT champions and their characteristics, what seemed to set these individuals apart from other members of the implementation team was not the risk or informality associated with the role. Instead, RRT champions were distinguished by 1) the particular activities they engaged in (disseminating knowledge, advocating, building relationships, navigating boundaries, and achieving consensus) and 2) the manner in which they carried these out. RRT champions carried out their role by utilizing their exemplary people skills, leveraging their positions, and imbuing their actions with a strong personal passion for the innovation and its purpose.

The importance of context to champions

Previous product champion research has tended to focus on individualized facets of champions, such as their personality traits, leadership and risk behaviours, or influence tactics. This study goes further and extends previous research by examining champions in a specific context. The importance of contextual factors is illustrated in the finding that RRT champions could not succeed in isolation and required the presence of other champions. This is in contrast to the classic characterization of the product champion, first introduced by Schon (1963), as almost a maverick type who single-handedly overcomes resistance to change. Howell and Higgins described this classic portrayal as the "renegade process" of championing (1990a, 50).
In this study, however, participants noted that champions could not succeed alone. Both organizations required multiple champion for success; at Pinecrest, the executive champion efforts were stalled until more champions were on board, and at Metropolitan, the lack of an executive champion from the beginning of the implementation process was cited as a challenge that had to be overcome.

Just as the differences between RRT champions at Metropolitan and Pinecrest could be linked to the context at each hospital, the requirement for multiple RRT champions can be linked to organizational and innovation context shared at both hospitals. First, the RRT itself was a complex innovation which consisted of a multidisciplinary team of people. The implementation took place throughout many different patient-care areas in each hospital and end users varied by profession and experience (e.g. novice nurses, medical residents, etc.). With such a complex innovation and diverse implementation environment, one champion, representing just a single department, profession, or organizational function, would likely encounter great difficulty acting alone.

The second contextual factor which likely precluded champions from succeeding on their own was the organizational setting of a tertiary hospital. Similar to nuclear energy and aviation, the healthcare industry is considered to be high-hazard because of the significant risk of mortality or morbidity involved (Colla et al. 2005). Much of the care in a tertiary hospital is delivered by a variety of healthcare professionals who assume carefully defined roles and work within rigorously defined scopes of practice. Ultimate responsibility for a patient lies with assigned physician who must coordinate and communicate with the many people involved in delivering care to the individual. In this type of work environment, acting alone on measures that impact patient care is not only difficult, but also potentially dangerous.

Third, several of the processes that emerged as core features of champion role such as building relationships, achieving consensus, and navigating boundaries are suggestive that the role of RRT champions is reflective of the unique multi-disciplinary and highly multi-sectoral context in which these individuals work. In healthcare, effective teams have been shown to demonstrate good communication and high levels of cooperation, coordination, and collaboration (Lemieux-Charles and McGuire 2006). The RRT champions in this study engaged in similar processes in order to overcome resistance to change and the unique professional and departmental boundaries and divisions within their organizations.
This study illuminated the importance of the champion-context interaction and the value of a contextually-based understanding of champions. The product champion definition presented in management literature shared similarities, but did not map perfectly to the champions in this study, who were working to implement a complex patient safety initiative in a healthcare setting. RRT champions did not necessarily emerge informally or incur risk and noted that they would not have succeeded without the help of other champions. These individuals did not exist in isolation and required a variety of supportive elements, including the presence of other champions (both in number and type), the availability of resources, and supportive leadership. The nature of the work that champions do and their potential for success are likely related to a larger system of contextual factors and supportive structures that extend far beyond the individual.

**Champions and Other Roles in Change and Diffusion of Innovation**

Previous healthcare literature on champions has illustrated the lack of definitional clarity and understanding of the champion role in healthcare contexts. As explained in Chapter 2, some authors apply the product champion definition from management literature in discussing healthcare champions. Given the findings discussed above, the product champion definition does not sufficiently describe RRT champions and is likely also insufficient to describe other champions who are working to implement complex change in healthcare settings. Other authors use the term champion interchangeably with terms like 'opinion leader', 'knowledge broker', or 'change agent'. Management literature clearly distinguishes product champions from these other roles. RRT champions in this study did not necessarily occupy these other roles, and the core features of RRT champions were distinct from the accepted definitions of opinion leader, knowledge broker, and change agent. Although these roles are not mutually exclusive, the terms are not synonymous; authors and practitioners should strive for precision in the use of these terms for the purposes of enhanced clarity and understanding.

The intersections between healthcare champions and other leadership and change management roles may bear further study. Potential areas of investigation might include the nature of the relationship between champions and formal leadership, whether champions are more effective than other change management roles, and whether champions who are also considered opinion leaders are more effective than those who are not.
Practice Implications

The role of champions in the implementation of patient safety change, quality improvement measures, and new technologies has been promoted in healthcare literature and by organizations such as the IHI. As an element of organizational readiness, healthcare organizations are encouraged to have champions in place before embarking on major change projects. This study provides further understanding of the champion role in the context of RRT implementation at two acute care hospitals and may offer practical suggestions for individuals and organizations looking to implement similar initiatives elsewhere.

