

Nurse-Physician Co-Leadership:  
Exploring a Strategy to Enhance  
Quality and Patient Safety in U.S. Hospitals

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### Abstract

**Background:** The healthcare industry has been mandated by regulatory bodies to improve quality and patient safety in hospitals. The struggle to implement and sustain effective performance improvement processes is linked to leadership, especially at the department level where the rubber hits the road. Although many advances have been made, there is a sustained need to continue looking for additional strategies. A new leadership model in healthcare, nurse and physician co-leadership, may be an effective strategy to use to bridge diffuse power structures found in the knowledge-based, pluralistic organization. Effectively used by at least 10% of business worldwide, only a few hospitals across the country have implemented this leadership model. Anecdotal evidence is promising, but empirical evidence is lacking.

**Study Question and Aims:** The research question was, “How do nurse and physician co-leaders’ description of their work together reflect their roles and relationships?” The specific aims were to explore: (a) the factors that hindered or enhanced the role development of the partners; and (b) the nature and dynamics of the co-leaders’ working relationship.

**Design:** Qualitative inquiry was used to obtain evidence from practice. Eight nurse and physician co-leaders were interviewed individually about their shared role and responsibilities, and their collaborative work together within a co-leadership structure. A deductive content analysis approach was used. Coding started with nine categories, which were derived from an extensive review of the literature on co-leadership in business, education, and healthcare. Cross case analysis revealed 40+ sub-categories.

**Findings:** Nurse-physician co-leadership is a form of plural leadership where two formal leaders together lead a hospital unit, sharing power to build a more democratic process, but also taking back power and influence from diffuse sources of power commonly found in the hospital setting. Two essential themes, the Shared Role Space: Moving from I to We and Partnered Leadership: Dynamic Interplay of Complementary Competencies, emerged from the data to describe the experience, and a conceptual framework was proposed. Numerous factors were revealed that enhanced or hindered the co-leaders’ role development. The dynamic interplay of co-leaders’ work together was portrayed.

**Conclusion:** Co-leadership is different than inter-professional collaboration or teamwork. Clinicians and administrators are offered a toolkit to help ensure successful development of the nurse-physician co-leadership model in hospitals. Researchers are offered a framework to measure outcomes, but are warned about confusing terms, and the presence of intermediate outcomes in research focused on post-heroic leadership models. This plural leadership model is

a strategy worth exploring to address the challenges of successfully implementing quality and patient safety innovations in hospitals.

**Keywords:** co-leadership, quality and patient safety, nurse and physician leaders, plural leadership, qualitative research, content analysis

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## CHAPTER 1 - THE RESEARCH PROBLEM

### Background

#### Hospitals Today

Hospitals in the United States (U.S.) have become extraordinarily adept at handling complicated patient problems; “70 percent of the patients in [the] ICU today would likely have been dead 30 years ago” (Christensen, Grossman, & Hwang, 2009, p.74). Although improving patient outcomes has been a long-standing national goal, this work has intensified during the past decade. Talented healthcare professionals have been working intently on quality and patient safety (Q&PS) issues, but little reassurance has been forthcoming that risks to patients have declined significantly (Levinson, 2010). The media continue to report that “hospitals are the worst place to be when you’re sick” (Greider, 2012, p. 10). It has been estimated that 13.5% of Medicare patients experienced an adverse event during their hospital stays (Levinson, 2010). This is an alarming rate and work on reducing the incidence is ongoing.

As a variety of innovations have become available to address these priorities, two major challenges emerged: the lag time between completing research and implementing findings into clinical practice, and the inconsistent rates of effectiveness across different settings. Conservatively, the lag time between “bench to bedside” has been estimated to be 17 to 20 years, and the level of success in implementing quality improvement projects effectively can be less than 50% (Alexander, 2008).

After the Institute of Medicine [IOM] (1999) published its ground breaking report, *To Err is Human*, which reported that more than 98,000 deaths are caused by medical errors each year, the search for solutions to improve Q&PS intensified. Providers, consumers, and policy makers demanded that healthcare systems address the six dimensions of quality espoused by the IOM (2001), namely, that care should be safe, timely, effective, efficient, equitable, and patient-centered (STEEEP).

During the past 10 years, researchers, scholars and clinicians have advanced a plethora of ideas that have shown promise for improving healthcare Q&PS. Many national organizations have published recommendations to improve Q&PS. For example, in its 5 Million Lives Campaign, the Institute for Healthcare Improvement (2006) outlined how several relatively independent interventions, when used together (bundles), significantly improved patient outcomes. After releasing *Serious Reportable Events*, the National Quality Forum (2003; 2009) outlined 34 healthcare practices that should be followed universally in clinical care settings to

reduce the risk of harm to patients. Soon thereafter, the Joint Commission began publishing *National Patient Safety Goals*, which is revised annually to address patient safety concerns as they evolve (Joint Commission, 2013a). The Joint Commission also publishes *Sentinel Event Alerts* several times a year, which synthesizes data about preventable deaths in the United States (Joint Commission, 2013b).

Not only has a host of new initiatives been advanced to improve healthcare, but also the federal government has created financial penalties to punish poor performance and financial incentives to reward improved performance (Rau, 2012). The Centers for Medicare and Medicaid Services (2011) estimated the health share of the Gross Domestic Product (GDP) at 17.9% in 2011. Healthcare is one of the largest expenditures in the United States, with errors in medications and patient care adding significantly to that cost. The National Priorities Partnership (2010) has estimated that by reducing medication errors the nation's hospitals could save upwards of \$21 billion per year.

### **Quality and Patient Safety Research**

Causes of sentinel events between the years 2004 to 2012 were reported to be multi-factorial in origin, and to vary by the type of event (Joint Commission, 2013b). For example, the most frequently reported sentinel event (i.e., wrong-patient, wrong-site, wrong-procedure) was reported 928 times in the past eight years, and the top four causes contributing to the event were determined to be: leadership (n= 770), communication (n= 634), human factors (n= 618), and information management (n= 338). But for a different sentinel event, (i.e., delay in treatment that resulted in death or permanent loss of function), the top four causes were different: communication (n= 634), assessment (619), human factors (n= 545), and leadership (n= 535). Each of the sentinel events has multi-factorial causes, and when examining all of them collectively, the top four reasons cited were human factors (n= 614), leadership (n= 557), communication (n= 532) and assessment (n= 482). See Table 1.1 for definitions of these top four categories.

Barriers to high-quality communication in healthcare have many origins. With the stakes so high, seeking multi-measured (i.e. STEEEP) quality healthcare requires a multifactorial approach, with a deep appreciation of the human factors that affect the processes. The strategies that have been used to improve Q&PS are diverse and have included such approaches as (a) improving communication between nurses and physicians (Kramer & Schalenberg, 2003), (b) applying advances in technology (Powell-Cope, Nelson, & Patterson, 2008), (c) enhancing collaboration between nurses and physicians (Zwarenstein, Goldman, & Reeves, 2009), (d)

building teamwork between staff (Salas, Gregory, & King, 2011), (e) standardizing care (Nelson et al., 2002), (e) improving the working conditions of nurses (Ingersoll & Schmitt, 2004), and (f) strengthening leadership skills (Jennings, Disch, & Senn, 2008).

Table 1.1 *Top Four Root Causes of Sentinel Events: Categories and Definitions*

Category	Definition
Human Factors	Staffing levels, staffing skill mix, staff orientation, in-service education, competency assessment, staff supervision, resident supervision, medical staff credentialing, medical staff peer review, other (e.g., rushing, fatigue, distraction, complacency, bias)
Leadership	Organizational planning, culture, community relations, availability, priority setting, resource allocation, complaint resolution, leadership collaboration, standardization (e.g., clinical practice guidelines), directing department and services, integration of services, inadequate policies and procedures, non-compliance with policies and procedures, performance improvement, medical staff organization, nursing leadership
Communication	Oral, written, electronic; among staff, with physicians, with administration, with patient or families
Assessment	Adequacy, timing, or scope of assessments; especially for pediatric, psychiatric, alcohol/drug abuse; patient observations; clinical laboratory testing; care decisions

*Note.* Adapted from *Sentinel Event Data- Root Causes by Event Type*, by The Joint Commission, 2013. Copyright by The Joint Commission, 2013.

Investigators have found that enhancements in interpersonal communication are critical to improve patient safety (Burke, Boal, & Mitchell, 2004; Dayton & Henriksen, 2007; Perren, Conte, De Bitonti, Limoni, & Merlani, 2008; Staggers & Jennings, 2009; Weeks, 2005). One of the most error-prone events is the *handoff* (Sexton, Chan, & Elliott, 2004), a time when information can be easily lost in transition. In 1999, the IOM (1999) estimated that errors that stem from communication failures frequently occurred during junctures in care, like shift changes or patient transfers from one unit to another. More recently, data from a national survey of hospital staff (Agency for Healthcare Research and Quality [AHRQ], 2013a) revealed that hospital staff felt that certain aspects of communication were still troublesome. Although *teamwork within my own unit* was reported as good by 80% of the respondents, 55% of the nearly half million hospital staff respondents reported change of shift and unit to unit *handoffs and transitions* as “problematic.” With respondents admitting that “important patient care information is being lost” and that “things are falling between the cracks” (AHRQ, 2013a), clearly there are still opportunities for improvement in communication.

New communication tools and strategies have been proposed to enhance both nurse-to-nurse, and inter-professional communication (AHRQ, 2008). Strategies such as a *stop the line* phrase, can empower individuals to advocate for patient safety when an error is identified by one individual, who can then call for a stop in the process. Delivering information in the SBAR [situation-background-assessment-recommendation] format is a useful strategy, allowing one to order information in a predictable, and ultimately more understandable, manner (Leonard, Graham, & Vonacum, 2004). The *call-out* and *check-back* tools, which are methods of closing the loop in communication, increase the accuracy of a message (Barenfänger, Sauter, & Lang, 2004). Although these new communication strategies have proved helpful, consistent use is lacking, and an overall decrease in errors has not been realized.

Advances in technology have accounted for a significant decrease in patient errors. Common to all is that they avoid reliance on memory, a key variable in human factor research (Boston-Fleischhauer, 2008). Key technologies associated with decreased errors include scanning patient identification badges to verify patient identity (Marini & Hasman, 2009), using electronic health records to reconcile patient medications (Schnipper et al., 2009), and using computerized provider/physician order entry (Brunt & Gifford, 2009; Pirnejad, Niazkhani, van der Sijs, Berg, & Bal, 2009). Some hospitals, however, have reported less than ideal results, leaving the promise of these innovations not fully realized (Walsh et al., 2008). Thus, even though enhanced communication and technological advances have had some impact on improving Q&PS, there is a sustained need to investigate other strategies.

### **Leadership's Role in Improving Quality and Patient Safety**

Effective leadership has been found to be one of the most important predictors of improved outcomes; similarly, deficient leadership contributes significantly to poor outcomes (Joint Commission, 2009). In healthcare, leadership competencies generally fall into three distinct classifications: transformation skills, execution skills, and people skills (National Center for Healthcare Leadership [NCHL], 2006). The NCHL's list of competencies is extensive; it contains 26 competencies, each with three to six sub-competencies, for a total of 121 attributes listed for an effective healthcare leader to achieve. Attaining all of these qualities can be challenging, especially early in a career.

To make the most of leadership development, it is important to first determine what elements of leadership are needed and for which roles (Leslie, 2009). Because hospital leaders, from administrative executives to middle managers, are responsible for developing and overseeing an effective quality improvement process (Birken, Bryan, & Weiner, 2012), upgrading



leaders' skills at all levels of an organization must be a priority. Evidence indicates that a gap in leadership skills exists in many organizations today. The four aspects of leadership that require most attention are (a) leading people, (b) planning strategically, (c) managing change, and (d) inspiring commitment (Leslie, 2009). It is imperative to understand the relevant competencies that make hospital leaders successful, and identify those that are lacking, in order to move forward.

**The nurse manager's role in improving quality and patient safety.** Researchers have described how top organizational leaders influence the implementation of healthcare innovations by stimulating motivation, and by providing a strategic plan and resources (Damschroder & Hagedorn, 2011; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004; Rycroft-Malone, 2004; 2008). Midlevel nurse managers are often left to oversee implementation of these projects, and they are the critical link between frontline staff and higher administrative leaders. Traditionally, the nurse manager's role is day-to-day operations, such as staffing and resource allocation. However the nurse manager's role has increased in scope of work and span of control (Duffield, Roche, Bay & Stasa, 2011). As nurse managers enter the role, they need the skills to perform quality improvement (McCallin & Frankson, 2010), empower staff (Manojlovich, 2005), cope with relentless change and coach staff through change (Sherman, Bishop, Eggenberger, & Karden, 2007). Within the broad context of the nurse manager's role and responsibilities, improving Q&PS at the department level requires a unique skill set.

Change management requires "an entirely innovative set of interactions and relationships as well as the leadership necessary to create them" (Huston, 2008, p. 910). Many nurses assume their first leadership position with little understanding of how to successfully implement Q&PS innovations successfully; many develop their business skills on the job (Marquis & Huston, 2012). This "trial-by-fire" approach often relegates Q&PS effort to "the back burner," and leaves many new nurse managers feeling overwhelmed; many managers "just put a Band-Aid on everything so they can get through the day" (Hendren, 2010, sect 5).

When trying to identify challenges to successful implementation of innovations, nurse managers reported a lack of knowledge and/or time to meet requirements (Dopson & Fitzgerald, 2006). Nurse managers must appreciate the complex nature of knowledge itself (i.e., its ambiguous and dynamic nature) and the critical role that local professional groups play in the way knowledge is perceived. Using the results from a meta-synthesis of more than 1400 interviews exploring the role of the nurse manager in the implementation of evidence based practice, Dopson and Fitzgerald found:

In explaining and accounting for the variations in the rate of diffusion between sites and between cases, several of our studies underline the critical importance of traversing professional boundaries and gaining agreement from, or developing joint approaches to, the implementation of innovations. However this can only be achieved if a reasonable foundation of inter-professional relations already exists. It is apparent that nurse managers play a crucial role in developing and working to maintain sound quality relationships between doctors and nurses (p. 47).

Although nurse managers may not be involved in all aspects of the phases of a Q&PS project, they may recruit and facilitate expert clinicians to be opinion leaders; these individuals are the vehicles for sharing data and persuading staff to adopt the new practice (Rogers, 2003).

Macphee and Suryaprakash (2012) found that once knowledge deficits were addressed, lack of time appeared to be less of a problem too. These researchers explored the outcomes nurse leaders reported after attending the British Columbia Nursing Leadership Institute. Over a three year period, 226 nurse leaders participated in this education program that included didactic content focused on change management, completed a year-long change management project, and received organizational support, mentorship, and on-line peer support. Only a handful of leaders (n=24) complained of any challenges once the education program was completed, and only 14 of these attendees identified time as the problem for achieving success (Macphee & Suryaprakash, 2012).

With their unique knowledge of the local contextual features, nurse managers are typically responsible for the active management of improvement processes; they can help translate the processes to their particular setting, as well as keep their eye on wider priorities and pressures (Dopson & Fitzgerald, 2006). Nurse leaders are responsible for devising practices that use a multi-professional, collaborative approach to project planning. All professionals, but especially physicians, have a pervasive influence on the acceptance or rejection of evidence based practice changes; without the nurse manager's commitment to bridging the differences between professional communities, and establishing collaborative practice, physicians' attitudes could go unchallenged and can inhibit the development of a shared understanding (Dopson & Fitzgerald, 2006).

The American Organization of Nurse Executives [AONE] (2006) has recommended that nurse leaders acquire two major skill sets: the art of governance (leadership), which can influence people to change their behaviors; and the science of governance (management), which includes

skills such as staffing a unit and managing resources. As highlighted in Table 1.2, there are a variety of knowledge, skills and abilities (KSAs) listed under each of these two dimensions.

Although all leadership skills can be challenging to master, becoming an influential expert can be particularly difficult, yet ultimately rewarding. Nurse leaders must learn to let go of the reins and influence change through intense mentoring and professional development of the clinical nurses in unit-based committees (Muller, McCauley, Harrington, Jablonski, & Strauss, 2011). This shared decision making process is a key variable in the adoption of innovations and a key aspect of working with any inter-professional group (Brennan, Rich, Doyle, & May, 2010). If the field of healthcare is anything like business, then the most prevalent gaps found in mid-level managers' leadership skills (e.g., leading people, planning strategically, managing change, and inspiring commitment) could be in short supply in the ranks of nurse managers in hospitals as well (Leslie, 2009).

Table 1.2 *Overview of the Skills Needed to be an Effective Nurse Manager*

<b>The Art: Leading the People</b>	<b>The Science: Managing the Business</b>
Human Resource Leadership Skills <ul style="list-style-type: none"> <li>• Performance management</li> <li>• Staff development</li> <li>• Coaching and guiding skills</li> <li>• Mentoring</li> </ul>	Performance Improvement <ul style="list-style-type: none"> <li>• Knowledge of PI tools</li> <li>• Patient safety</li> <li>• Workplace safety</li> <li>• Promoting intra- &amp; inter-departmental communication</li> </ul>
Relationship Management and Influencing Behaviors <ul style="list-style-type: none"> <li>• Communication skills</li> <li>• Emotional intelligence</li> <li>• Self-awareness</li> <li>• Effective use of dialogue</li> <li>• Team dynamics</li> <li>• Collaborative practice</li> <li>• Conflict management</li> <li>• Negotiation</li> </ul>	Foundational Thinking Skills <ul style="list-style-type: none"> <li>• Systems thinking knowledge</li> <li>• Complex adaptive systems</li> <li>• Understanding organization behaviors- conflict resolution and navigating change</li> <li>• Decision making skills</li> <li>• Problem solving skills</li> </ul>
Diversity	Strategic Management
Shared decision making <ul style="list-style-type: none"> <li>• including the structure and processes of shared governance</li> </ul>	Financial Management:
	Human Resource Management
	Technology
	Appropriate clinical practice knowledge

*Note.* Adapted from “Nurse Manager Leadership Partnership Learning Domain Framework” by American Organization of Nurse Executives, 2006. Copyright by AONE, 2006.

**The physician leader’s role in improving quality and patient safety.** Historically, primary care physicians’ clinic practice consisted of diagnosing and treating acute disorders, managing chronic illnesses, conducting wellness examinations, and advocating disease

prevention (Christensen et al., 2009). Physicians channeled their energies into patient care, not hospital functions (Gourevitch, Caronna, & Kalkut, 2005). In the hospital, only a few physicians had opportunities to influence medical practice by serving on the medical staff committee. Eventually, more physicians became involved, some rising to the position of medical director, a position “directly involved in improving the care of patients in an entire [hospital] unit, rather than just one’s caseload” (Disch, Beilman, & Ingbar, 2001, p. 370).

With expanded responsibilities and subsequent time commitments, more physicians demanded to be adequately compensated for their efforts and accountability, whereas some physician leaders still volunteered for these duties (Reynolds, 2012). The ability and motivation to balance multiple roles vary among physicians. Stagg-Elliott (2012) found that even chief medical officers were juggling administrative work with their clinical practice; 15% reported that they had both clinical duties and administrative work.

Many of the new physician roles involved Q&PS, with titles such as chief patient safety officer, chief quality officer, service line medical director, performance improvement medical director, chief medical information officer, and LEAN/Six Sigma Champions (Reynolds, 2012). Even the role of medical director began to move beyond its traditional function as liaison between the medical staff and hospital administration, to the role of physician champion or change agent for Q&PS initiatives (Baldwin, Dimunation, & Alexander, 2011). Besides demanding more time, the new leadership roles also required new skill sets. When summarizing an American Hospital Association report, Avakian (2011) suggested physician leaders must learn to set long-term goals and plan accordingly, get work done through other people, resolve conflicts and foster peer relationships; and get all staff members involved in process-improvement activities by becoming an inclusive manager.

This teamwork approach can be a paradigm shift for many physicians. Their socialization process in medical school and residency fostered a culture in which individual autonomy is of primary importance. There is no inter-professional collective identity within the physician culture (Bujak, 2009). Therefore, physicians who move into hospital leadership roles need to find a way through this paradigm shift. Iedema, Degeling, Braithwaite, and White (2004) revealed how physician leaders navigated across what appeared to be two disparate positions, medicine and management. Although medical managers are physicians first and foremost, they must develop a distinct occupational identity to be successful leaders, with different loyalties, modes of promotion, motivations, and viewpoints (Kaissi, 2005).

Additional challenges confront physicians who accept positions of hospital leadership: peer pressure is generated by other physicians who might view them as traitors (Stagg-Elliott, 2011), and tensions exist between administrators and physicians (Gilmore, 2010). Brennan et al. (2010) surveyed more than 1,000 physicians and found that most of the physicians mistrust hospital administrators: hospitals and physicians have competing goals (60%), hospitals lack transparency (56%), there is a lack of communication between physicians and the hospital administration (50%), and incentives are not aligned (50%).

Faced with these challenges, many physicians and administrators may wonder why bother to engage physicians in hospital leadership. Despite the challenges, Walsh, Ettinger and Klugman (2009), in the United States, and Hayes, Yousefi, Wallington and Ginzburg (2010), in Canada, described the positive contributions of physicians in formal quality leadership positions. These contributions included taking the lead for implementing the patient safety bundles, advocating for evidenced-based practices to be the basis for clinical improvements, analyzing patient safety indicators, making recommendations for improvements and supporting critical incident reviews. Also physician leaders helped other physicians identify appropriate clinical quality indicators, facilitated physician participation in patient safety activities, and educated physicians about their roles and responsibilities regarding patient safety. At the organizational level, physician quality officers promoted a positive and non-punitive safety culture, addressed physician-related system issues, and modeled open communication between physicians and other members of the healthcare team (Hayes et al., 2010, pp. 69-71). Increasingly, healthcare experts are recognizing the role that physician leadership contributes to Q&PS initiatives (Goeschel, Wachter, & Pronovost, 2010; Shekelle et al., 2011).

Many physicians are clinical experts and make natural opinion leaders, because of their expertise, high levels of education and high social status (Rogers, 2003). Physicians are well-suited to the roles of influencer and mentor (e.g., opinion leader), and should be successful at meeting these responsibilities, as long as their goals are aligned with their organization's goals, and they are seen as socially accessible (Rogers, 2003). But some physicians find that leadership skills are not so easily acquired.

Avakian (2011) suggested that physicians need support to be effective and that other individuals can mentor budding physician leaders, especially those who lack the management experience in dealing with hospital or group practice staff and administrative issues. Kaissi (2008) suggested that nurse leaders can be physicians' business partners, because the "nurses' culture seems to fall somewhat in the middle of the continuum on some other cultural

aspects...nurses can act as ‘translators’ who can explain physicians' views to managers and vice versa” (Kaissi, 2008, p. 113). In a report on the future of nursing, the IOM (2010) also suggested that nurses work as full partners with physicians and other leaders in redesigning healthcare to ensure high quality patient care. The role of nurse and physician partnerships in healthcare leadership is a timely and important topic, one that could add to our understanding of how to effectively improve healthcare outcomes.

### **Co-Leadership: A Strategy used to Improve Outcomes**

Despite the long-held tradition that one heroic person holds the lead position in an organization, a business unit, or in a team, leadership research during the last 20 years indicates a *post-heroic* paradigm in which leadership is sometimes done collectively, in either a shared or distributed fashion (Alvarez, Svejenova, & Vives, 2007; Ancona, Malone, Orlikowski, & Senge, 2007; Gilmore, 1999). These plural leadership structures have been either formally created by organizations or have spontaneously emerged in the workplace (Thorpe, Gold, & Lawler, 2011). Regardless of why or how the leadership model has formed, the structure can take on various configurations (Gronn, 2009) which are defined and compared in Chapter Two. One of these plural leadership structures, co-leadership, is the focus of this study, and is defined as two individuals who come together in an integrated or coordinated manner to manage and lead a department or organization. Co-leadership has been used for many years in business (Alvarez et al., 2007; Hennis & Bennis, 1999; O'Toole et al., 2002; Wyman, 2005) and in education (Eckman, 2006; Gronn, 2009; Spillane, 2006) with mostly positive effects, although success is not always achieved. But with the prospect of achieving better outcomes, more than 10% of companies worldwide now have two or more chief executive officers in place (Alvarez et al., 2007).

In general, the benefits of co-leadership are manifold, with perhaps the greatest benefit being “diversity of thought and talent” (Miles & Watkins, 2007, p. 93). In healthcare, frontline nurses and physicians, with their diverse perspectives and talents, have demonstrated improvements in outcomes when working in a collaborative manner at the bedside (Jennings et al., 2008; Zwarenstein et al., 2009). If engaging nurses and physicians in collaborative problem solving at the bedside has improved outcomes, then a collaborative approach at the leadership level might do the same. By bringing two key stakeholders into a shared leadership role of a hospital unit, both of whom have unique perspectives and a diversity of thought and talent, patient and organizational outcomes should improve. A report of anecdotal evidence revealed that the inclusion of physicians in leadership teams erodes hierarchical boundaries and makes

solutions more acceptable to all stakeholders (Baldwin et al., 2011). Moreover at Cincinnati Children's Hospital Medical Center, after shared leadership teams were established for quality improvement projects, which involved melding together the complementary skills of a nurse, a physician, and an administrator, positive outcomes were reported.

It helped to avoid the perception of winners and losers, which could have lead perceived losers to withdraw from the improvement effort. Problems owned by the physician and nursing staffs were much more likely to be solved in ways that were supported and sustainable for both groups. It fostered a breakdown of the traditional cultural barriers between physicians and nurses and led to an atmosphere where everyone recognized the contributions of multiple staff types. Organizational transformation requires a culture that rejects hierarchy and embraces relevant expertise (Hines, Luna, & Loftus, 2008, p. 62). This shared leadership strategy offered the hospital a way to address culture, hierarchy, and communication challenges.

Similar outcomes were reported with the use of an inter-professional leadership structure at the University of Pennsylvania Health System (Brennan et al., 2010). Called *Unit Based Clinical Leadership*, the model pairs the diverse talents of the physician leader and nurse leader at the hospital unit level, along with the expertise of a quality coordinator. The partners shared accountability in improving patient care processes at the unit level, and appeared to move all quality indicators in the right direction (Brennan et al., 2010).

Although shared governance (Porter-O'Grady, 1992) and teamwork (Leonard et al., 2004) have been extensively covered in the healthcare literature, plural leadership, in the form of nurse-physician co-leadership, has not penetrated the business of healthcare to any measureable degree (Casanova, 2008). Scholars have advocated for this leadership structure for several years (Batalden et al., 2003; Reid-Ponte, 2004), but evidence of its existence is minimal.

So when is it best for two or more people to head an organization, a service line or a department? "The simple answer is when the challenges a corporation faces are so complex that they require a set of skills too broad to be possessed by any one individual" (O'Toole et al., 2002, p. 68). Other motivating factors for creating plural leadership stem from the problem that some leaders become frustrated and dissatisfied with their positions, because living up to such high standards can be very difficult and stressful (Ancona et al., 2007). Potential leaders may look at the burden imposed on leaders and shy away from moving into leadership, resulting in a shortage of qualified applicants in some of the top positions (Eckman, 2006). Clearly hospital leaders face a burdensome job situated in a complex environment. The time for healthcare scholars to explore

the use of this model is now. Although motivating factors for creating nurse-physician co-leadership structures clearly exist, evidence to support the effectiveness of nurse-physician co-leadership is lacking.

**Current knowledge regarding nurse-physician co-leadership.** Nurse-physician co-leadership was defined for this study as one nurse leader and one physician leader partnered together in a formal, shared, unit-based leadership role. One quantitative study and one opinion piece were found using the search terms *nurse and physician co-leadership*. A team in Germany (Steinert, Goebel, & Rieger, 2006) conducted a quantitative study that provided some valuable information regarding nurse-physician co-leadership. Although the focus of the research was to compare and contrast the nurse leaders' opinions with the medico-therapeutic leaders' opinions about different aspects of the co-leadership role, the types of questions used helped identify some of the key constructs in the nurse-physician co-leadership experience.

The opinion piece proposed some advantages to forming nurse-physician co-leadership models in hospitals (Reid-Ponte, 2004). The author discussed several unique aspects of nurse-physician co-leadership (e.g., combined complimentary professional skill sets creating perspective diversity, shared vision and accountability), and briefly described how co-leaders could work together, including "spend time planning agendas, approaches, and strategies together" in order to frame a problem for discussion (Reid-Ponte, 2004, p. 483). The author suggested an important aspect of nurse-physician co-leadership was the unique professional perspective each leader brought to the partnership.

### **Purpose of the Study**

Given the demands placed upon healthcare leaders, there is a substantial need for investigating all strategies that might advance Q&PS improvement goals in hospitals. Although Reid-Ponte (2004) and Steinert et al. (2006) presented some foundational work on nurse-physician co-leadership, it is very limited, and neither fully described role development nor the working relationship of these co-leaders. The true nature of the nurse-physician co-leadership in U.S. hospitals needs to be explored before questions related to effectiveness of this leadership strategy can be addressed. Without a clear understanding of the phenomenon, further empirical research could be compromised, because a construct that is poorly defined will, in turn, be poorly measured. Therefore, it was important to conduct additional qualitative research. The purpose of this study was to gain a better understanding of a unit-based, nurse and physician co-leadership model.



### **Research Question and Aims**

With little evidence available about nurse-physician co-leadership, the use of quantitative methods to explore the complex dynamics of co-leadership would have been difficult; therefore qualitative inquiry was clearly the most logical approach to capture evidence from practice (Leeman & Sandelowski, 2012). The question to be answered was, “How do nurse and physician co-leaders’ descriptions of their work together reflect their roles and relationship?” The specific aims of this study were to explore:

1. the factors that hindered or enhanced the role development of the partners; and
2. the nature and dynamics of the co-leaders’ working relationship.

### **Significance**

A primary task for healthcare researchers is to discover strategies that improve any or all aspects of quality for patients (i.e., care that is safe, timely, effective, efficient, equitable, and patient-centered). Because rigorous evaluation of any of these quality measures depends on valid and reliable appraisal tools, foundational work discovering and describing factors affecting role development of nurse and physician co-leaders, and obtaining an understanding of how the co-leaders work together, was necessary before proceeding with quantitative studies.

## CHAPTER 2 -LITERATURE REVIEW AND STUDY FRAMEWORK

### Introduction

This chapter has four major sections. First, there is a discussion of the origins of plural leadership, the associated terminology, and the various forms it takes, including a conceptual framework for collective leadership. Second, a search to identify articles specifically depicting co-leadership in the healthcare literature is described, and common attributes of the phenomenon are identified. Third, a search and corresponding synthesis of co-leadership in the business and education literature is described. Fourth, results from the synthesis from the three bodies of literature are combined and key constructs of co-leadership are presented in Table 2.11.

### Plural Leadership

#### Origins of Plural Leadership

Before commencing with the literature review of nurse-physician co-leadership, a brief historical overview was undertaken to clarify leadership terms and concepts. The search was complicated somewhat by the newness, or possibly the under-reporting of nurse-physician co-leadership in the literature. Also, interchangeable and synonymous terms within the global field of plural leadership abounded. Initially, I considered this semantic challenge to be a barrier to a rigorous literature search because the search could not be limited to only one or two keywords. However, by expanding the search to other forms of plural leadership, additional, relevant articles were located.

Many forms of leadership that imply plurality are explained below, and an attempt was made to distinguish one from the other. Historically there were a few publications about plural forms of leadership (Follett, 1924; Gibb, 1954; Hodgson, Levinson & Zaleznik, 1965; Hollander & Julian, 1969), but most of the research was completed in the last two decades. The contemporary works stem from fields such as sociology, education, business and organizational psychology.

First, understanding some relevant terms and concepts from the field of leadership was helpful. As the “age of information” emerged in the early twenty-first century, theories arose that espoused a systems approach to explain variations in outcomes (Avolio, Walumbwa, & Weber, 2009). Better outcomes were associated with the effective methods of sharing of information, and with building relationship between leader and followers. A new focus on *we* rather than *me* lent itself to using social networks theory in research (Avolio et al., 2009). In addition, social network theory compelled the researchers to consider setting and context more heavily, because

variations in people, resources, and contextual barriers were dependent on the setting. Consistent with systems' theory, outcomes were viewed as synergistic effects among the parts. Information and knowledge were considered the *currency* in the information age, and those who possessed them possessed power (Avolio et al., 2009).

Drawing on a new understanding of complexity science, scholars in the science of leadership interpreted leadership dynamics as an emergent phenomenon that was embedded in a complex interplay of many interacting forces. In a complex adaptive system, interdependent agents were thought to operate simultaneously, governed by local rules and specific knowledge, leaving room for multiple moderators to bring about various outcomes (Avolio et al., 2009). A pluralistic perspective was viewed as an advantage to problem solving and adaptation to a rapidly changing environment. Pluralism was based on open communication, use of feedback, and engagement with others across boundaries. In complexity leadership theory, leaders influenced others and achieved better outcomes by enabling members of the workforce to realize their full potential (Avolio et al., 2009).

Plural leadership borrowed from the research about complexity leadership theory, and researchers began to depict how more than one person can share leadership responsibilities (Avolio et al., 2009). Based on the assumption that plural leadership is a dynamic process, it was characterized by the serial emergence of official and/or unofficial leaders, as any given situation needed a certain set of skills possessed by a member of the leadership group (Pearce & Conger, 2003). Like complexity leadership theory, plural leadership involves a complex adaptive systems approach. Scholars suggested that outcomes were the result of synergy and produced patterns of reciprocal influence that reinforce further development of the relationships between team members and leaders (Carson, Tesluk & Marrone, 2007). With the advent of team-based work and co-leadership management practices in business and education, plural leadership has only begun to command serious attention in this century.

### **Plural Leadership: Types and Terminology**

Defining the terms in the field of plural leadership has been difficult because they are often used inappropriately and interchangeably (Bolden, 2011). Although no overarching, all-encompassing term has been agreed upon, Denis, Langley and Sergi (2012) recently proposed the term *plural leadership* as a global term, and Yammarino, Salas, Serban, Shirrefs and Shuffler (2012) proposed *collectivistic leadership*. For this study, I adopted the term plural leadership.

In addition to the lack of a global term, the nomenclature that describes the various plural leadership models also has inconsistencies in the definitions. In a review of the use of plural

leadership terms, Bolden (2011) reported that *shared* leadership and *distributed* leadership were the most commonly used terms. In addition he reported the use of several other commonly used terms: *collective*, *collaborative*, *emergent*, *co-leadership*, and *democratic leadership*. His findings indicated that authors' preferences for one term versus another did not just vary by subject matter, preferences were noted to be correlated to country and/or fields of study. The term distributed leadership was used predominantly in the United Kingdom, even though the term shared leadership was used more often in the United States. Also, researchers in various fields of study differed in which term they preferred. Characteristically, researchers in education used distributed leadership, even though researchers in nursing used shared leadership (Bolden, 2011). See Table 2.1 for a guide to differentiating these related terms. Regardless, the term co-leadership has been used in psychology, as a method of group counseling (Saltzberg, 2003), but in this study, co-leadership was defined as two or three formal leaders sharing responsibility to lead an organization or a department within an organization.

Table 2.1 *Differentiating Between Types of Plural Leadership Terms*

<b>Term</b>	<b>Member's Roles or Performance</b>	<b>Reference</b>
Shared leadership	A group of peers working together and taking responsibility to make decisions that affect their work	Pearce & Conger, 2003
Distributed leadership	Members emerge to exercise influence and take action in an interdependent and conjoint manner;	Gronn, 2002 Spillane, 2006;
Team leadership	Management is done by the group members, either consecutively, or in a random pattern as the situation dictates the needs;	Day, Gronn, & Salas, 2006
Collaborative leadership	Business leaders engaging with community members to make strategic plans and /or take action	Cashman, Flanagan, Silva, & Candib, 2012
Co-leadership	Two or three people sharing responsibility and accountability at the formal leadership level	Denis, Langley & Sergi, 2012
Collective leadership	Responsibility given to a group; members collectively act as leaders, distributing the roles based on the situation, in both formal and informal capacities	Friedrich, Vessey, Schuelke, Ruark, & Mumford, 2009

Scholars differentiated between approaches to plural leadership using other aspects of the models, such as the group's structure, the members' roles, or the level of authority. Thorpe and colleagues (2011) proposed that leadership between two or more people be termed shared when

involving peer to peer structure (i.e., a horizontal dimension), and termed distributed when it included people who were not peers, and involved a hierarchical structure (i.e., a vertical dimension). Zander and Butler (2010) took this one step further and described different types of plural leadership by their level of authority (e.g., either vertical or horizontal), and the level of activity among members (e.g., either focused or distributed). See Figure 2.1 for an adaptation of their framework.

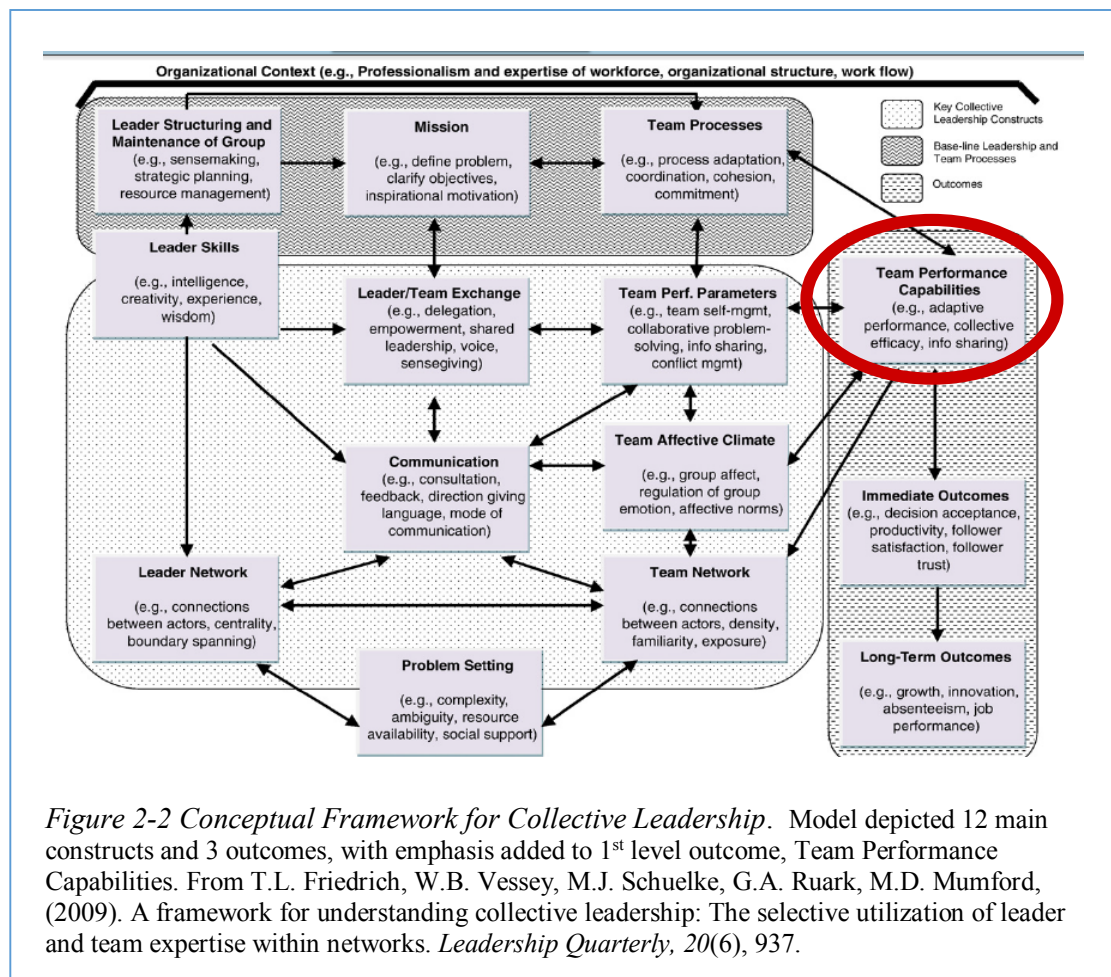
		<u>Authority</u>	
		Vertical	Horizontal
<u>Activities</u>	Focused	Single leadership	Paired leadership
	Distributed	Rotated leadership	Shared leadership

*Figure 2-1 Differentiating Leadership Models by Levels of Authority & Activity.* Differences between plural leadership models- distinguished by the level of authority and the level of activities. Single (solo) leadership- a vertical level of authority and contains focused activity. Plural leadership- horizontal level of authority, contains distributed activities among its members. Adapted from “Leadership modes: Success strategies for multicultural teams,” by L. Zander & C.L. Butler, 2010, *Scandinavian Journal of Management*, 26, p. 260. Copyright 2008 by Elsevier.