For managers and senior leaders

This study, taken together with the documented importance of healthcare champions in the implementation change, suggests that the leaders of healthcare organization should give consideration to ensuring that these champions are in place at the outset of the change process, particularly in the case of complex change which involves many stakeholder groups and the modification of long-standing organizational and cultural norms, where champion involvement may be more critical. Participants in this study noted that merely appointing someone with the title of champion did little to contribute to the success of an initiative. The ineffectiveness of simply appointing champions has also been corroborated by a recent study of champion types and emergence for infection control (Damschroder 2009). It is clear that healthcare leaders cannot just name anyone a champion and expect that individual to succeed at the role. Instead they must be more strategic and targeted in their approach to fostering champions. Bradley et al. provide more specific guidance by recommending that senior leaders who are hoping to effect organizational change should identify clinical leaders - "torchbearers", "cheerleaders", and "champions" - who have "credibility within the hospital, high personal commitment to program, linkages to organization's administrative structure, and knowledge about the organizational culture" (2004, 1878). In addition to these traits, this study has suggested that if senior leaders are hoping to appoint champions, they should look for individuals who are effective communicators, receptive to change and innovation, familiar with both the
organization’s structure and culture, able to establish strong positive relationships throughout the organization, and who demonstrate genuine deep-rooted enthusiasm for the initiative at hand. Leaders can also look for individuals who have shown an existing interest or passion for the area of innovation (e.g. an ongoing interest in the topic of patient safety, as demonstrated by attendance at courses).

Organizational leaders may also want to try to foster an environment that supports the emergence of champions. Managers and leaders can attempt to develop excitement for patient safety initiatives by encouraging potential champions to attend patient safety workshops, symposiums and conferences, where they will be immersed in the topic alongside like-minded peers. Also important is the provision of opportunities within the organization to become patient safety leaders. At both hospitals in this study, leaders sought to hire RRT clinician leads from within the organization as opposed to hiring from outside. Additionally, by providing training opportunities that focus on education, communication and negotiation, organizational leaders can help individuals obtain or reinforce the skills necessary to carry out the five core champion activities.

The importance of having all three types of champions represents an important finding that brings with it practical considerations. For initiatives that span across the entire organization, senior leaders need to identify not only clinical champions but executive and managerial champions as well, from the very beginning of the change process. Managers and senior leaders must also recognize that all champions, irrespective of type, require protected time to focus on the initiative they are implementing and will benefit from executive support that is both visible and sustained throughout the entire implementation process.

For champions and would-be champions

Mirroring the implications for managers and senior leaders, the study findings indicate that individuals who are appointed or who emerge as champions should actively seek dedicated time, resources, and executive support for the initiative they are involved with. Would-be champions should be prepared to undertake the five core champion activities, and may want to assess their strengths and capabilities on each in order to build up their skills where necessary through training and mentorship.
Champions may also wish to maximize those facilitating factors that are more controllable, such as taking a strategic approach to implementation, while minimizing challenges, for example, by recognizing and planning for areas of potential resistance.

For policy-makers and guideline developers

Finally, policy-makers and guideline developers who hope to implement complex patient safety interventions such as RRTs across multiple organizations or regions should be cognizant of the contributions that champions make to the implementation process. For Metropolitan, the fact that the RRT was ready to implement was considered a facilitator, whereas for Pinecrest, the fact that the RRT was tailored-to-fit was considered a facilitator. These findings are not necessarily incongruent; when creating implementation policies, officials should understand that guidelines, timelines, and deliverables are useful, but that champions and their organizations can also benefit from a certain degree of flexibility to adjust the intervention to suit the needs of each organization. Policy-makers may also consider working with organizations to provide for additional training for champions on not only the technical elements of the intervention, but also in communication and knowledge translation skills. Since champions cannot exist alone, supplying resources to support multiple champions at each organization, facilitating the development of communities of practice for champions at different organizations, and providing networking opportunities for linkage and exchange may be worthwhile activities.

Limitations

One of the limitations of this study is the potentially restricted generalizability of the findings. This was an exploratory study that sought to investigate the role of champions in the implementation of a particular patient safety intervention at two tertiary hospitals in the Greater Toronto Area. The hospitals were purposively selected to achieve variation among important contextual variables in order to allow for the identification of champion features that were likely to be constant across different settings; however, because of the focus on data from just two sites, findings cannot be extended as conclusively as with a study that included a greater number of sites. Additionally, the sites chosen were tertiary hospitals located in a major metropolitan area. Results may differ in other types of health care organizations such as community health...
centres or long-term care facilities and in other communities such as smaller urban centres or rural communities.

Generalizability of the study findings may also be limited by the type of innovation studied. The rapid response teams were complex patient safety interventions that were implemented across nearly the entirety of both hospitals and consisted of teams of people. The role champions play in the implementation of RRTs may be different when compared to the implementation of other initiatives, such as those localized to one part of a hospital or those which are individualized such as hand hygiene. Furthermore, patient safety interventions are just one of many kinds of healthcare change and findings may not necessarily be generalizable to other healthcare innovations.