Shared leadership typically referred to a leader giving his or her followers the responsibility and power to make decisions about their work processes and environment (Pearce & Conger, 2003). Shared leadership was often seen as a management model that supported staff in exercising their influence on decisions that affected their practice, work environment, professional development, and self-fulfillment (Walker, 2001). However, in distributed leadership, power and responsibility were spread over several people of similar rank (Spillane, 2006). Distributed leadership took on several configurations, as members emerged to exercise influence and took action in an interdependent and conjoint manner (Gronn, 2002).

The term collective leadership was defined as multiple individuals with a diverse set of skills and abilities who collectively acted as leaders, distributing the roles based on the situation, in both formal and informal capacities (Friedrich, Vessey, Schuelke, Ruark, & Mumford, 2009). Friedrich and colleagues proposed a conceptual framework to enhance the understanding of collective leadership (See Figure 2.2). Although this model is not focused on co-leadership, it

greatly influenced my understanding of how a conceptual framework might be composed for a plural leadership model. Their model depicted the relationship among the 15 constructs that they proposed are relevant to collective leadership. Of particular note is their proposal of a first level outcome (i.e., team performance capabilities), circled in red in Figure 2.2. They suggested that the team performance processes, such as information sharing, needed to be achieved before intermediate and long term outcomes, such as productivity, innovation and job performance, could be realized.



Denis and colleagues (2012) attempted to differentiate the plural leadership research by describing specific properties of the models, regardless of the names used. They identified four distinct streams that focused either “on sharing leadership in teams, on pooling leadership at the top of organizations, on spreading leadership across boundaries over time, and on producing leadership through interaction” (p. 211). In their comprehensive review, Denis, Langley, and

Sergi summarized findings from over a hundred studies of plural leadership. Table 2.2 provides a brief overview including definitions, structures, and key constructs regarding the state of the research in each of the three main approaches. The fourth approach, producing leadership, is still in a mostly conceptual state, and not relevant to this study.

Table 2.2 *Three Main Streams of Plural Leadership*

Leadership approach	<b>Sharing</b> leadership for team effectiveness	<b>Pooling</b> leadership at the top to direct others	<b>Spreading</b> leadership across levels over time
Definition	Mutual leadership in groups with shared responsibility	Top management is formally structured around a dyad, triad or small group in knowledge based work	Series of individuals who each take on leadership responsibilities
Structure	Shared leadership Horizontal dimension	Dyads, triads, & constellations; Executives in a shared role space;	Distributed leadership Vertical dimension; Leader plus
Key constructs	Task interdependence; Self leadership; Voice; Team performance and processes; Collective efficacy; Team empowerment	Professional autonomy; Leader skills; Role specialization; Complementarity; Partnerships; Synergy; Expertise-based cognitive, complex social problem solving;	Intra-organizational collaboration; Accountability; Coordination; Planned, spontaneous, or emergent; Aligned or misaligned,

*Note.* Adapted from “Leadership in the Plural,” by J.L. Denis, A. Langley, and V. Sergi, 2012, *The Academy of Management Annals*, 6, p. 211- 283. Copyright 2012 by Academy of Management.

**Giving or taking power and influence.** These various plural leadership streams have some unique differences that can be used to differentiate them. Denis, Langley and Sergi (2012) suggested “that a series of three bipolar tensions or oppositions can be identified as underlying them and indeed as underlying the whole idea of plurality in leadership” (p. 269). The structure and purpose of the model were described as the first two. The third of the bipolar tensions was described as power and influence either being given or taken. In other words, plural leadership can be used to *give* power and influence to others to make a more democratic organization, or it can be used to *take* diffused power and influence back to make a more coherent organization.

In the first case, the premise of sharing leadership was that it has many benefits and can lead a group or organization to increased effectiveness. “Plural leadership contributes to

organizational democracy and is valued for its own sake” (Denis et al., 2012, p. 272). The basic assumption was that sharing leadership is a choice, and it is given to others by those in formal authority. In the second case, the premise was that “power, authority, and expertise are in any case widely dispersed and that a multitude of individuals will inevitably exert influence in particular situations” (Denis et al., 2012, p. 272). The basic assumption was that formal co-leaders are taking back power and influence from others as a means to overcome the natural tendency toward chaos and disintegration.

### **Literature Search and Review Process: Healthcare**

Although one opinion piece and one empirical study were found in the literature, research on nurse-physician co-leadership has been meager. The limited critical discussion of the topic has hindered a full and accurate understanding of the experience. To explore the phenomenon of nurse-physician co-leadership, and to illuminate its unique attributes, a broad, rigorous search of the literature was needed.

With a clear understanding of the types of plural leadership models and the terms used in the field, a search for nurse-physician co-leadership began. Scopus was selected for the literature review because it is the world’s largest abstract and citation database of peer-reviewed literature with over 20,500 titles from 5,000 publishers worldwide. Scopus provides 100% MEDLINE® coverage and offers researchers in the fields of science, technology, healthcare disciplines, the social sciences, plus the arts and humanities, a quick, easy, and comprehensive resource for their research.

Using Bolden’s (2011) broad range of terms (i.e., distributive, shared, collective, collaborative, emergent, democratic, and co-leadership), the initial search in Scopus was limited to the fields of healthcare, medicine, and nursing. The search was further limited to articles or reviews that were written in English from 1992 through 2012. One hundred thirty-two healthcare documents were found.

The review proceeded with a detailed examination of each record’s abstract. Although the primary target of the review was descriptions of nurse-physician co-leadership structures in hospitals, the inclusion criteria were expanded to include a third person as part of the co-leadership team. Although nurse-physician relationships can be described as hierarchical, for this study, the partnership of the nurse manager and physician leader has been described in a nonhierarchical fashion, and the partnership is considered a formal position of power. Thus, inclusion criteria included those aspects (see Table 2.3).



Table 2.3 *Inclusion and Exclusion Criteria for Co-leadership in Healthcare***Inclusion Criteria**

Leadership dyads or triads, nonhierarchical relationship, in the same or different profession, assigned the responsibilities of a formal leadership role. The setting – healthcare.

**Exclusion Criteria**

More than three people, hierarchical relationship, temporary or informal leadership roles, a relationship with community member or patient. The setting - not healthcare.

Exclusion criteria limited the search to no more than three people sharing the leadership position, no hierarchical relationship, and no temporary or informal roles. Articles were also excluded if participants worked outside the hospital setting. Due to the nature of the Scopus database, no duplicate articles were captured. Thus, no duplicate articles needed to be identified or discarded.

After completing the initial review of abstracts, additional articles were identified from the reference lists of selected articles. Another Scopus search was conducted after additional relevant key terms were identified (e.g., *paired, partnered and dyad leadership*). No additional documents were identified by this search. Finally, the CINAHL, Digital Dissertations, and MEDLINE® databases were searched using the keyword *co-leadership*. Search results matching that keyword were 10, 9, and 9, respectively. Although some duplicate documents were found, no new documents met the inclusion criteria. After reviewing all of the abstracts, only nine articles were retained.

Although all of the articles retained were related to healthcare, only six groups of authors described co-leadership in a hospital setting, and only five of these involved unit-based management (Baldwin et al., 2011; Disch et al., 2001, Kim et al., 2012; Reid-Ponte, 2004; Steinert et al., 2006). Four of the articles were set in the United States and were primarily commentaries (non-empirical). Only one article (Steinert, Goebel & Rieger, 2006) used a quantitative design; their study was conducted in Germany.

Four other articles on co-leadership identified during the search, were set in healthcare, but were not conducted in a hospital, or not with a nurse and physician. Two were set in a community clinic (Fischbach, Smerz, Findlay, Williams & Cox, 2007; Gallagher et al., 2010), and one described CNO/CMO co-leaders working at the corporate level of a major health system (Patton & Pawar, 2012). The last was a partnership involving two nurse managers (Rosengren & Bondas, 2010), instead of a nurse and a physician, but was set in a hospital. Adding these four articles to the review enhanced the understanding of co-leadership in the healthcare setting. See Table 2.4 for details about the four empirical studies (setting, participants, design, stated purpose,

and keywords used to describe the co-leadership structure); and see Table 2.5 for details of the five commentary articles (setting, and leadership level discussed, key ideas presented, and keywords used to describe the co-leadership structure).

Table 2.4 *Empirical Studies of Co-leadership in Healthcare Setting*

Year	Author	Keywords	Purpose	Context	Methods	
					Participants	Design
2006	Steinert, Goebel, & Rieger	Shared leadership / Co-leadership	To evaluate the co-leaders' opinions regarding their satisfaction with the shared leadership model, and compare differences between the physicians' and the nurses' responses.	Hospitals, mid-sized, psychiatric / Germany	Nurse & allied health leaders and physician leaders	Quantitative-questionnaire; 131 respondents
2007	Fischbach et al.	Collaborative leadership	To evaluate the impact of the co-leadership model on the persons experiencing it, and the suitability of the model for replication by other agencies.	Community clinic, mid-sized/ U.S.	CEOs	Qualitative inquiry-
2010	Gallagher et al.	Co-leadership	To examine how a small clinic practice can implement change using a team approach and 2 co-leaders, and to enhance understanding of how the co-leaders perceived their roles & the functions they performed.	Community clinic- Small, urban / U.S.	Physicians and nurses, managers, medical or admin asst.	Qualitative inquiry over 2 years
2010	Rosengren & Bondas	Shared leadership	To describe the nurse managers' experiences of working together as equal partners in a shared leadership model.	Hospital- Large, academic center / Sweden	Nurse managers	Qualitative inquiry over 3 years

*Note.* HC = Healthcare; CEO = chief executive officer; CNO = chief nursing officer; CMO = chief medical officer.

Table 2.5 *Commentary (Non-empirical) Articles regarding Co-leadership in Healthcare Setting*

Year	Author	Keywords	Key Ideas Presented	Setting	Leadership Level
2001	Disch, Beilman, & Ingbar	Productive pairs / Collaborative partnership	To describe the responsibilities of the medical director and describe how a collaborative partnership is created between the nurse manager and medical director.	Hospital- Large, urban / U.S.	Nurse manager and Medical director
2004	Reid-Ponte	Co-leadership	To reflect on a contemporary HC leadership practice that allows for shared accountability, and that supports framing issues for better decision making.	Hospital- Large, urban /U.S.	Nurse and physician
2011	Baldwin, Dimunation & Alexander	Dyad leadership	To describe how one health system developed a dyad model for HC leadership, and provide a comparison of the traditional and dyad models.	Hospital and clinic- Small rural / U.S.	Nurse and physician leaders
2012	Patton & Pawar	Co-leadership/ Partnership/ Dyad leaders	To describe the history, perspectives and approach taken in designing effective CNO-CMO leadership dyads at their hospital.	Corporate level, Integrated health system / U.S.	CNO and CMO
2012	Kim et al.	Partnership model	To describe a leadership model that partners a nurse manager with a physician director to build a local clinical care environment.	Hospital- Large, academic center /U.S.	Nurse and physician leaders

*Note.* HC = Healthcare; CEO = chief executive officer; CNO = chief nursing officer; CMO = chief medical officer.

## Co-Leadership in Healthcare: State of the Science

**Empirical research focused on nurse-physician co-leadership.** Only one quantitative research article was found in the search. Steinert and colleagues (2009) evaluated nurse and physician co-leaders' satisfaction with their personal experience of working in a shared role, and explored how the co-leaders perceived the general experience of using the co-leadership model throughout organization. A 45-item questionnaire, with a 4-point Likert scales, was used. The researchers did not develop it using methods to validate the instrument; they developed it as a means of evaluating participants' perceptions. See Table 2.6 for a summary of the key constructs.

Table 2.6 *Key Topics Found in Questionnaire Given to Nurse and Physician Co-leaders*

<b>Key Topics Found in Questionnaire</b>
<ul style="list-style-type: none"> <li>• Level of partner's competence and commitment</li> <li>• Levels of cooperation and conflict with their partner</li> <li>• Level of clarity re: their responsibilities within the shared role</li> <li>• Level of understanding of their partner's role/job tasks</li> <li>• Level of role conflict</li> <li>• Types of problems discussed between partners (e.g., patient, staff, hospital)</li> <li>• Number and type of meetings used to coordinate work</li> <li>• Perception of change of culture within the hospital due to the use of model</li> <li>• Level of personal job satisfaction</li> <li>• Perception of how helpful the model was to enhance problem solving</li> <li>• Perception of procedure efficiency and effectiveness as a result of the model</li> <li>• Perceptions of the co-leadership model by others (e.g., devaluing the role of the professional, confusion for staff or outsiders, gender inequity)</li> <li>• Level of bureaucracy caused by the model</li> <li>• Perception of the time it took to work together (e.g., too much time in meetings)</li> <li>• Frequency of disagreements about the responsibilities</li> <li>• Perceptions of co-leaders' ability to resolve conflicts among themselves</li> </ul>

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*Note.* Adapted from "A Nurse-Physician Co-leadership Model in Psychiatric Hospitals: Results of a Survey Among Leading Staff Members in Three Sites," by T. Steinert, R. Goebel & W. Rieger, 2006. *International Journal of Mental Health Nursing*, 15, pp. 251-257. Copyright 2006 by Australian and New Zealand College of Mental Health Nurse Inc.

Eighteen items were used to evaluate the co-leaders' opinions of the personal aspects of working in a shared leadership role. Then 27 items were used to evaluate the general perception of the use of co-leadership within the hospital setting. The findings from this study were helpful to identify some of the positive outcomes that the researchers attributed to the use of the co-leadership model (e.g., job satisfaction, procedural effectiveness, and culture change). Also, some negative consequences were explored (e.g., extra time needed, additional bureaucracy, and

role conflict), as well as some factors related to an integration process (e.g., clarity of responsibilities, understanding partner's role, role conflict, cooperation and conflict with partner). Just a few questions were related to the participants' evaluation of their partner's skills (e.g., level of competence, level of motivation), and there was a hint of information about the co-leaders' work together (e.g., level of problem solving abilities, and the type of problems the co-leaders worked on together). Further details were needed to answer the aims of my study.

**Key constructs of co-leadership derived from healthcare literature.** A review of all of the articles identified in the search was completed, and a more detailed outline of the key constructs relevant to the aims of this study was identified. Evaluating the positive outcomes related to the use of co-leadership was not an aim in this study, therefore outcomes were not evaluated in this literature review.

***Skills each leader brought to the role.*** In general, leadership scholars recognize that all individuals bring his or her skills into the leadership role, and typically, these skills include personal and professional characteristics, such as intelligence, creativity, experience and wisdom (Northouse, 2010). This is true for studies about co-leadership as well, but the evidence from this review called particular attention to the healthcare professionals' expertise and perspective, as well as their technical (i.e., clinical) skills. In addition, the attributes that pertained to complementarity were acknowledged.

Many of these aspects are similar to an effective solo leadership style, such as being a good listener, mature, self-confident individual, and a servant leader (Fischbach et al., 2007), and clinical competence (Rosengren & Bondas, 2010). Although successful role development centered on leaders possessing clinical competence and strong leadership skills, in studies focused on co-leadership, their personality traits were sometimes described as being complementary. "One exuding high energy, the other displaying a calm, steady presence—they were seen as extremely compatible and able to work as a team of equal partners" (Fischbach et al., 2007, p. 33).

To embrace the duality of a partnership fully, humility was essential (Patton & Pawar, 2012). A harmonious working relationship was built upon a lack of ego (Fischbach et al., 2007). Descriptions of the necessity of co-leaders being clinically competent and emotionally mature are not new to leadership research, but being complementary and possessing humility and a lack of ego could be unique to co-leadership.

***Shared role and responsibilities.*** Steinert et al. (2006) measured role clarity as a factor that defined the shared role. The aspects described by the other authors that encompassed the

shared role were the shared responsibilities, structural dimensions and combined complementary competencies. Kim and colleagues (2012) described the shared role in terms of the reporting structure: “Most hospitals have separate reporting structures for physicians (who usually report up to their clinical departments) and nurses (who report up to nursing administration)” (p. 110). Other authors suggested that the reporting structure be amended, so the dyads report their accomplishments to one central administrator (Baldwin et al., 2011).

Creating clarity relied on distinguishing between what work was shared and what was distinct to the co-leaders’ professional domains. Rosengren and Bondas (2010) described how co-leaders worked together at meetings to constantly clarify their roles. They described the shared role as two leaders of equivalent status (e.g., two nurse managers) sharing responsibility and tasks within a trustful relationship, using their strengths, limitations, and combined competence. Typically the shared responsibilities for a medical director and a nurse manager on an inpatient unit were to “work together to promote and foster a clinical care environment that strives to deliver the ideal patient care experience for our patients” (Kim et al., 2012, p. 108).

Combined complementary competencies were frequently described as an important factor in co-leadership. Complementary skills allowed for co-leaders to have varied perspectives (Gallagher et al., 2010), and to use each other as a sounding board (Fishbach et al., 2007). In describing Gilmore’s (1999) work on productive pairs, Disch et al. (2001) suggested that partners could be successful if they enjoyed good interpersonal chemistry and understood “the importance of the two bodies of expertise that have to be connected in the service of the mission” (p. 373). Different perspectives provided the partners with skill sets to address challenges more difficult than either of them could address individually, such as implementing new initiatives, even though they were handling competing priorities within the department at the same time. All of these authors helped to outline various features of the co-leaders’ shared role, which helped to define this construct.

***Integration and alignment.*** Steinert et al. (2006) measured levels of cooperation and conflict resolution with one’s partner, and understanding the partner’s role as factors that defined integration. The aspects of integration that were discussed by the other healthcare authors included both relationship building and information sharing between the two leaders.

These two dimensions fit well with the theory of *relational coordination* by Havens, Vasey, Gittell and Lin (2010), where the authors described integration as having both a relational dimension of building shared goals, knowledge and mutual respect, and a communication dimension of frequent, timely, and accurate sharing of information with a non-blaming

communication style. These factors were similar to findings reported by the other authors studying co-leadership in the healthcare setting. Disch et al. (2001) described integration as two leaders who “come together and develop a partnership to accomplish shared goals . . . to integrate all the different perspectives in accomplishing the organization’s mission” (p. 373).

Baldwin et al. (2011) conceptualized respect and cohesion between partners as trust, engagement, organizational alignment, and support. Fishbach et al. (2007) described how important it was that neither member of the dyad triangulate or speak ill of the other; as they learned together, they also grew together. A harmonious working relationship was built upon the ability to trust the co-leader.