Finally, it should be noted that because of the exploratory case design, attributive relationships can be speculated but not concluded from this study. An exploratory design was chosen because of the underdeveloped nature of research about champions in health care organizations. The design fulfilled the intent of the study which was to gain a better understanding of the role of champions in implementing patient safety practice change; however the design precluded the ability to determine causal relationships. Since only hospitals that had successfully implemented RRTs were included in the study and not those that had been unsuccessful, it cannot be concluded that the presence or activities of champions is necessary for implementation success.

**Future Directions**

This exploratory study has opened several avenues of further investigation into the role of champions in the implementation of complex patient safety practice change.

First, as noted above, this study focused on hospitals that had been successful in their attempt to implement RRTs. Questions remaining include whether champion presence is a necessary element for the successful implementation of RRTs and other complex patient safety interventions and whether practice change can succeed and be sustained in the absence of these individuals. Future studies about champions and health care innovations may employ other empirical testing designs in order to investigate potential causal relationships between champions and implementation success.
Champion activities are also open to further investigation. Champions at both organizations engaged in all five of the core champion activities; however it is possible that differences existed here also. Although the study was not designed to measure variation in champion activities, it is conceivable that there were differences in the proportion or total amount of time and effort spent engaged in each activity, which varied across organization, types, or time.

Further research could determine whether champion activities vary between organizations according to their structural or cultural characteristics. For example, champions in a hospital that has many departments and hierarchical divisions might spend much of their time consensus building and navigating boundaries.

Variation in key activities between champion types may also led itself to study. For example executive champions might spend less time disseminating technical knowledge about the intervention and more time advocating and building consensus.

Finally, champion activities may vary across the implementation process. The innovation process that has been characterized by Rogers (2003) includes the following chronological phases: 1) agenda-setting by identifying or creating the need for the innovation process, 2) conceptually matching the innovation to determine the goodness of fit with the organization, 3) redefining/restructuring the innovation to suit the organizations needs, 4) clarifying the innovation to the organization’s members, and 5) routinizing the innovation such that it is enmeshed in the normal activities of the organization and is no longer perceived as new. It is possible that champions engage in their different activities in accordance with the phases of the innovation process. For example, champions may spend more of their time advocating in the earlier stages (1 & 2) and then focus their efforts on achieving consensus and disseminating knowledge during the middle stages (3 & 4). Another unanswered question is what happens to champions following routinization of the innovation and the dissolution of the implementation team. In this study, some champions were reported to continue to champion the RRT but on a larger scale, whereas others moved off the project to other things.

Champion emergence is also open to further study. Helpful to healthcare leaders and administrators would be more knowledge about what structures, processes, and organizational and innovation contexts encourage the emergence of champions. More understanding of the
concept of champion emergence may be found in management literature about organizational
citizenship, as well as the still-growing body of evidence on emergent leadership.

**Conclusion**

This exploratory study aimed to achieve a better understanding of champions and to start
to fill a gap in research literature on the implementation of patient safety practice change. The
study did not seek to generate theory, but it is hoped that the preliminary findings might be used
as the launching point for further studies that do and that help patient safety stakeholders
understand more fully the role champions play in the adoption and implementation of
innovation and change. In a review of innovation diffusion in service organizations,
Greenhalgh et al. suggest that

> Context and 'confounders' lie at the very heart of the diffusion, dissemination,
and implementation of complex innovations. They are not extraneous to the
object of study; they are an integral part of it. The multiple (and often
unpredicatable) interactions that arise in particular contexts and settings are
precisely what determine the success or failure of a dissemination initiative.
Champions, for example, emerged in our review as a key determinant of
organizational innovation, but no amount of empirical research will provide a
simple recipe for how champions should behave that is independent of the
innovation, the organizational setting, the sociopolitical context, and so on
(Greenhalgh et al. 2004, 615)

Greenhalgh et al. have rightly noted the added complexity of context in the diffusion and
implementation of innovations. They are also correct in suggesting that it's unlikely that any
amount of research will result in a truly "simple recipe" for role of champions. However, these
realities should not condemn research on champions or other facets of innovation diffusion as a
futile endeavour, forever confused and confounded by context. On the contrary, the pursuit of
new knowledge about champions is valuable to individuals and organizations seeking to
implement complex innovations or effect change.

Although coined over forty years ago (Schon,1963), the term 'champion' endures.
Contemporary diffusion researchers and change management thought leaders including Everett
Rogers (2003) and John Kotter (1996) have recognized the contributions that champions make
to the innovation and change processes. Similarly, healthcare decision makers and researchers
now acknowledge the value of champions in achieving successful change in healthcare contexts and have come to realize that the presence of champions should not be left solely to chance.

This study helps to fill a gap in research literature by offering new insight into the things champions do, the ways they emerge, and the facilitators and challenges they encounter, in the context of a complex patient safety change initiative. Equipped with a better understanding of the champion role, healthcare decision makers have one more tool in their arsenal to optimize chances of success as they work toward improving quality and patient safety in their organizations.

Works Cited