Patton and Pawar (2012) found that working together diminished the co-leaders’ loneliness, and it broadened and improved their performance. They found that it took the co-leaders numerous discussions and about one and a half years of working together to fully develop this level of performance. Even though these co-leaders believed that as individuals they were equals, they believed that hierarchical differences between their individual skill sets could pose substantial barriers.

Some conversations were described as healthy conflicts, where full and frank discussions were essential if the partners were to realize their leadership potential (Patton & Pawar, 2012). A non-blaming communication style consisted of both the tone and the openness of the communication. All of these authors helped to outline various features of nurse-physician co-leaders’ alignment and integration efforts, which helps to define this construct.

***Problem-solving.*** Steinert et al. (2006) measured perceptions of problem solving ability within the partnership, and asked the co-leaders about what types of problems they worked on. These factors, although very limited, helped to define co-leaders’ work together. The aspects of problem solving that were discussed by the healthcare authors also included the types of problems the co-leaders worked on together, plus the advantages and disadvantages of having more than one person involved. Baldwin and colleagues (2011) focused their report on the amount of time it took for problem solving to occur; they compared the traditional operations model to the co-leadership dyad model and suggested that there was a greater risk of bottlenecks to occur when using a consensus process. They suggested that co-leadership slowed down the decision making process. But other authors disagreed, reporting that their participants reported this model did not require more meeting time (Steinert et al., 2006).

Several of the authors described a full range of problems partners worked on together, from patient-, to staff- and organization-oriented problems (Disch et al., 2001), and that the co-



leadership process actually enhanced the ability to facilitate solutions (Reid-Ponte, 2004). Not only did the partners work together enhance the process, but an integrated team was often involved too:

...a clear, consensus-oriented approach to a problem, led by a nurse–physician team in collaboration with a broader interdisciplinary quality council, meant that the executive leadership team had the needed perspective and thoroughness of evidence to respond to a proposal of this kind (Reid Ponte, 2004, p. 482).

All of these authors helped to outline various features of nurse-physician co-leaders' collaborative problem solving efforts, which helps to define this construct.

*Allocation of work.* The construct of work allocation was described by Reid-Ponte (2004) in terms of enacting typical leadership tasks: setting priorities together, devising solutions, presenting proposals together, defining metrics, and engaging other stakeholders in the process of leadership. The difference from solo leadership, however, was how tasks were allocated.

“Understanding the lines of authority and accountability, scope of decision making, and where various elements fall in terms of shared or distinct accountability is the first step in assuring a strong interdisciplinary governance model” (Reid-Ponte, 2004, p. 482).

Other authors found that some work was completed more often by one leader than the other. Kim and colleagues (2012) described how nurse managers typically managed staffing and operations on most inpatient units, but the physician leaders contributed in other ways. But some work was shared. Staff maintenance skills were important for both professionals. Whether the task was showing gratitude to individuals for their exceptional teamwork or working with individuals to improve their performance, both unit-based partners shared responsibility to work with staff (Kim et al., 2012). Other researchers found that the physician chose the clinical role; Gallagher and colleagues (2010) reported that the differentiated but coordinated roles of the co-leaders allowed physician leaders to work more on clinical care, and the non-physician leaders took the lead in managing people. However, both leaders served as facilitators of their local change process.

Rosengren and Bondas (2010) reported that two nurse managers in a dual leadership role felt insecure and anxious during the initial phase of working together. Initially, a power imbalance existed between them, caused by their different professional backgrounds and clinical expertise. The co-leaders described the experience of sharing power as gaining self-confidence, overcoming competition, and developing greater respect for the other's strengths and weaknesses. “Informants' highlighted the importance of finding a balance between their individual power and

their shared leadership” (Rosengren & Bondas, 2010, p. 293), and that over time they felt supported, loyalty and “finally, a sense of harmony at work when ‘two’-getherness was reached” (p. 291). All of these authors helped to outline various features of nurse-physician co-leaders’ allocating work, which helps to define this construct.

**Communication.** The aspects of communication that were discussed by the healthcare authors included the descriptions of co-leaders exchanging information, providing feedback, facilitating conflict resolution, giving directions, and motivating people to take action. Communication is considered an essential component of both solo leadership and plural leadership, and is a prominent element in any leadership theory.

Kim and colleagues (2012) suggested that co-leaders used a variety of collaborative communication techniques with frontline nurses and physicians, in order to: provide guidance, facilitate conflict resolution across practice disciplines, provide orientation to new physicians, and coach other leaders about how to address disruptive behaviors. Co-leaders’ use of communication strategies to “motion people into action was dependent on their connection to the unit and the people who work there” (Kim et al., 2012, p. 111). This work was done by the sharing of ideas and peer networking at bimonthly meetings for all unit-based leadership partners.

Disch et al. (2001) had similar findings, and stated that medical directors used communication strategies to be “a point of contact for interaction among hospital leaders, other physicians, and the workers; to engage other physicians in solving unit-based problems” (p. 371). Two nurse co-managers described their communication strategy as the ability to create “transparent determination” in the work environment, which means to share information to keep everyone informed (Rosengren & Bondas, 2010, p. 292). These authors helped to outline various features of nurse-physician co-leaders’ communication efforts, which helps to define this construct. With nine articles related to co-leadership available for review in the healthcare field, a basic outline of key constructs and their definitions was identified. See Table 2.7 for a summary of these key findings.

Table 2.7 Key Constructs of Co-Leadership Derived from Healthcare Literature

Role Development Constructs	Working Together Constructs
<p><b>1<sup>st</sup> Leader's Skills -</b> Intelligence, creativity, experience and wisdom; professional expertise and perspective; humility and lack of ego</p>	<p><b>Collaborative problem solving-</b> Focused on patient-, staff- and organization-oriented problems; Enhanced ability to solve problem by a thoroughness and use of different perspectives; Use of other leaders in the process;</p>
<p><b>2<sup>nd</sup> Leader's Skills -</b> Intelligence, creativity, experience and wisdom; professional expertise and perspective; humility and lack of ego</p>	<p><b>Allocation of work-</b> Leadership tasks were shared or distinct depending on accountabilities and scope of practice; co-leaders shared the work of maintaining staff's competence; physicians focused more on clinical care tasks, nurses focused more on managing staff; both facilitated change; initially competed for control until they found a balance</p>
<p><b>Shared Role -</b> Structure of shared accountabilities, but separate reporting structures; combined complementary competencies</p>	<p><b>Communication –</b> Sharing information with staff; keeping partners updated on changes; providing guidance and direction to staff; keeping everyone informed; acting as a point of contact with colleagues; facilitating change; motivating others</p>
<p><b>Integration and alignment -</b> Relational dimensions: shared goals, shared knowledge, and mutual respect; trust; support; no triangulation; chemistry; lots of time together Communication dimensions: frequent, timely, and accurate information and non-blaming communication style; healthy conflicts; full, frank discussions</p>	

### Literature Search and Review Process: Business & Education

With only nine articles available for review in the healthcare field, it was necessary to expand the search for relevant articles into the fields of education and business, to more fully define the key constructs, and to search for a conceptual framework. Again, using Bolden's (2011) suggested terminology (i.e., shared, collective, collaborative, emergent, democratic, and co-leadership), another search for articles on co-leadership was conducted in Scopus. The search was limited to English language articles or reviews from 1992 through 2012. Seven hundred fifty-eight documents were found. The search was then divided into two sections, a business section and an education section. The first section was developed by excluding all but business-related articles; 282 documents were retained. The search was further narrowed to the past 10 years, which resulted in 248 business documents: 101 from the United States, 72 from the United Kingdom, 15 from Australia, 11 from Canada, 8 from Hong Kong, and 7 from Germany. Forty-five articles had the keyword listed as shared leadership, 44 articles as distributed leadership, 9 as collective leadership, and only 1 as co-leadership.

From the original pool of 758 documents, I then focused the search on articles related to education; there were 418 documents. The results were then limited by year; only articles from the past decade were retained. Three hundred sixty-four education documents remained: 150 documents from the United States, 81 from the United Kingdom, 24 from Canada, 21 from Australia, 15 from Hong Kong, and 8 from Belgium. Eighty-five articles had the keyword listed as distributed leadership, 30 as shared leadership, 10 as collective leadership, and only 3 as co-leadership.

I began the review process by examining the abstracts of each record. Because my aim for the review was to include relevant attributes to the developing nurse-physician conceptual framework, the inclusion criteria were very open to all types of evidence about co-leadership. I restricted the structural features to two or three leaders, and to a nonhierarchical, formal leadership model. Extending the search to informal leaders or vertical leadership structures was deemed ineffective. See Table 2.8 for summary of the criteria used. After completing the initial abstract review, a few additional articles were identified using a tool in Scopus that links selected articles to other potentially relevant articles.

*Table 2.8 Inclusion and Exclusion Criteria for Co-leadership in Business and Education*

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**Inclusion Criteria**

Leadership dyads or triads, nonhierarchical relationship, assigned the responsibilities of a formal leadership role. The setting - business or education

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**Exclusion Criteria**

More than three people, hierarchical relationship, temporary or informal leadership roles.  
The setting - not healthcare

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One hundred duplicate documents were identified due to the overlap between the two sections (i.e. business and education). Upon reviewing the abstracts, 18 documents were retained: 6 from the field of education and 12 from the field of business. See Table 2.9 for characteristics of the 14 empirical studies (i.e. author, year, keyword description of the leadership model studied, stated purpose, and the methods, including the setting, participants and the design used). See Table 2.10 for details of the four non-empirical works.

Table 2.9 *Empirical Studies of Co-Leadership in Business & Education Settings*

<u>Year</u>	<u>Author</u>	<u>Leadership term</u>	<u>Purpose</u>	<u>Context</u>	<u>Methods Participants</u>	<u>Design</u>
2003	Court	Shared leadership	To describe the impact of some inter-group struggles over power on the initiative to develop more democratic structures and practices	Education- Primary school/ New Zealand	Principals	Discourse analysis
2004	Gronn & Hamilton	Co-leadership	To analyze: the properties and dimensions of the division of leadership labor; the means by which the co-leaders negotiated their shared role space; the impact it had on their career aspirations; the impact on key stakeholders	Education – High school/ Australia	Principals	Case study using observation and interviews
2006	Wilhelmson	Joint leadership	To show what leaders regard as the working ingredients in their mutual work situation that help facilitate personal development	Business-Public and private/ Sweden	Middle & low level managers	Qualitative inquiry
2006	Eckman	Dual leadership/ Shared leadership	To describe co-principals personal and professional characteristics; the model of leadership implemented in the schools; the factors that contributed to this; the strengths and limitations of the model; and the co- principals' level of role conflict, commitment and job satisfaction	Education- Public and private schools, varying in size and grade level / U.S.	Principals	Quantitative-questionnaire s 48 respondents
2006	Grubb & Flessa	Distributed leadership	To examine the moderating variables that led to stability of a new plural leadership model in 10 schools; variables included: origins of the reform, the school's role in the decision, the district's role in the decision, the costs and the benefits	Education- Public and private, varying in size and grade level / U.S.	Principals and teachers	Qualitative inquiry and cross case comparisons

2007	Court	Shared leadership	To reflect on how politics, and relationships feminist consciousness, can affect the potential for social, cultural and organizational change	Education- Elementary/ New Zealand	Principals	Case study
2008	Paré, et al.	Co-leadership	To identify the influence of ethnicity and social capital on entrepreneurial practices.	Business- Small/ Canada	Entrepreneurs	Field survey
2008	Vine et al.	Co-leadership	To understand the process of co-leadership	Business – Medium & small/ New Zealand	Managers	Discourse analysis
2008	Bunnell	Distributed leadership	To explore the philosophy and dynamics of Western and Chinese co-principals leading an international school	Education- International elementary school/ China	Principals	Qualitative inquiry
2009	Reid & Karambayya	Dual leadership /Distributed	To explore conflict dynamics of dual leadership.	Business- small/ Canada	Executive leaders	Case studies
2010	Arnone & Stumpf	Shared leadership	To understand dynamics and efficacy of shared leadership	Business- Large/ U.S.	CEOs	Case studies
2010	Zander & Butler	Paired leadership	To form a proposition predicting which leadership mode will enhance different teams' outcomes the best, given their different multi-cultural composition	Business- Large/ International	N/A	Review of literature
2011	Schnurr & Chan	Co-leadership	To identify and describe complex processes through which co-leadership is enacted, particularly disagreements	Business- Large & small/ Hong Kong	Executives	Discourse analysis
2012	Bhansing Leenders & Wijnberg	Dual leadership	To identify effects of heterogeneity in orientation on effectiveness on this leadership mode	Business- Theater - Europe	Executives	Qualitative inquiry

Table 2.10 *Commentary Articles or Book regarding Co-Leadership in Business & Education Settings*

Year	Author	Keyword	Topic	Setting	Key Stakeholders
1999	Heenan & Bennis	Co-leadership	To describe: the practice of co-leadership, and enhance our understanding of how the structures emerged; to describe how to create the culture of co-leadership, and identify the critical factors for success	Business, plus sports, politics, military & other partnerships	CEOs, politicians, athletes, & historical figures
2002	O'Toole, Galbraith, & Lawler	Shared leadership/ Co-leadership	To describe the practice of co-leadership & identify best practice for establishing the dual leadership model	Business – Large/ U.S.	CEOs
2007	Alvarez, Svejnova & Vives	Co-leadership	To describe the qualities of co-leadership and provide advice for engaging in this type of mode of leadership	Business – Large/ International	Executives & managers
2007	Miles & Watkins	Team	To understand why the structures emerge, what purpose they serve, and what challenges they create	Business – Large/ International	Executives

### **Co-leadership in Business and Education: State of the Science**

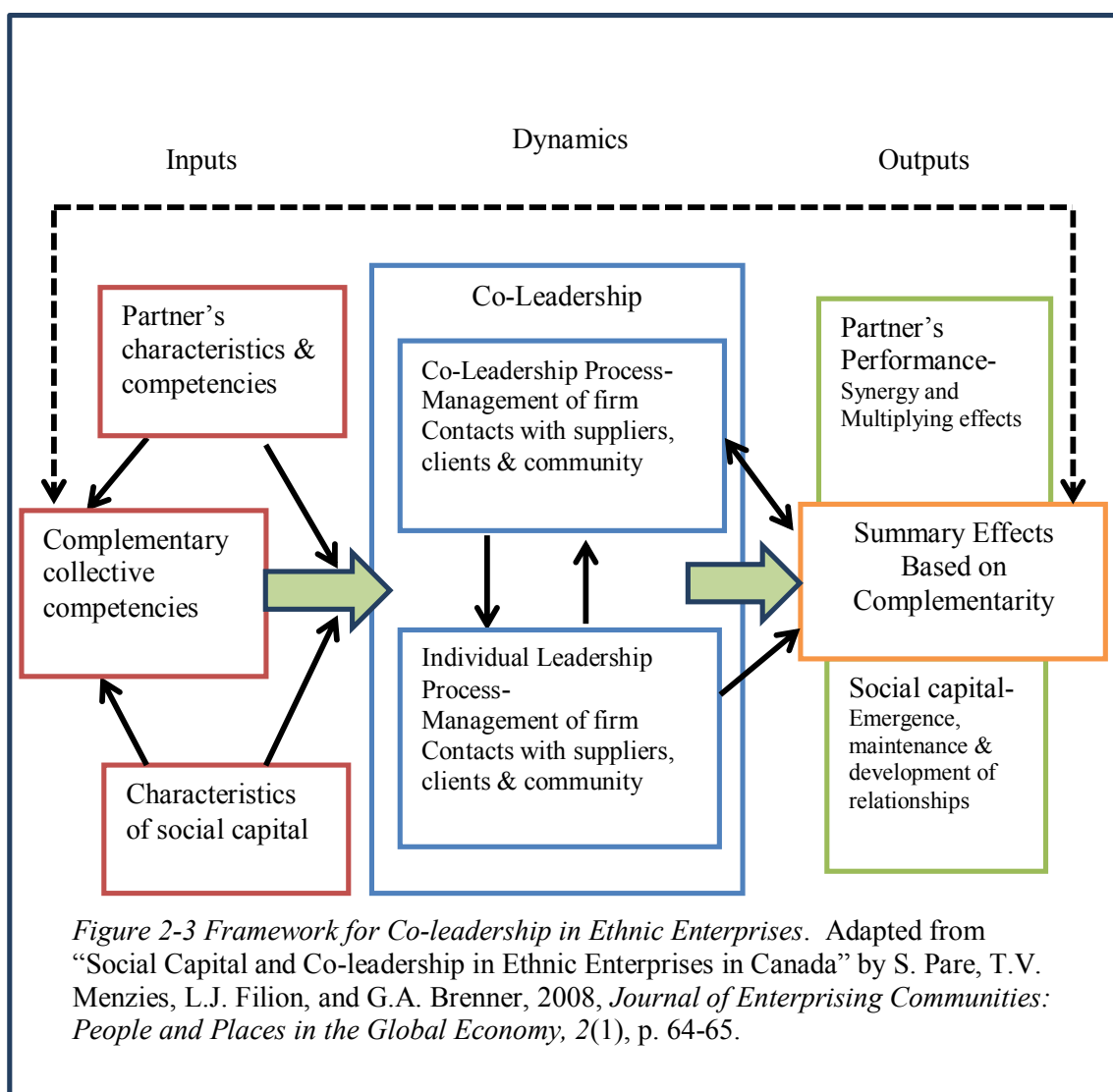
This search resulted in 18 non-healthcare articles focused on research and opinion pieces related to co-leadership. Some of the findings were helpful to further explain the key constructs, and to help develop a conceptual framework for nurse-physician co-leadership. Despite the fact that many of the authors reported various outcomes, those findings are not evaluated here. The aims of this study were to gain a better understanding of factors that enhanced or hindered the role development of the partners in co-leadership, and to increase the understanding of the nature and dynamics of the co-leaders' working relationship. Therefore, information regarding outcomes was not relevant.

**Frameworks depicting co-leadership.** In four of the 18 studies, diagrams were furnished that depicted some aspect of co-leadership. One researcher depicted a proposal of how a co-leader's personal and professional attributes led to the shared role space, and that role conflict and commitment were the facets of the shared role that are directly linked to the outcome of job satisfaction (Eckman, 2006). Reid and Karambayya (2009) provided a diagram depicting the relationships between the constructs of conflict (i.e., conflict type and dissemination of conflict) and subsequent outcomes of organizational processes (i.e., operational functions, leadership attribution and morale). A third research team (Gronn & Hamilton, 2004) provided three simple Venn diagrams depicting three types of interdependence within a co-principal shared role space (i.e., complementarity, overlap and duplication).

A complete conceptual framework of co-leadership was presented in only one investigation. When studying entrepreneurial practices in Canada, one research team attempted to identify the inputs, outputs and inner workings of co-leadership (Paré, Menzies, Filion, & Brenner, 2008). See Figure 2-3 for an adaptation of their original diagram.

Paré and colleagues' (2008) proposal was based on a range of theories. The section on inputs was based on Paré's earlier works, which showed how the "collective competencies are derived from the characteristics and competencies of each partner" (p. 67). Outcomes could be described as the multiplying effects of a partnership by using the theories of family dynamics (Foley & Powell, 1997). "This particular model was felt to be appropriate for comparing the interpersonal aspects of the relationship between co-leaders" (Paré et al., 2008, p. 66). Furthermore, the section on outputs was enhanced by including evidence on the different ways of producing social capital (Cote & Levine, 2002). At the center of the model, the inner working of co-leadership was depicted as a mixture of individual and partnered practice used to manage the firm. This model proved helpful when developing the conceptual framework for this study.





**Key constructs of co-leadership from business and education literature.** The articles identified during the second search provided some additional details about the key constructs that were not identified during the evaluation of the articles found in the first search that was limited to healthcare. Additional details are presented by construct.

**Skills each leader brought to the role.** The aspects of leaders' skills sets that were discussed by the business and education scholars included personal characteristics and leadership competencies. Heenan and Bennis (1999) provided lengthy descriptions of co-leaders' characteristics and competencies through the numerous vignettes they provided. The stories incorporated people from all walks of life. Cross case analysis identified that some of the common

traits of co-leaders are: a healthy ego, courageous, able to speak the truth, willingness to share, creative, and able to engage in a healthy conflict.

However, conflict can be challenging when it includes major cultural differences. Co-leaders/co-principals at an international school discovered that a Western-style school in eastern China faced many philosophical and pragmatic challenges (Bunnell, 2008). The researcher described how all aspects of the co-leadership model were affected during this unique, dual-culture, co-principal experience.

Zander and Butler (2010) also examined cultural differences in paired, rotated, and shared leadership multicultural teams in a business setting. Using cultural diversity to strengthen a team, the researchers described how they developed a way to measure a potential leader's networking strengths during the selection process. By selecting co-leaders by their combined networking strengths, the authors proposed that outcomes would be enhanced. Combining heterogeneous networks should have more wide-reaching effects.

Competition between heterogeneous groups, plus struggles over power, politics and cultural differences have provided a rich understanding of some contextual features in co-leadership. Court (2003; 2007) described how the work of fledgling co-leaders dissolved under the burden of working with marginalized groups of parents in a school setting. All of these authors contributed to outlining various features of the co-leaders' skill sets, which helped to define this construct.

***Shared role and responsibilities.*** The aspects of shared role that were discussed by the business and education scholars included the creation of a time and a place where the co-leaders can mix their skills together, where the reporting structure is identified, and where shared accountabilities are clarified. Gronn and Hamilton (2004) provided a lengthy discussion focused on the construct of shared role space. They proposed that interdependence is the main feature of this construct. They distinguished three dimensions of role interdependence: complementary, overlap, and duplication (p. 16). When co-leaders' work is complementary, they each bring attributes to their joint work, which are then blended, but the work remains separate. When co-leaders work is overlapped, the leaders work within their preferred domain of specialist expertise and influence, but they can substitute for the other- either interchangeably, or they stand in, or they take turns. The third type of interdependence is duplication, and is where co-leaders not only substitute for, but also replicate, the other. Even though duplication can appear inefficient, it can be "a powerful device in the suppression of error" (Gronn & Hamilton, 2004, p. 20).

Almost all researchers have found that, ideally, individuals should be paired with another individual whom they know and with whom they “connect.” (O’Toole et al., 2002). The researchers have found that partnership should be determined by the complementary skill sets based on each person’s experience, point of view, temperament, skills, and social network. Although different skills sets, social networks, worldviews, and experiences are advantageous in making a duo more effective, Gronn and Hamilton (2004) suggested that individuals should not be polar opposites. Balance is the key, with differences being measured more by degrees than yardsticks.

Other scholars have described the shared role space as a place to bring together two people who can compensate for the other’s shortcomings, and where their combined strengths produce a result where the whole is greater than a sum of its parts. Miles and Watkins (2007) described complementary leadership as having four dimensions: task complementarity, expertise complementarity, cognitive complementarity and role complementarity. Some authors described the co-leaders skills as a way to capitalize on different talents (Heenan & Bennis, 1999), whereas others compared the partners to yin-yang; complementary forces, where dual forces interact to form a whole greater than either separate part (O’Toole, et al., 2002). Furthermore, others suggested that these personal and professional attributes can be separate and distinct, but also they are not binary opposites. Gronn and Hamilton (2004) warned that if the dualism is too strong, it can breed a split in staff. Partners need to be different by degrees, not polar opposites. Alvarez and colleagues (2007) agreed, and suggested that the complementary competencies are a state of balanced expertise, emotional compatibility, and, ideally, both leaders are analytically minded.

Although complementarity has been identified as a key feature of the shared role space, the risk of placing opposites together is inherently possible. Several researchers have examined political struggles between co- leaders, for example, between artistic and managing directors in performing arts companies (Bhansing, Leenders, & Wijnberg, 2012; Reid & Karambayya, 2009). Reid and Karambayya (2009) examined how cognitive and emotional conflicts and their consequences within partnerships can spread outside the duo, and the need to maintain a public front of harmony.

In a study where the researchers examined rival chief executive officers (CEOs) who have been forced to work together after their companies merged, the theme of distrust ran deep (Arnone & Stumpf, 2010; Fitzsimons, James, & Denyer, 2011). The authors suggested common pitfalls to avoid: (a) co-leaders not verifying the other’s intentions, (b) failure to establish open communication, (c) disagreements over non-relevant personal experiences, (d) fear of unfair

recognition for the other co-lead, and (e) lack of respect for the other co-lead (Arnone & Stumpf, 2010, p. 19).

These attributes are similar to the five dysfunctions of a team described by Lencioni (2002), which included: an absence of trust, a fear of conflict, a lack of commitment, an avoidance of accountability and an inattention to results. But co-leadership is somewhat unique. The trick to effective complementarity lies in what Miles and Watkins (2007) called the four features of the co-leadership framework: a common mission-vision, common incentives, leader-to-leader communication, and trust. These features are found in the next construct, integration. All of these authors contributed to outlining various features of the shared role space, which helped to define this construct.

***Integration and alignment.*** The integrating mechanisms that were discussed by the business and education scholars included building trust and respect, developing shared goals and sharing of knowledge. Ideally, co-leaders should develop a set of shared goals at the onset of their work together. Authors used a variety of examples and phrases to describe this: shared aspirations and values (Alvarez et al., 2007), core values that meshed, a celebration of the enterprise, not the individual, thinking beyond themselves (Heenan & Bennis, 1999), and collective vision and a sharing of the costs and risks (Paré et al., 2008).

Although mutual trust and respect are obvious elements of successful co-leadership, some authors emphasized that co-leaders first and foremost value their different perspectives and expertise. “Co-leaders are of a mind to share power. They must be attentive and willing to accept other points of view and capable of openly communicating their own point of view” (Alvarez et al., 2007, p. 12). Initially, the relationship is a process of committing, bonding, exploring, and negotiating expectations. Wilhelmson (2006) added that beyond just exploring and negotiating differences in points of view, co-leaders were provided the opportunity to enhance their partner’s personal development. When a partner explicitly talked about his or her thoughts, biases, and assumptions, the other was afforded a look into his or her partner’s habits of the mind. With critical reflection on the partner’s frame of reference, joint sense-making, and transformative learning occurred. These initial integration processes allowed the partners to develop their commitment, coordination, and cohesion.

Partners should expect to invest an extensive amount of time in the relationship; coordination and alignment begin with communication; this integration process must take place constantly and spontaneously (Alvarez et al., 2007). Co-leaders need to meet regularly to brief and de-brief with each other. When not together, they must have regular contact by phone or email.

Habits must be maintained which foster togetherness; partners must practice inclusion with a vengeance (Heenan & Bennis, 1999). If partners have no history of working together, a relationship of trust must be built; trust is created slowly, decision by decision (O'Toole et al., 2002). Co-leaders must continuously seek to enhance their mutual awareness, keep each other in the loop to consolidate collective understanding. Integration is facilitated by regular communication.

When co-leaders spend time together, they develop both a working and a social relationship, and their activities together enhance their mutual awareness (O'Toole et al., 2002). Although time together may seem excessive at first, the partnership can gradually minimize it by reducing time spent in meetings (e.g., one attends for the other) or by preventing or resolving problems quickly as the partnership matures. The co-leaders' roles will shift over time; thus, individuals must continue to negotiate expectations (Vine, Holmes, Marra, Pfeifer, & Jackson, 2008). Strong integrating mechanisms are needed to manage changing responsibilities and to establish joint accountability for the co-leader's work (Alvarez et al., 2007). Lack of strong alignment and coordination in the beginning can lead to discord during next phases of the co-leadership process. All of these authors contributed to outlining various features of the integration and alignment process, which helped to define this construct.

***Collaborative problem solving and allocation of work.*** The aspects of collaborative problem solving and work allocation in co-leadership that were discussed by the business and education scholars included how work was divided, how information was gathered and shared, and how decisions were made. Many of these activities were completed in an interdependent way: working in tandem (one after the other), working apart, or working side by side. Alvarez et al (2007) suggested that all major responsibilities should be performed jointly, but in many cases, there are some activities in which one member has an edge, the know-how or the contacts. Therefore co-leadership has aspects of solo leadership in addition to the joint activities (Paré et al., 2008).

O'Toole and colleagues (2002) suggested that co-leaders split up the chores; as one steps forward and the other steps back. Although co-leaders needed to check in advance on strategic matters, and keep each other informed on daily disasters, they often divided the responsibilities along the lines of the individual's expertise. At other times, the division of work was symbiotic. They suggested that the most effective approach was to be flexible. It did not matter so much how responsibilities were divided, what mattered most was that the individuals were clear about their roles and honest about their contributions. And as the relationship progressed, partners could draw

on a history of increasingly deep, work-related exchanges that led to each individual's growing awareness of his or her partner's competencies or styles.

The dynamic nature of collaborative problem solving was described by Gronn and Hamilton (2004) as a process that included: paralleling (i.e. cognitively attuned to the same line of reasoning), positioning (i.e. providing information to bring the other up to speed), anticipating (i.e. pre-meeting rehearsal), pooling of suggestions, and retrieving information when cognitive overload occurred. The collaborative problem solving process typically started with partners engaging in an open-minded dialogue that allowed for various perspectives, disagreements, and exploration. A strong partnership allowed either individual to defer to the other's expertise or challenge his or her ideas. The strength in the problem solving process was the ability to have collegial conversations, to have someone to bounce ideas off, to see things from multiple perspectives, and to share key decision making with an equally qualified peer (Eckman, 2006). Co-leaders can collectively retrieve information, or garner information from varied sources and then bring the other partner up to speed (Gronn & Hamilton, 2004).

With the use of discourse analysis, two research teams described the problem solving processes co-leaders used. Vine and colleagues (2008) illustrated different ways in which leadership responsibilities were shared. They described how each co-leader had a different leadership style, and that certain accountabilities (e.g., giving approval, checking people's progress, outlining employees' expectations, and easing tensions) typically fell to one of the partners.

Schnurr and Chan (2011) also used discourse analysis to examine executives in both large and small businesses engaged in discussions, with the primary focus on disagreements between the partners. The collaborative work depicted a dynamic process in which the individuals positioned themselves as the primary leader and the secondary leader at different moments throughout the interaction (Schnurr & Chan, 2011). This competitiveness between co-leaders was not uniformly found by other researchers, and may be unique to the use of discourse analysis. All of the authors did describe a dynamic process, which contributed to outlining various features of the co-leaders' collaborative work together, which helped to define this construct.

**Communication.** The aspects of communication that were discussed by the business and education scholars included the need for co-leaders to be able to speak with one voice publicly but to speak openly and honestly in private. Regardless of private disagreements, co-leaders needed to display a unified position in public (Alvarez et al., 2007). Although disagreements were natural, they needed to be resolved in private. Compromise was the glue that sustained the relationship. Alvarez and colleagues (2007) provided an example of how one leadership dyad tried to resolve

problems privately, but if they reach an impasse, the co-chiefs choose three colleagues who would act as referees and tie-breakers.

When in public, presentations were often done in a tag-team style, where partners amplified each other's remarks. This technique helped to build influence and consolidate the collective understanding on a topic (Gronn, 2009). Vine et al. (2008) suggested that co-leaders practice these communication skills of collective talk in private, so they would appear authentic and genuine to their staff. Communication was sometimes problematic, and it could be difficult to always present a unified front. Therefore practicing collective talk within the workplace allowed partners to work in tandem.

Power-sharing in co-leadership could sometimes be difficult; competition was natural and presented a risk, even though each person may come with the intent to cooperate. O'Toole and colleagues (2002) found the biggest challenge was not practical or technical, but it was trying to manage the strong egos. In fact, co-leadership has been used as a restraint on the naturally strong egos found in some top-tier banking firms (Miles & Watkins, 2007). Heenan and Bennis (1999) agreed that managing the relationship was an art. First, the co-leaders needed to have respect for each other and learn to sublimate their egos. If they were able to cultivate egalitarianism, to have frank discussions, and were willing to share, then partners could become worthwhile sounding boards for each other (Heenan & Bennis). Honesty, even if it was unpleasant, was a necessary feature in the co-leaders' relationship. The partners should not spend time just reinforcing each other, rather they needed to be candid and capable of communicating openly. In co-leadership, dissenting opinions were respected and appreciated.

A summary of the key constructs and their definitions as derived from healthcare, business and education literature is found in Table 2.11. Although contextual factors (i.e. both macro- and micro-level) were not specifically identified during this review, they were part of the collective leadership model (Friedrich et al., 2009), and therefore were added to this study too.

Table 2.11 *Constructs of Co-leadership Derived from Review of Literature*

<b>Role Development Constructs</b>	<b>Working Together Constructs</b>
<p><b>1<sup>st</sup> Leader's Skills</b> – intelligence, creativity, experience and wisdom, and professional perspective; different points of view, temperament; social networks/ social capital; characteristics and competencies; healthy ego, courageous, able to speak the truth, willingness to share, creative, able to disagree</p> <p><b>2<sup>nd</sup> Leader's Skills</b> – intelligence, creativity, experience and wisdom, and professional perspective; different points of view, temperament; social networks/ social capital; characteristics and competencies; healthy ego, courageous, able to speak the truth, willingness to share, creative, able to disagree</p> <p><b>Shared Role Space</b> – Structure of model; executives, formal leaders; shared responsibilities &amp; accountabilities Interdependence: complementary, overlapped or duplicate Complementary collective competencies: talent in tandem, capitalize on different talents; yin/yang, financial genius and a technical whiz; a warm, caring person and a gutsy guy; a computer person and a people person; balanced expertise; emotional compatibility Both leaders are analytically minded</p> <p><b>Integration</b> – Relational dimensions: shared goals, shared knowledge, and mutual respect; a process of committing, bonding, exploring, and negotiating expectations Communication dimensions: frequent, timely, and accurate information and non-blaming communication style; honesty, candor, and clear communication</p>	<p><b>Collaborative problem solving-</b> Focused on patient-, staff- and organization-related problems; enhanced ability to solve problem by a thoroughness and use of different perspectives Use of other leaders in the process Management of firm; contacts with suppliers, clients and community; major responsibilities are handled together; open-minded dialogue that allows for various perspectives, disagreements, and exploration</p> <p><b>Allocation of work-</b> Leadership tasks were shared or distinct depending on accountabilities and scope of practice; co-leaders shared the work of maintaining staff's competence; physicians focused more on clinical care tasks; nurses focused more on managing staff; both facilitated change Power sharing; hybrid process-sometimes solo, sometimes together; initially competed for control until they found a balance</p> <p><b>Communication</b> – Sharing information with staff; keeping partners updated on changes; providing guidance and direction to staff; keeping everyone informed; acting as a point of contact with colleagues; facilitating change; motivating others Speaking with one voice publically and resolving disagreements privately; amplifying each other remarks</p>
<b>Contextual Factors</b>	
<p><b>Macro-level</b> – Expertise and professionalism of the workforce, organizational structure and workflow</p>	<p><b>Micro-level</b> – Complexity and ambiguity of the work, resources for the frontline staff, and their social support</p>



## CHAPTER 3 - METHODOLOGY

### The Original Study

For this qualitative research study I used data from an earlier investigation, *Improving Patient Safety through Effective Nurse-Physician Partnerships*, conducted by Joanne Disch, PhD, RN, FAAN, which was funded in 2006 by the American Organization of Nurse Executives and Sigma Theta Tau International, Zeta Chapter. In that original research Dr. Disch attempted to identify the characteristics of nurse-physician co-leaders and to compare them with the characteristics proposed by Gilmore (1999) in his work on *Productive Pairs*. According to Gilmore, productive pairs have the following characteristics: (a) separate bodies of knowledge, networks, and perspectives; (b) enough time and history together to explore interdependencies; (c) an understanding of each other's area of expertise; (d) trust in one another; (e) avoidance of triangulation and resistance to being split apart; and (f) a shared passion for a common goal. Dr. Disch posed the question, "What does nurse-physician co-leadership look like, and how does it compare to Gilmore's proposal of productive pairs?" Although the data were collected in 2006, a description of the study and its findings was not formally published.

At that time, I was employed by Dr. Disch as a research assistant. I had several responsibilities related to that study; I interviewed the participants and I arranged for the audio tapes to be transcribed. Also Dr. Disch and I started an initial microanalysis of the data, but we did not complete the analysis at that time.

### Approval to Use Original Dataset

Dr. Joanne Disch, the principal investigator of the original study, provided permission to use the data from her study (see Appendix A for permission letter). The original study was approved by the University of Minnesota's Institutional Review Board (IRB). The protocol was forwarded to and approved by the Nursing Research Council at the medical center where the investigation was conducted. Approval to conduct this secondary data analysis was sought from the University of Minnesota's IRB. The IRB determined that the secondary study was exempt from full committee review under federal guidelines 45 CFR Part 46.101(b) category #4, which includes use of existing data. See Appendix B for the IRB's letter.

Initially, Dr. Disch and I used a purely inductive approach to coding the data. For this secondary study I used a different approach to coding. First I immersed myself in the literature related to co-leadership, then I used a hybrid approach with both inductive and deductive aspects to data analysis.

### Research Design

Selecting a research design depends on the research question, the context, and what can realistically be done in a given setting (Rossman & Rallis, 2003). Qualitative research methods are well-suited to address gaps in knowledge and are particularly useful in developing detailed descriptions, exploring phenomena, and conducting a study in a natural setting (Creswell, Hanson, Clark Plano, & Morales, 2007). “Qualitative research is conducted in the natural setting rather than a controlled one; it assumes that humans use what they see and hear and feel to make meaning of social phenomena” (Rossman & Rallis, 2003, p. 6). As an increased demand grew for practical knowledge and contextually relevant data, clinicians expressed a renewed interest in qualitative health research (Sandelowski, 2004). With qualitative research serving as a foundation for practice-based evidence (Leeman & Sandelowski, 2012), knowledge gained from qualitative inquiry was a logical choice to deepen the understanding of a relatively new leadership model: nurse and physician co-leadership in hospitals.

Although several qualitative designs were considered, the choices were limited due to the use of secondary data and the length of time that had lapsed between data collection and analysis. Approaches, such as interpretive phenomenology and grounded theory, were considered but were subsequently dismissed due to lack of methodological integrity, such as the need for more specific philosophical underpinnings (van Manen, 1997), or the requirements for sampling to be continued until data saturation is reached (Corbin & Strauss, 2008). In contrast to interpretive phenomenology, qualitative description has a lower level of inference. Therefore, it is “likely to result in easier consensus among researchers” (Sandelowski, 2000, p. 335), making it a pragmatic choice. Ultimately, a qualitative descriptive design was deemed appropriate for this secondary analysis; it was used to obtain rich, detailed explanatory data about events and experiences.

A qualitative description study provides “a comprehensive summary of an event in the everyday terms of those events” (Sandelowski, 2000, p. 336). The researcher uses principles of naturalistic inquiry and offers direct descriptions of phenomena, with an interpretive aspect. This makes it a perfect choice to address the research question in this study. By synthesizing the data gathered from the participants in a manner that faithfully honored their descriptions, the researcher addressed a clinically relevant question, “How do nurse and physician co-leaders’ descriptions of their work together reflect their roles and relationship?”

Qualitative approaches can be distinguished by who is sampled, how the data are treated, and how inferences are drawn from the data (Sandelowski, 2010). Sandelowski (2000) reported that qualitative description can be distinguished from other approaches by four key components: (a)

the typical theoretical foundation is naturalism (p. 337), (b) the sampling approach is purposeful but with the goal of maximum variation (p. 337), (c) the data collection methods are usually individual or group interviews (p. 338), and (d) content analysis is oriented toward summarizing information (p. 338). Using content analysis, the researcher can thematically group, count, detail, and compare data; but the researcher does not interpretively transform it. This does not mean that no interpretation occurs and that data, as collected, are displayed as facts. “Data never speak for themselves,” and all qualitative research requires that “researchers make something of their data” (Sandelowski, 2010, p. 79).

Although a qualitative description approach does not have a philosophical orientation, such as phenomenology does (van Manen, 1997), the approach does have a theoretical foundation specific to the experience under study. Data analysis is not approached naively or simplistically. There are preconceptions and bias; researchers talk about their subject matter reflecting their leanings. “Every word is a theory” (Sandelowski, 2010, p. 79), and a vast difference exists between being “open-minded” and “empty-headed” (p. 80). Thus, although the conceptual framework was derived from the literature review as a beginning point for analyzing the data, there was no commitment to stay with that framework as the analysis proceeded. As Sandelowski (2010) concluded, “the value of qualitative description lies not only in the knowledge its use can produce, but also as a vehicle for presenting and treating research methods as living entities that resist simple classification” (p.83).

### **Population, Setting and Sample**

#### **Population**

The number of nurses and physicians who work in a co-leadership model in a unit-based hospital setting is unknown. But from the limited literature available on the topic, the population should be considered relatively small, much smaller than the number of nurses and physicians employed in hospital leadership positions in general. To approximate the size of the nurse-physician co-leader population in the United States, Kim and colleagues (2012) surveyed the University Health System Consortium. They found that only 20 or so academic hospitals, out of approximately 120 members surveyed, were either contemplating adoption of this leadership model or had already implemented it. At the AHRQ Health Care Innovations Exchange website (Agency for Healthcare Research and Quality, 2013b), a repository for national healthcare innovations, no mention was found of nurse-physician co-leadership, even though thousands of submissions were on that database. One innovation, posted on the site in October 2012, described something quite similar to nurse-physician co-leadership. The scholars described unit-based, clinical leadership

teams at the University of Pennsylvania Health System that were composed of a physician leader, a nurse leader, and a quality project manager (Brennan et al., 2010). In the light of these findings, one can conclude that the population of nurse-physician co-leaders is small, possibly less than 100 co-leader pairs in the United States.

### **Research Site**

The research setting was a large, integrated, academic, research-intensive medical center with a downtown campus that includes two hospitals. In 2006, when interviews were conducted, the co-leadership model had been operational at the downtown campuses for more than 5 years.

Several practical considerations led to the selection of this setting for this research project. The site had been chosen by Dr. Disch for the original research study for several reasons: (a) she was aware that physicians and nurses operated within a co-leadership framework; (b) there were a large number of such paired arrangements; (c) they provided leadership over a diverse set of patient populations, ranging from ambulatory clinics to intensive care units; and (d) Dr. Disch had contacts within the organization who were supportive of the proposed research.

### **Sample**

**Inclusion and exclusion criteria.** Any individual was considered a potential participant for this study if he or she worked in acute care at the study hospital, was a nurse or physician leader, and was working in a partnered leadership dyad with a person from the other eligible profession. Individuals could volunteer for the study regardless of their partner's interest in being in the study. Individuals were excluded if they worked in the outpatient setting, if they were not a physician or nurse leader, or if they had a solo leadership position.

**Participant recruitment and sampling technique.** Sample selection began by obtaining a list of nurses and physicians who were working in a co-leadership model, and their titles and departments. A list with 20 potential participants had been provided to the original research team by the hospital's chief nursing officer in 2006. Of the 20 individuals who were identified as potential participants, eight were nurse leaders and twelve were physician leaders. Invitations to participate in the study, which was fully described, were mailed to these individuals. Two weeks passed with no response. Invitations were sent a second time, by email, and garnered 15/20 responses, a 75% response rate. Initially, more physician leaders volunteered to be interviewed than nurse managers (10 and 5, respectively), which was a response rate of 83% for the physician leaders and 62% for the nurse leaders.

In qualitative research, sampling strategies differ from quantitative research because the researcher has a different type of goal in mind; sampling strategies are usually purposive, with the

exception of random and convenience sampling (Miles & Huberman, 1994). Several purposive sampling strategies are available: maximum variation, homogenous, critical case, theory based, confirming and disconfirming, extreme or deviant cases, typical cases, politically important cases, and stratified purposeful sampling (Patton, 2001).

Purposive sampling with a focus on maximum variation was used to select members of the available population. Purposive selection was initiated with two primary foci: (a) obtaining a sample of participants from different hospital departments, and (b) obtaining a sample of participants who represented the two professions equally (i.e., a 50:50 ratio of nurses to physicians). Sampling was somewhat limited in regard to obtaining equal representation of the two professions, because only five nurse leaders volunteered. Thus some of the physician volunteers were turned down, resulting in five nurse leaders and five physician leaders being accepted as participants. No additional recruitment was conducted at that time.

**Sample size.** Ten individuals were interviewed for this study, which is deemed an appropriate sample size. A small sample size (e.g. 6-10 participants) is considered sufficient due to the in-depth nature of qualitative research and its goal to generate knowledge rather than to test it (Sandelowski, 1995).

**Participant demographics.** The purposive sampling technique, which focused on maximum diversity of hospital units, resulted in a sample of ten participants. Collectively, they represented seven clinical specialty areas: behavioral health, adult medicine, general pediatrics, pediatric intensive care, neonatal special care, adult medical intensive care and adult surgical intensive care. A 50:50 ratio of physicians to nurses was maintained. Unfortunately two participants' interviews (i.e., one physician from behavioral health and one nurse from surgical intensive care) were lost due to mal-functioning audio-tape equipment, resulting in a total of eight transcripts available for data analysis. Six clinical specialty areas were represented in the final sample.

Even though the participants were self-selected, all partnered leaders in the hospital were given an equal opportunity to participate. The reasons for lack of participation are not known, but fear or simply a lack of time or interest are likely explanations. Although equal representation of nurses and physicians was done purposively, the process resulted in unequal representation of gender; 60% of the participants were women. Ethnicity was not determined. With purposive selection of participants and adherence to sample selection criteria, the reliability of the information obtained was strengthened.

## **Protection of Human Research Participants**

### **Informed Consent Process**

All prospective participants received an invitation letter that described their potential role in the study. This was the beginning of the consent process. Interested individuals contacted one of the research team members (i.e., Dr. Disch or myself) by email, after which time I telephoned each volunteer to explain in detail the overall purpose of the study, what a participant would be asked to do, study procedures, and confidential handling of the informant's information. Potential participants were granted more than 24 hours to consider the request to participate. They were informed that they were free to choose to participate or not, without any repercussions. If an individual gave verbal consent at this time, I proceeded to arrange an interview using a mutually convenient time and place. Upon meeting the individual in person, I reviewed the consent form, including the explanation of the risks involved in participating in the study. I asked each participant if he or she had questions about the study, and invited each to sign the consent form (see Appendix C for the consent form). All of the interviews were conducted in a private location and were audiotaped. Each informant was interviewed only once.

### **Privacy and Confidentiality**

Confidentiality was ensured by assigning each participant's file a number that was used as his or her study identifier, and pseudo names were used in transcripts and the casebook. Transcripts were also purged of the names of people, institutions, cities, and any other information that could possibly be linked to the participants.

Identified data, such as the consent forms and audiotapes, were retained by the original principal investigator and stored in a secure, locked filing cabinet in a personal office with limited access. Audiotapes were destroyed by the original principal investigator after completion of the data analysis. De-identified data (e.g. the transcripts) were stored on two password protected laptops, one owned by Dr. Disch and the other owned by myself.

### **Data Generation**

The data used in this study came from one source, individual interviews with the participants. Although data collection might be the traditional term used for the process of compiling of statistics and information, in this qualitative study, data generation was a better fit. Data generation is considered to be different than data collection, in that data generation denotes that "data have no independent existence apart from the researchers who decide that some things and not others will become data for their projects" (Sandelowski & Barroso, 2002, p. 214).

### **Individual Interviews**

Individual semi structured interviews were conducted with each participant. The interviews took place at each participant's private hospital or university office, except for one, which took place at the interviewer's office. This arrangement helped to ensure confidentiality. Interviews lasted approximately 60 min (range: 50-90 minutes). Although qualitative researchers have only a handful of collection methods at their disposal (e.g., interviews, observations, and the collection of texts and artifacts), in-person, one-to-one interviews were selected to maintain confidentiality and increase the data's authenticity. Focus groups, questionnaires, and telephone interviews were deemed too open, too restrictive, or too impersonal, respectively. Due to the sensitive nature of the topic, confidentiality was a concern and was maintained more easily with this approach.

Interview transcripts were the only data available from the original study in 2006 for use in the secondary study. Nonetheless, interviews are the tool most commonly used to collect data about a person's point of view (Weiner, Amick, Lund, Lee, & Hoff, 2011). Interviews could have been done sequentially over several months or years, if change was occurring in the phenomena, thus allowing differences in time periods to be recorded. In this study, however, one interview was deemed sufficient because many of these leaders were recalling past events that occurred several years before or just weeks before the interview.

The interview guide was comprised of open-ended questions that were designed to elicit information about the variations in the nurses' and physicians' experiences when working in a co-leadership model. Each co-leader was asked to describe (a) how he or she came to be in the role, (b) how the relationship developed with his or her partnered leader, and (c) a story about a project that the co-leader and his or her partner worked on together (see Appendix D for the interview guide). Sample interview questions included the following: "Tell me a story about when the two of you worked on a project together. How did you divide up the work?" and "Who did what?" Credibility was strengthened by how well the data collection process related to the research question and by using an open-ended questioning technique that allowed participants to guide the interview process (Graneheim & Lundman, 2004).

### **Data Collection Procedures**

The interviewer established rapport with each participant by briefly describing her background as a clinical nurse specialist who was pursuing her doctoral degree. No other personal information was provided. Next, each participant was given an overview of the questions to be discussed. The overview set the tone, opened the discussion, and explained the

focus of the interview. A researcher should “prime the pump” so to speak and establish why the topic is of interest (Corbin & Strauss, 2008). An investigator must establish a legitimate reason to be there. “Asking a few questions often relaxes the study participant and stimulates his or her memory so that he or she becomes more talkative and spontaneous” (Corbin & Strauss, 2008, p. 28). The opening question was casual and open-ended, “Please tell me how you came to be a medical director or nurse manager.”

A conversational style was used throughout the interviews. According to Mishler (1986), interviews are a form of discourse, “Questioning and answering are ways of speaking that are grounded in and depend on culturally shared and often tacit assumptions about how to express and understand beliefs, experiences, feelings and intentions” (p. 7). By not asking participants to respond to a study’s research question but more globally about their work, subjects can be more spontaneous and readily able to discuss their personal experiences relevant to the topic (Corbin & Strauss, 2008). Initial questions were followed by probing questions that were meant to clarify the intent of what a participant was sharing.

Ten interviews were completed. Eight were successfully audiotaped and then transcribed verbatim; two audiotapes were poor quality and could not be transcribed. Most participants were very talkative and provided candid remarks. The transcribed texts ranged from 15-34 pages (average = 24). The only sources of data were the transcribed interviews, which consisted of approximately 82,650 words.

### **Data Analysis**

#### **Overall Strategies**

During the data analysis, inductive and deductive techniques were used. Although many believe that qualitative research is strictly an inductive process, this hybrid approach to data analysis is probably more realistic.

Our stance is that this characterization of qualitative researchers as inductive rather than deductive oversimplifies and trivializes the complexity of any research, especially qualitative research. Qualitative researchers typically begin a study with a well thought-out conceptual framework that focuses and shapes their actions, but this framework is flexible. In fact, qualitative research[ers] recognizes [recognize] that any individual enters a context with a personal perspective that shapes - and is shaped by - perceptions.

(Rossman & Rallis, 2003, p. 11)

Although the actual process of data analysis is somewhat difficult to describe, the validity of the research is strengthened by providing as thorough a description as possible. “The neglect or



inability of qualitative researchers to make explicit the cognitive struggle of model or theory construction has led to the belief that qualitative research is ‘easy’ and to the criticism that it is subjective and unscientific” (Morse, 1994, p. 24). Basically, the analysis started with a deductive approach to content analysis coding (Hsieh & Shannon, 2005) that was based on research in the literature review. Next I moved the analysis into the more inductive cognitive phase of qualitative inquiry, the comprehending and synthesizing, as described by Morse (1994). During the entire analytic process, I managed the transcripts using NVivo 8 (QSR, 2013), which provided an increased ease of access to the data and ensured that the text was kept in context.

### **Qualitative Content Analysis**

Although several analytical methods were available to code the data for this secondary data analysis, qualitative content analysis was deemed the most appropriate method. According to Elo and Kyngäs (2008), the goal of content analysis is to provide knowledge and understanding of the phenomenon under study by making reliable and valid inferences from data. Content analysis was considered a good choice because it is a powerful data reduction technique. Its major benefit is the researcher’s use of a systematic, replicable technique, which includes compression of many words of text into fewer content categories based on explicit rules of coding (Elo & Kyngäs, 2008).

Hsieh and Shannon (2005) described the three types of coding processes that are available for content analysis: a *conventional* inductive approach, a *directed* deductive approach, and a *summative* approach, which is focused on counting and comparing keywords. For this study, deductive content analysis was chosen because codes were a priori derived from relevant research findings, and “as analysis proceeds, additional codes are developed, and the initial coding scheme is revised and refined” (Hsieh & Shannon, 2005, p. 1286). The directed deductive approach provides a more structured process than the inductive approach and allows for existing research to be supported (Hsieh & Shannon, 2005) or an existing framework to be tested in a new context (Rossman & Rallis, 2003). In general, an inductive approach moves from the specific to the general, whereas the deductive approach moves from the general to the specific (Elo & Kyngäs, 2008). In this study, the deductive approach to content analysis was used to validate and enhance the conceptual co-leadership framework in the new context (i.e., the healthcare setting) and with new participants (i.e., nurse and physician leaders).

**Phase 1: Preparation and comprehending.** According to Elo and Kyngäs (2008), the preparation phase “starts with selecting the unit of analysis; the sample must be representative of the universe from which it is drawn” (p. 109). The unit of analysis, or the unit of meaning, can be a

letter, word, sentence, paragraph, or portions of a page. The unit of analysis cannot be too broad or the analytic process becomes too difficult; but it cannot be so narrow that the results become too fragmented (Elo & Kyngas, 2008). For this study, portions of the text, (i.e., typically several sentences long) were deemed to be the appropriate unit of analysis to represent the meaning. Although each unit of meaning may denote more than one concept, it would be incoherent to go any smaller and too burdensome to go any larger.

According to Morse (1994), the preparation phase also includes comprehending all the elements related to the study. By familiarizing oneself with the theory of the topic before starting the analysis and familiarizing oneself with the setting and the collected data, a researcher is better prepared to recognize relevant findings (Morse, 1994). Although immersion in the data is just one aspect of preparation, insights can only occur if a researcher is familiar with the data and makes sense of it in the context of the whole (Elo & Kyngäs, 2008).

**Phase 2: Coding.** Elo and Kyngäs (2008) suggested that the central process of the organizing phase is to code and group the data. For the deductive approach, therefore, it was necessary to develop structured analysis matrices and code data according to the defined codes. The coding categories were derived from co-leadership framework presented in Chapter 2, and encompassed four aspects nurse-physician co-leaders' role development (e.g., 1<sup>st</sup> leader's skills, 2<sup>nd</sup> leader's skills, shared role space, integration), the three aspects of co-leaders' work together (e.g., collaborative problem-solving, allocation of work, and communication), and two contextual factors (e.g., macro-level and micro-level).

*Developing the codebook.* A structured matrix, as outlined by Crabtree and Miller (1999), was used to analyze the text in this study. This involved creating a codebook and describing the codes and how they were to be applied as a means of organizing text for subsequent interpretation. Crabtree and Miller suggested that the researcher define the codes before commencing an in-depth analysis of the data. Although the codebook could have been based on a preliminary scan of the text, the codes for this study were developed a priori, based on the key constructs of co-leadership described in Chapter 2. See Table 3.1, an excerpt from the codebook illustrating the definitions of three of the codes.

After the codebook was developed, each transcript was coded using a single-case approach. Chunks of data were coded using these nine a priori categories. Sometimes entire paragraphs were coded with one label, but because some of the participants' descriptions of their work were very rich in details, one paragraph could contain data illustrating more than one category. Subsequently some paragraphs were coded twice, meaning they contained data from two different categories.

Table 3.1 *Excerpts from the Codebook*

Code 1	
Label	<i>Collaborative problem solving</i>
Definition	Focused on patient-, staff-, and organization-oriented problems; Enhanced ability to solve problem by a thoroughness and use of different perspectives; Use of other leaders in the process; Occurs in huddles and when doing root cause analysis; Management of practice: contacts with suppliers, clients and community; Major responsibilities are handled together; Open-minded dialogue that allows for various perspectives, disagreements, and exploration
Example	Co-leaders huddled a few times a week to solve problems using root-cause analysis (Kim, 2012)
Code 2	
Label	<i>Communication</i>
Definition	Sharing information, keeping partners updated on changes; Providing guidance and direction to staff; Keeping everyone informed; Acting as a point of contact. Speaking with one voice publically and resolving disagreements privately; Amplifying each other remarks
Example	Kim (2012) described co-leaders using collaborative communication techniques with frontline nurses and physicians, providing guidance, and facilitating conflict resolution across practice disciplines. Patton and Pawar (2012) described communication between co-leaders as healthy conflicts, where full and frank discussions are essential if the individuals are to realize their leadership potential.
Code 3	
Label	<i>Integration</i>
Definition	Shared goals, shared knowledge, and mutual respect; A process of committing, bonding, exploring, and negotiating expectations; Honesty, candor, and clear communication; Frequent, timely, and accurate information and non-blaming communication style
Example	Cohesion between partners has been conceptualized as trust, engagement, organizational alignment, and support (Baldwin, 2011). A harmonious working relationship was built upon a lack of ego and the ability to trust the co-leader (Fishbach, 2007). Understanding the lines of authority and accountability, scope of decision making, and where various elements fall in terms of shared or distinct accountability (Reid Ponte, 2004)

Coding memos recorded decisions made. For example, several times participants talked about their work together and sharing information to facilitate the process. Sometimes this information sharing was coded as integration, and other times it was coded as problem solving. If the text described problem solving only in passing and dealt primarily with the leader's sharing information as a way to build their relationship, it was coded as integration. But if the text described coordination or alignment in passing and dealt primarily with the leaders' sharing

information to make decisions and solve problems, then it was coded as collaborative problem solving.

As the coding progressed, some text did not fit into the initial nine categories. I made the decision either to create a new code or to not code the segment of text. “Newly identified categories either offer a contradictory view of the phenomenon or might refine, extend, and enrich the theory” (Hsieh & Shannon, 2005, p. 1283). Rather than prematurely disregarding potentially relevant data, non-coded data were reviewed again; if they were determined to be relevant to the aims of this study, a new category was created following the principles of inductive content analysis. One additional category was identified because many participants provided definitions of collaboration; thus a new category (i.e., perceptions of inter-professional collaboration) was developed.

Once the coding was completed, all the text that was coded for each of the now ten categories was downloaded into separate Microsoft Word© documents, in order for the next phase of the analysis to take place. The coded transcripts remained in NVivo 8, and were used as resources when I needed to verify the context a particular quote. Otherwise the remainder of the abstraction and synthesis work was done in Word.

**Phase 3: Abstraction and synthesis.** According to Morse (1994), abstraction requires that the data be “de-contextualized” from specific instances so that it becomes more abstract and devoid of insignificant “noise” (p. 31). For example, a participant described how information about a new protocol was communicated to staff; it included details of the protocol. By removing the noise (e.g., the participant’s description of the protocol), a more abstract depiction of the process was available (e.g., communication patterns the nurse manager used). This process was completed on every segment of data coded, in every category. See Table 3.2 for an example of the process used to de-contextualize the data.

Once the units of meaning were abstracted and de-contextualized, comparisons were possible, using cross-case analysis. Morse (1994) described the process of cross-case analysis as “the examination of the dimension and properties of codes across all cases with the development of the range found within categories” (p. 31). This step allowed me to examine similarities between cases, and to group those similar findings into sub-categories.

Table 3.2 *Example of De-contextualization Process*

Text coded as meaning collaborative problem solving	De-contextualized unit
I'm now proposing a risk assessment tool that we use, and I'm asking him to review it and comment. I think he'll be fine with it. I just couldn't have mailed it to him, for example. I needed to put it into a context.	Nurse manager creates first draft of a procedure, then shares it with the medical director to get feedback.
She is my resource person for sort of the big Hospital #1 morass, which I don't know very much about. So when I said I wanted to (address) . . . I want to take the next step and try to start using this special suctioning device. How would I get materials management to buy this tube? How would get it on all of the code cards? How would I tell anesthesia to put it? This is a major intervention here, and next week she had the phone numbers of people who do ordering; here's what you have to do if you want to change an endotracheal tube; you have to petition materials management and they'll have to say how much is this going to cost, and why are you doing this, it has to go through the Critical Care Committee. She's done this kind of administrative function through a big entity like Hospital #1. I know how to worm my way through the academic side, but I have little familiarity with Hospital # 1 the entity. So she helped me out.	Co-leaders working on a patient care improvement project that has multiple facets that need to be negotiated: Nurse manager has the knowledge of the process and resources; she shares it with the Medical Director.

For example, after examining the decontextualized data coded as *collaborative problem solving*, a three-column matrix was developed. In the left column were condensed, de-contextualized descriptions, then to that column's right were interpretations of the underlying meaning, and in the far-right column, sub-categories were placed. Cross case analysis (i.e. synthesis) was completed using the interpretations and sub-categories. Miles and Huberman (1994) suggested additional methods for making sense of the decontextualized data and for generating meaning, such as the tactics of noting patterns (p. 246), seeing plausibility (p. 246), and clustering (p. 248). For example, when synthesizing the data that was coded as collaborative problem solving, as depicted in Table 3.3, these methods of analysis helped me to generate several sub-categories, such as: information sharing, tandem efforts, collaborative efforts across professional boundaries, collaborative efforts within professional boundaries. These sub-categories were then clustered into groups with similar features, in order to identify the range of attributes for each sub-category.

Approximately 40 sub-categories were identified; see Table 3.4 for the list of sub-categories that emerged from the data. These 40+ sub-categories provided the foundation for addressing the aims of the study. The macro- and micro-level contextual data were not abstracted, therefore there were no sub-categories identified for these two categories.

Table 3.3 *Moving from Decontextualized Data to Sub-categories*

<b>De-contextualized meaning unit-description close to text</b>	<b>Interpretation of the underlying meaning</b>	<b>Sub-categories</b>
Facing a new problems together, co-leaders shared info and provided mutual support.	Partners building a new program together for very high risk patients	Synchronous efforts, Interdependent efforts
Working on a complex patient care improvement project together, co-leaders negotiated the multiple facets together, such as new equipment and protocols.	Nurse's role was to assist the physician with how to navigate the organization's structures and processes.	Asynchronous and synchronous efforts (hybrid process), interdependent efforts
Creating first draft of a procedure that affects one professional group, then sharing it with partner person in person to get feedback	NM creating a new policy or process for nurses, asking MD to review it	Asynchronous and synchronous efforts (hybrid process), interdependent efforts
Co-leaders developing a policy together, with the MD taking the lead on educating nurse and residents during rounds	Partners work on inter-professional collaboration project together, with MD crossing professional lines	Interdependent efforts in dyad, crossing professional boundaries
Adverse event occurred- partners discuss case then each communicates with (trains) the nurse and MD involved	Problem solving and providing feedback to subordinates within professional boundaries	Collaborative problem solving, staying within professional lines

To address both aims of the study, it was important to build a logical chain of evidence to show how nurse and physician co-leaders transitioned into the co-leadership role, and the nature of their work together. Enough evidence was found to draw conclusions. "Relationships have to make sense" and "countervailing evidence has to be accounted for" (Miles & Huberman, 1994, p. 260).

To address Aim 1, I used the main factors of role development to construct an explanatory map. Eventually I was able to build conceptual coherence. "This is the classic procedure for analytic induction" (Miles & Huberman, 1994, p. 261). Tactics I employed included: making contrasts and comparisons (p. 254), partitioning variables (p. 255), finding intervening variables (p. 258), making conceptual coherence (p. 261), and subsuming particulars into the general (p. 255).

To address the aims of this study, several matrices were developed. To examine the first aim of the study, to explore the factors that hindered or enhanced the role development, a *role-ordered* display was helpful. Miles and Huberman (1994) stated that "A role-ordered matrix sorts data in its rows and columns that have been gathered from or about a certain set of 'role occupants' data reflecting their views" (p. 123). The matrix was designed to display data in role domains and make within-role comparisons. The salient characteristics of nurses and physicians were

delineated. The coded data were then reviewed, and relevant data were entered into each cell, summarizing the analysis for each group.

Table 3.4 *List of Sub-categories Derived from Data Analysis*

<b>Category</b>	<b>Sub-categories</b>
Nurse leaders' skill	Technical, interpersonal, & conceptual skills; Experience; Knowledge of the organization;
Physician leaders' skills	Technical, interpersonal, & conceptual skills; Experience; Access to and influence over people; Quality improvement and research skills; Understanding of frontline staff's work;
Shared role space	Clarity of the shared role; Shared accountabilities/responsibilities; Structure- integrated or coordinated; Complementary competencies;
Integration	Building respect and trust; Developing shared goals; Sharing knowledge; Frequent, timely and accurate exchange of information; Problem solving communication style; Confrontational behaviors; Different loyalties; Large group of people to work with; Large distance between co-leaders; Lack of time together; No opportunity to provide feedback
Collaborative problem solving	Asynchronous work; Synchronous work; Working within traditional professional boundaries; Crossing traditional professional boundaries; Tapping into support of other leaders
Work allocation	Dynamic process; Allocated by expertise; Substitute for each other; Divided and/or combined work together; Single voice
Communication	Sharing information; Providing feedback; Requesting input from frontline staff; Setting standards; Creating connectedness

Conclusions were drawn by reviewing the columns of the matrix using the following techniques: *counting and making comparisons* (Miles & Huberman, 1994, p. 123). It was important to determine how many times the physician group or nurse group made the same comments; and to *note relationships* it was essential to explore if the physician group or the nurse group perceived something in a certain way most of the time. The counting and making comparisons matrix allowed me to examine how perspectives varied by profession. For example, the physician leaders typically described how they communicated within their colleagues using metrics, statistical analyses of improvement or where improvement was needed. Nurses, on the other hand, did not mention using statistics when communicating with their colleagues.

Use of the noting relationships matrices allowed me to examine variations within a profession or length of time in the co-leadership role. For example, nurse and physician co-leaders who were in the role more than four years identified macro-level contextual factors as a hindrance; those in the role less than four years identified lack of time together as a hindrance. After initial comparisons were done, I used the tactic *following up on surprises*, which includes the process of rechecking field notes, coding memos, and original data to ensure that the original meaning was not misinterpreted during the data reduction process (Miles & Huberman, 1994, p. 270).

The next process was *making if-then tests*. This tactic allowed for more within-role analysis (Miles & Huberman, 1994, p. 271). For example, *if* the nurse had mentioned that ..., *then* her view of ... should resemble...? In more concrete terms, *if* the nurse had mentioned that she and the physician had worked together before they became co-leaders, *then* the relational dimension of integration was positive.

To address Aim 2, testing of the main factors of how the co-leaders worked together was done. Tactics I employed were similar to those employed to address Aim 1, but to explore the nature and dynamics of the co-leaders' relationship, I designed several conceptually clustered matrices to organize the data found for the three main groups of coded data (i.e., problem solving, communication and allocation of work). Huberman and Miles (1994) have suggested that "The solution was to compare several different groups of coded data" (p. 127). For example, to examine the relationship between data coded as *communication* and data coded as *problem solving*, I built a display using those variables, entered the sub-categories, and then looked for relationships between the variables. Many instances of overlap between two of the three constructs (i.e., problem solving, allocation of work, and communication) were found; and several examples were identified where all three categories were found overlapping.

The final step was to find an overarching conceptual framework that can account for the how and why of the phenomena under study (Miles & Huberman, 1994, p. 261). A conceptual framework that incorporates the original nine constructs was developed; the figure is simple, yet parsimonious. The conceptual framework is presented at the end of Chapter 4.

Although useful conclusions were identified, I was ever-mindful of the need to recognize that some conclusions could be misleading, and their importance may be inflated by use of these techniques. Miles and Huberman (1994) warned that a "systematic method like role-ordered matrix can allow researchers to present findings more strongly than they would have otherwise" (p. 125). I maintained an audit trail so that others could follow my line of reasoning, and I returned to the transcripts and my coding notes many times to test emerging conclusions.



## CHAPTER 4 - RESULTS

This chapter is divided into three main sections: (a) the description of the setting and sample, (b) the description of the findings for each aim, and (c) the synthesis of the findings for both aims. A conceptual framework of nurse-physician co-leadership is presented at the end of the chapter.

### **Description of the Setting and Sample**

#### **Description of the Work Place**

This study was completed at a large, integrated, academic, research-intensive medical center in the United States, in a downtown location that includes two campuses, with 874 staffed beds. These two campuses were separate organizations for decades (i.e., a community health system and an academic health center), and had undergone a merger about nine years before the data were collected for the original study. The integrated health system also includes two suburban hospitals and four rural hospitals as part of the larger organization. The health system is one of the largest in the state, and employs more than 20,000 people, and has more than 3000 physicians in its system. The health system is located in the mid-west region of the United States, and provides a full range of services, with 77,244 inpatient surgical operations, 175,214 emergency department visits, and 9965 behavioral in-patients served annually. In 2006, when interviews were conducted, the co-leadership model had been operational at the downtown campuses for more than 5 years. Participants in this study came from a mixture of the two downtown campuses, except for one medical director. Although his office and practice were downtown, he was partnered with two different nurse managers at the two suburban hospitals.

#### **Description of the Participants**

Although 10 participants were interviewed, the final sample consisted of only eight participants because two audiotapes were incomprehensible and could not be transcribed. Demographic information, as reported by the participants, included years of experience in leadership (3-20 years; average 8 years), years in the co-leader role (1-7 years; average 4 years), gender (3 males and 5 females), their role at the time of the interview, the type of unit in which each participant worked, and the size of the unit. See Table 4.1 for details of the participants' demographics.

Not all participants were joined by their leadership partner in the study. Four participants were partners of another participant (i.e., the Nurse Manager [NM1] and Medical Director [MD1] from Adult Medicine unit, and the Nurse Manager [NM2] and Medical Director [MD2] from Adult Critical Care unit), whereas the other four participants represented their unit by themselves (i.e.,

Nurse Manager [NM3] from Pediatric Critical Care, the Medical Director [MD3] from Pediatric Services, Nurse Manager [NM4] from Behavioral Health, and the Medical Director [MD4] from the Level 2 Nursery. The type and size of the participants' work units varied considerably which provided a wide range of results.

Table 4.1 *Casebook of Participants and Their Demographics*

SP#	Gender	Years as co-leader	Years in leadership	Role	Unit	Unit Size
NM 1	Female	3	3	Nurse Manager	Adult Medicine	1 unit- ~25 beds/unit
MD 1	Female	4	4	Medical director	Adult Medicine	3 units- ~80 total # beds
NM 2	Female	5	5	Nurse Manger	Adult ICU	1 unit- ~15 beds/unit
MD 2	Male	4	4	Medical director	Adult ICU	3 units- ~40 total # beds
NM 3	Female	6	6	Nurse Manager	Pediatric ICU	1 unit- ~ 12 beds/unit
MD 3	Male	1	~5	Medical director	Pediatric service	4 units- ~72 total # beds
NM 4	Female	7	15	Nurse manager	Behavioral Health	3 units ~50 total # in-pt beds, plus ~14 out-pt beds
MD 4	Male	2	~20	Medical director	Level 2 Nursery	2 units at 2 hospitals ~30 total beds

*Note.* SP# = Study participant number, NM = Nurse manager, MD = Medical director, NICU = Neonatal Intensive Care Unit, ICU = Intensive Care Unit, pt = patient

### Description of Findings

Findings have been defined as “the integrated discoveries, judgments or pronouncements researchers have offered about the events or experiences under investigation” (Sandelowski & Barroso, 2002, p. 214). It was my intention to illustrate the gestalt of the participants' experiences, and to re-tell the co-leaders' stories through their own voice. Throughout this chapter, interview excerpts are included, which I selected as exemplars, and that represent the commonalities and variations found in the participants' stories. My interpretation of these findings ultimately addressed the research question of this study - How do nurse and physician co-leaders' descriptions of their work together reflect their roles and relationships? Although there was just one research question for this study, there were two aims, to explore: (a) the factors that hindered or enhanced the role development of the partners, and (b) the nature and dynamics of the co-leaders' working relationship. The findings that are presented in each section contain several dimensions, with each dimension having several facets. See Table 4.2 for a schematic of how the section addressing Aim One was arranged.

Table 4.2 *Layout of the Findings for Aim One*

Co-leaders' Role Development: Factors that Enhanced or Hindered the Process	
❖	The nurse leaders' KSAs
❖	The physician leaders' KSAs
➤	Factors that enhanced role development for both the nurse and physician leaders.
➤	Factors that hindered role development for both the nurse and physician leaders.
❖	Shared role.
➤	Shared responsibilities.
▪	Factors that enhanced role development.
▪	Factors that hindered role development.
➤	Clarity of the shared role.
▪	Factors that enhanced or hindered role development.
➤	Complementary competencies.
▪	Factors that enhanced role development.
▪	Factors that hindered role development.
❖	Integration process.
➤	Affective elements
➤	Logistical elements
▪	Factors that enhanced role development.
▪	Factors that hindered role development.

*Note.* KSAs = knowledge, skills and abilities

### **Aim One: Co-leaders' Role Development: Factors Enhancing or Hindering the Process**

Examination of the participants' interviews revealed four dimensions of the co-leaders' role development: (a) the nurse leader's KSAs, (b) the physician leader's KSAs, (c) the shared role, and (d) the integration process. Common and unique attributes of these four dimensions were uncovered during the analysis. Throughout this section of the chapter, the four dimensions and their facets are presented separately, and the corresponding interpretation of which factors appeared to enhance or hinder the co-leader's role development are presented by each dimension, except for the first two dimensions. The nurse leaders' KSAs and the physician leaders' KSAs are combined during the interpretation phase, when factors that enhanced or hindered role development are presented.

**The nurse leaders' KSAs.** The first dimension of the nurse co-leaders' role development was found to be the KSAs the nurse leaders brought to the role. In this study, the construct addressing the nurse leaders' KSAs includes three components. The knowledge was defined as their intelligence, creativity, experience, wisdom and their professional perspective. The nurse leaders' skills were defined as leadership skills, such as planning, strategizing, measuring, evaluating and coaching. The nurse leaders' abilities were defined as the behaviors needed to engage in this type of a plural leadership structure: the abilities necessary to share responsibilities (i.e., the person's temperament, ego, confidence, ability to speak the truth and willingness to share).

Although many of these KSAs were similar to the physician leaders' KSAs, several attributes described by the nurse participants were unique.

All of the nurse managers discussed their many years of experience as a registered nurse as a stepping-stone to their subsequent transition into a management position. NM2 described her transition in this way:

I had worked in a cross-trainer role, which meant you worked 50% of your time down here [ICU] and 50% of your time up on telemetry. I had done that for five years prior to taking the assistant nurse manager role on the telemetry unit . . . 50 percent was office hours and 50 percent patient care.

The other nurse managers described similar career ladder experiences; they all emphasized their clinical expertise first, and then described an incremental transition into a leadership role, with additional increases in accountability.

The nurse leaders described several other KSAs that were beneficial to their role development: their coaching skills, knowledge of the organization, and the wide-range of relationships they had developed with other hospital personnel. For example, one nurse manager described her previous experience in patient placement, which gave her a broad perspective on the hospital process of through-put. In that case, NM1 felt that her clinical experience and her knowledge of hospital operations helped her build both technical skills and inter-professional relationships. She portrayed herself as "knowing all of the resources."

NM4 attributed her strengths as a nurse leader as stemming from her graduate education in family counseling. She credited her clinical expertise in dealing with patients experiencing profound psycho-social crises as a key factor in how she was chosen to become a co-leader. In summary, not only did the nurse managers identify their expert clinical skills as an important factor linked to their success, but also they surmised that their strong interpersonal skills and multiple connections to the larger hospital community enhanced their transitions into the co-leadership position.

**The physician leaders' KSAs.** The second dimension of the co-leaders' role development was found to be the KSAs the physician leader brought to the role. In this study, the construct addressing the physician leaders' KSAs includes three components. The knowledge was defined as their intelligence, creativity, experience, wisdom and professional perspective. The physician leaders' skills were defined as leadership skills, such as planning, strategizing, measuring, evaluating and coaching. The physician leaders' abilities were defined as the behaviors needed to engage in this type of a plural leadership structure: the abilities needed to share responsibilities

(i.e., the person's temperament, ego, confidence, ability to speak the truth and willingness to share). Although many of these KSAs were similar to the nurse leaders' KSAs, several attributes described by the physician participants were unique.

Similar to nurse leaders, physician leaders attributed their promotion to a co-leadership role as being related to their clinical expertise, their extensive relationships with professional colleagues within her "firm" (i.e., practice) and their familiarity with organizational processes. MD1 described her strengths in this way:

I spend a lot of time on the in-patient wards; I'm a hospitalist. The [medicine] firms are the general medicine services. So I spend a lot of time on the general medicine services and so I know a lot of people.

Another skill reported as key to a physician leader's success was knowledge of quality improvement processes and the ability to influence people. MD2 depicted his skill set like this:

I've been doing various QI projects and stuff like that for four or five years. . . . I am also director of the internal medicine residency firm rotation for ICU, so I need to interact and get them involved in quality improvement projects. . . . You have to have some influence over all the various elements. I'm also chair of the Critical Care Committee for the hospital so that gets me involved with the surgical ICU . . . what pediatric ICU is doing, or what respiratory therapy is doing.

This medical director was a member or the chair in several influential committees. The range of his inter-personal relationships enhanced his influence, making him an ideal candidate for a leadership position.

One medical director (MD3) was new to the organization. He described his ability to influence others as an important attribute for the job, and that it was a skill gained from his previous job. Furthermore, MD3 explained that he made a concerted effort to build his influence at his new place of employment by proactively reaching out to the staff:

I was very familiar with working with nursing and nursing leadership with kind of clinical care issues. And I think I was effective at doing that . . . just how you work as teams and how you collaborate and getting away from the typical kind of silos or the dichotomies of physicians and nursing . . . but really looking at how we, as a group, can do this together. . . . So, for me, the most important thing this first year is for the nurses to know that any of them can walk up to me, and talk to me about anything going on. And that I will respond to them and I will include them in . . . the solution.

This medical director addressed a gap in his skill set head on, consequently allowing him to build his credibility and influence. His remark “you have to understand your colleagues, [by] wearing their shoes” demonstrated his authentic desire to include staff in the important work of problem finding and problem solving.

*Factors that enhanced role development for both the nurse and physician leaders.* Within these first two dimensions of role development (i.e., nurse leader’s KSAs and physician leader’s KSAs), a range of factors was attributed to enhancing the co-leaders’ role development. The co-leaders listed the following factors: (a) their clinical expertise, (b) their broad understanding of the organization and its resources, (c) their relationships with and connections to other leaders and staff, (d) their communication skills, (e) their prior experiences as a leader, (f) their quality improvement and research skills, (g) their self-confidence, and (h) their willingness to work collaboratively. Many of these are similar to factors that are important to becoming a successful solo leader. However, a unique factor is the willingness to work collaboratively, because being technically expert and being well connected does not translate into becoming an expert partner in a co-leadership model.

The participants identified many personal attributes that supported their role development; however, some external factors were linked to enhancing role development, namely receiving guidance from a mentor and organizational support. Members from both professional groups expressed gratitude for the guidance received from other colleagues. NM2 described her transition in this way:

I had a nurse manager that helped guide my development very nicely. . . . She was very excellent about identifying opportunities that were just that little bit of challenge for me, and helping me identify the right tool to apply to the situation and come up with an answer, a process, a result. . . . She was very good about giving applicable feedback, encouragement, identifying strengths and weaknesses, helping me to identify it so that I could articulate all of those pieces . . . and just slowly giving me more and more responsibility and accountability for the role.

This nurse manager had an exceptional transition experience, as did her leadership partner (MD2). Both of these co-leaders acquired the personal and outside factors that enhanced role development as co-leadership partner.

*Factors that hindered role development for both the nurse and physician leaders.*

Conversely, a lack of any of the factors mentioned above could be considered a hindrance to role development. For example, NM3 explained that she had a difficult transition, partially because she

had not received any mentoring when she started. Moreover, she identified that she lacked certain essential skills. “There was these big gaps in various parts of being a manager. . . . Because that [evidence-based practice and quality improvement skills] wasn’t in my schooling.” Furthermore, she did not have any formal orientation or institutional support for the first year after starting the new role. Consequently, with some key personal and outside factors missing, this nurse manager’s role development was hindered.

**Shared role.** The third dimension of role development in co-leadership was the shared role. Conceptually, the shared role in the co-leadership model began with the KSAs that each leader brought into the shared role. This dimension included three key elements: (a) the shared responsibilities of the co-leaders, (b) the clarity of the shared role, and (c) the complementary competencies that are created with two leaders sharing a role.

**Shared responsibilities.** The first facet of the third dimension of role development in co-leadership was identified as shared responsibilities. All of the participants expressed that their shared role included some shared responsibilities, although the degree to which responsibilities were shared varied among the participants. All participants agreed that the co-leaders shared the responsibilities for activities related to patient care. Some co-leaders expressed that all of the unit operations fell under the shared accountabilities, because, in one way or another, everything that occurred on the unit was related to patient care. Other co-leaders did not accept that the shared responsibilities were that broad.

NM4 described the scope of the role she shared with her co-leader. The dyad worked together often and shared a bulk of the leadership responsibilities.

Whether I consciously in my head knew I was working on the relationship or not – I can’t say that I did – but I certainly understood that I had a major task and relied on [the medical director] as a consultant around all of those tasks. Many of those tasks involved clinical development.

These co-leaders go on to develop a very cohesive working relationship over the years.

In another case, NM2 described her perception of shared responsibilities as a platform for her and her partner’s future work together.

We need to start together envisioning that future. What does he see it looking like from the physician perspective, what do I see it looking like from the nursing perspective, and the operational perspective together. And then, how do we start identifying what changes need to be made when, and start plugging away at that.

With an attitude that all department responsibilities are shared, these co-leaders then moved forward to work and strategize together on how to operationalize their vision. With a perception of an all-encompassing scope of the shared responsibilities, some of the co-leaders considered the shared role using a systems theory approach, in that all the work of the department was connected in some fashion.

*Factors that enhanced role development.* When the co-leaders deemed the shared responsibilities as inclusive of all aspects of the department's operations, role development was enhanced, possibly by diminishing the *us versus them* stance. Such as when NM3 described how she and her partner shared the responsibility of ensuring frontline nurses and physicians complied with established policies and standards.

I think there's a lot of overlap. I think both of us are responsible for the unit, so I think it's not only the nursing part for me, but also to make sure that the physicians stay within policy, things like that . . .

Ideally, all co-leaders should have appreciated that everything that occurred on the hospital unit was interrelated, and that both leaders were accountable for all aspects of how the unit operated. But in some cases, the view of the shared responsibilities was more limited.

*Factors that hindered role development.* By taking a more narrow view of the scope of the shared responsibilities, role development may have been hindered. In one case, although the medical director agreed that shared responsibilities existed, these were limited to only patient care issues. One medical director did not believe that she shared any accountability for the operations of the unit, which was apparent by how MD1 described her beliefs of what comprised the shared role and its shared responsibilities:

I think about what the lead nurse does versus like the lead doctor. . . . The nurse manager's on the wards every day, that's 100% of her job. She doesn't do anything else but that. . . . She's sort of running things on a daily basis, making sure that everything is running okay. She's also helping oversee like charge nurses and scheduling and issues like that. . . . I oversee the scheduling of the physicians, but we interact where there's patient care issues.

The perception of the scope of the shared responsibilities was an important factor in role development. Maintaining a strong distinction between what was considered the nurse manager's role, and what was considered the medical director's role may have hindered the co-leaders' role development; whereas a more integrated stance may have enhanced their role development.

*Clarity of the shared role.* The second facet of the shared role was characterized as the co-leader's level of understanding of their involvement in the shared role. Although closely related to



the first facet (i.e., what was perceived as the scope of the shared responsibilities within the partnership), this second facet was defined as the level of clarity each leader experienced regarding his or her part to play within the shared role.

*Factors that either enhanced or hindered role development.* Having a clear understanding of one's accountability within the shared role appeared to enhance role development. Conversely a lack of clarity about one's position hindered the co-leaders' role development. Some of the medical directors reported that they were not clear about their part in the shared role, and possibly even their role as a medical director. Some of the confusion was attributed to a difficult transition into the role, such as in the case of MD1. She claimed that a lack of orientation to the shared role contributed to her uncertainty:

So they asked me to do it, as well as the firm director bit, and there really was very little in the way of orientation. It would have been nice to have known what my job duties were, what the expectations were. . . . I knew how much time I was supposed to spend on it because there's a small amount of salary support that goes with it. So I knew I was supposed to spend so many hours a week, but I didn't really know what I was supposed to be doing.

For MD2, however, the transition to the co-leader role was relatively smooth because he had a mentor for several years before taking over the position completely: "And, so the transition was very easy. It occurred over years, and that's why it was so imperceptible." Several participants conceded that it took at least a year to understand the co-leader role. Even after a couple years into the shared role, NM2 remarked that her medical director felt it was important that he more fully comprehend the nurse manager's responsibilities as a way to understand more clearly his part in the shared role.

For example, this year he actually came and said, "Ok, I need to learn more about what you do. What is the operation of the unit like?" Formally now this is my role. We'd spend time here in the office talking about: What do I do? What do I look for when I hire someone? What do I look at when I'm looking at the budget? How do I talk about these things with staff? What are the staff meetings like now?

Although the co-leaders had been working together for years, clarity about the shared role continued to evolve. The medical director enhanced his role development, and subsequently his performance, by obtaining a better appreciation of the nurse manager's accountabilities.

*Complementary competencies.* The third facet of the third dimension of role development in co-leadership was identified as complementary competencies. Competencies can be defined as a

leader's KSAs. Complementary competencies are characterized as the different, but harmonizing competencies that the co-leaders created as they brought their individual KSAs into the shared role. In co-leadership, these collective KSAs are referred to as complementary competencies.

Participants in this study gave accounts of various types and degrees of competencies that they, or their partner, possessed. Descriptions included competencies such as the co-leaders' diverse professional perspectives and knowledge, their different levels of understanding of the organization or work processes, their unique social networks, their different coaching abilities, and their divergent spheres of influence. Collectively, these divergent competencies were often considered complementary, or productively paired.

*Factors that enhanced role development.* When co-leaders were able to recognize their differences as strengths of their partnership, their complementary competencies enhanced their role development. For most of the participants, diversity was considered a strength of the shared role. They believed that without these complementary, collective KSAs, opportunities to effectively address opportunities for improvement on their hospital units may have been missed.

Although participants did not specifically label their differences as complementary competencies, their descriptions of their work together demonstrated that they considered their partner's KSAs as a welcomed addition. Below is an example of when MD2 recounted the importance of the co-leaders' differences, and how it enhanced the development of their shared role.

I meet with [NM2] actually every week, almost every week, so she might catch me up there. . . . Nursing concerns are generally brought up through [NM2] . . . her job is to hear, evaluate and then funnel to me what are the nursing concerns that have some impact by a medical director. . . . And so there's a whole bunch of physician faculty issues which might impact the way care or something is delivered in the Intensive Care Unit. . . . She has a whole glob of nurses, 50 or 60 nurses, and I got a whole glob of physicians and residents. . . . They can't possibly all talk to each other. So the physician issues get funneled down, and the nurses' issues get funneled down, and we meet together. [NM2] talks about the nurse issues, I talk about the physician issues, and the tremendous overlap between the two.

In this example, diversity was recognized as an asset. Complementary social and professional connections provided a wide range of information that could be channeled to the dyad by each co-leader sharing his or her different perspectives at weekly meetings. These differences allowed co-leaders to have a full array of accurate information about the frontline staff in a timely manner. By

integrating these unique streams of information at the unit leadership level, opportunities for improvements were identified, and subsequently role development was enhanced. Additional examples of the use of the co-leaders' complementary competencies are presented in the section addressing Aim Two, descriptions of the co-leaders working together.

*Factors that hindered role development.* Although some co-leaders described the complementary competencies as a strength of the shared role, others felt that their differences hindered role development. For example, MD1 expressed that because she and her partner had different employers, and possibly different allegiances, these differences hindered their ability to develop a shared role.

Loyalties are a little bit different. I think that who you have to answer to at the end of the day is also different. So, that is . . . probably the biggest difference. To some extent, I'm a little bit of an outsider trying to work within a system that I'm not part of. I think that's an issue for a lot of the medical directors here.

Perception of how differences affected the partnership varied from dyad to dyad, and for this medical director, considering herself an outsider magnified the differences between herself and her partner. This created a divide between them, and in turn, that divide hindered the co-leaders' role development.

**Integration process.** The fourth and final dimension of role development in co-leadership was the integration process. This process was defined as the behaviors that the partners engaged in that helped the co-leaders become coordinated, cohesive, and aligned. There are two main facets to the integration process: the affective elements and the logistical elements.

*Affective elements.* Participants described many affective behaviors, such as partners sharing similar values and respecting each other, which are considered key factors in the integration process. For example, when recalling the affective behaviors that NM2 and her partner engaged in, she described building respect and creating transparency. Although she had a friendly relationship with her partner before moving into the shared role, she suggested that the integration process could not take past history together for granted.

I think part of it was probably our past history working together as colleagues, me, a nurse at the floor, he, a new physician on the unit. . . . When I started and he was developing here, we both had learnings. . . . Recognizing that in each other, that we could go to each other with [questions], and say things. We'd both be respectful of taking in what the other was saying, to see if that matched what we knew, or did I know something different. And be able to have that open conversation about something. And neither one of us assumed

that the other knew everything. . . . I think there was no power struggle at all between the two of us. . . . [Our] common goals . . . we are here for quality patient outcomes.

These nurse and physician co-leaders achieved a point in their shared role where they had no power struggles. Affective elements were a part of that integration process. By establishing shared goals of “quality patient outcomes,” the co-leaders became more aligned and cohesive.

*Logistical elements.* Participants described many logistical behaviors of the integration process, such as partners having regular meetings with each other, and co-leaders providing each other with honest feedback. For example, NM3 recalled how she and her partner engaged in regular, weekly meetings, these were essential logistical behaviors that helped build cohesion. Although a certain level of respect and trust was already present from a previously established relationship, in addition NM3 reported that the co-leaders needed to meet regularly in their new roles, to become more aligned.

Well, I knew him [when I was] a staff nurse, so that was a little bit easier . . . we set up meetings on a regular basis [so] that we would touch base . . . about unit issues and things like that. He was a huge nursing advocate, so he was very involved in things that affected the nursing staff. So it was easier to go to him with problems about nursing staff, and about issues that they bring up . . . I’ve known [the medical director] for a long time, so I think our relationship is very good, I mean, we work very well together. He listens and I listen, and things like that. . . . What he does is one week here, and then I can page him if I need him for something. He’s very responsive . . . phone, or I’ll page him, he’ll come up, or he checks in, a lot of times he just checks in, or I’ll grab him in . . .

Regular and impromptu meetings were added to a collegial relationship, which allowed for the development of shared values and shared knowledge. Knowing that her partner would be available when needed created cohesion within the dyad. As NM3 and her partner became more aligned as co-leaders, they moved seamlessly into the process of working together.

*Factors that enhanced role development.* Many examples of affective and logistical elements of the integration process were found intertwined throughout the participants’ stories. These behaviors enhanced role development in the co-leadership model. See Table 4.3 for a summary of the evidence of behaviors identified in this study that enhanced integration, and consequently, role development.

Table 4.3 *Behaviors that Enhanced Integration*

Affective Elements	Logistical Elements
<u>Respect</u> Respecting each other, caring behavior, trust, professionalism, and care for each other	<u>Frequent, timely and accurate information</u> Regularly scheduled meetings, informal meetings, being available to partner all the time; Spontaneous meetings focused on clinical issues, resolving differences, transparency, good listening skills, and honest feedback
<u>Shared goals</u> Sharing similar values, and meaningful work together	<u>Problem-solving communication</u> Non-blaming style
<u>Shared knowledge</u> Learning each other's role, understanding the work, and building connections with other leaders and the staff	

The affective and logistical elements were often described by the co-leaders as coexisting, such as when NM4 recounted her initial meetings with the medical director.

Basically, in that relationship [the medical director] and I met rather regularly. I think we found we had very similar clinical experiences and biases. . . . I don't know that I could say we had a scheduled regular meeting, but I know that we met at least weekly to discuss clinical issues that involved all three of those programs. . . . We worked together on cases. We didn't plan it; it happened. It happened and it evolved, versus approaching it in an organized way. . . . If it had to do with managing a difficult case, or if it had to do with managing a difficult program problem, it did seem that we were able to do that. . . . We're both very available. There's no time I couldn't page him and talk with him about a situation, be it his case or not. We're very clear about that up front. I think those situations that we initially had to resolve set up a trust level, so now we're willing to tackle much more complex situations.

This exemplar richly described several important logistical behaviors: having regular meetings, providing clear and accurate information, employing a non-blaming conversation style, and making oneself available. Years later, NM4 established another partnership with a second medical director as the co-leader. In the following excerpt from her interview, she explained the integration process she used. Again, it is a combination of relational and communication factors. The nurse manager described a situation in which her new co-lead was displeased with the way one department was managed, but through a thoughtful, non-blaming, respectful communication style, the dyad was able to separate that issue from the work they needed to work on together:

What I had to do, and what that getting to know him part meant is, I had to listen to his concerns about adolescent mental health, and understand them before I posed what we

were doing. And actually it was helpful to me to be able to label it as different. This physician, and I consider it a compliment, highly respects what we do on our unit. He doesn't respect, which is too bad, what happens on the other unit right now. Is he willing to resolve it? No, he's been very clear he's not. But at least that's not a barrier to what we need to do on our unit.

Again, there was a mixture of meetings, open and honest conversations, building trust and respect that was evident throughout the exemplar.

NM4 described the integration process with two different medical directors, both illustrated several affective behaviors: showing respect, being receptiveness, sharing knowledge, asking for and receiving support, using encouragement, and providing trust. The combination of the two elements built alignment and cohesion between the partners, and provided the basis for the work ahead. In addition, these early positive outcomes allowed the partnership to grow over time, and achieve a higher level of cohesion through a synergistic effect.

*Factors that hindered role development.* A lack of affective and/or logistical behaviors impeded the alignment and cohesion between partners, and in turn hindered the co-leaders' role development. Examples of these behaviors from the participants' stories ranged from a lack of affective elements, such as partners having different goals, to a lack of logistical elements, such as partners not having regular meetings. See Table 4.4 for a summary of the evidence from the participants' stories of the barriers they experienced that hindered integration, and consequently, role development.

Table 4.4 *Behaviors that Hindered Integration*

<u>Affective Elements</u>	<u>Logistical Elements</u>
<u>Respect</u> Different loyalties, too many people to develop a relationship with	<u>Frequent, timely and accurate information</u> Not having formal or informal meetings, infrequent meetings; Too far apart, or too large an area to cover
<u>Shared goals</u> Negative views of the organization Different, misaligned goals	<u>Problem-solving communication</u> Confrontational behaviors; Not able to provide feedback
<u>Shared knowledge</u> Different perspectives	

The most common barrier to integration and alignment was found in the participants' recall of a lack of time spent together. For example, although NM1 and MD1 described each other as

professional colleagues, NM1 stated that the lack of frequent, timely, and accurate communication stalled their ability to become aligned, and subsequently delayed the development of their shared role.

I think we get along real well professionally. Personally I don't think it's probably as close as some medical director/nurse manager relationships are, because she hasn't been here a lot. . . . We, as managers, need to be giving our feedback . . . we don't formally evaluate, they don't report to us, but we have a responsibility to get back and say, "we aren't getting what we need from this." . . . I have some discomfort being able to go to the person, and being able to say . . . "we would like you to be able to support [us], we need you to come to the meetings . . ."

Besides the lack of availability, NM1 described that integration was hindered by her inability to provide open and honest feedback to her partner. In this story, key logistical and affective behaviors were missing.

Furthermore, the medical director believed that the lack of cohesion stemmed from differences in their aspirations, loyalties, and from the large geographic area MD1 had to cover. This medical director was employed by five hospital units, which required that she develop and maintain relationships with five nurse managers, one on each unit. MD1 described these factors as barriers to integration; they were a mixture of logistical and affective elements.

After using an *If . . . Then . . .* analysis matrix model, a pattern was noted between unresolved conflicts and factors that hindered integration. Three co-leaders (NM1, MD1, and MD4) expressed unresolved conflicts with their partners. Moreover, these leaders described how some of the essential behaviors that enhance integration were missing. Table 4.5 depicts these results. The statements of conflict varied from participant to participant, but in general, the conflicts were centered on a lack of availability, misaligned goals and acrimony.

The absence of some affective and/or logistical behaviors hindered integration between the co-leaders, and consequently hindered role development. Although integration may be considered as a process that occurred only early in a relationship, evidence showed that it was an ongoing process in co-leadership, and that affective and logistical behaviors continued to affect the cohesion of the partnership, and to enhance the solidarity of the shared role.

Table 4.5 *Link between Behaviors that Hindered Integration and Conflicts*

Case	<i>If...</i> (description of behaviors that hindered integration)	<i>Then...</i> (statement of unresolved conflict or frustration)
NM1	If the NM described infrequent meetings with her co-leader;	Then the NM stated “we have a problem with the attending [lead physician] holding people to policies, to practice changes. . . . We need the Medical Director to help move this with the docs”
MD1	If the MD described infrequent meetings with her co-leader;	Then the MD stated “nobody appears to understand, I can’t get [something I need]”
MD4	If the MD described infrequent meetings with his co-leader and that the physical distance between their offices was a barrier to working together;	Then the MD stated “the communication . . . [at] Hospital #3 has been much more difficult because the competitor had employed many of those nurses, and the nurse manager there wanted to make everything equal. It created a lot of ill-will.

### **Aim Two: Nature and Dynamics of Co-leaders’ Working Relationship**

Three dimensions of the co-leaders’ working relationship were evident in the data: (a) collaborative problem solving, (b) allocation of work, and (c) communication. Each dimension of the co-leaders’ work together had several facets. This section of the chapter is arranged by introducing each of these three dimensions separately. In addition, a fourth section illustrates how the three dimensions are intertwined. In the participants’ stories, the three dimensions often were described in one narrative. Thus by depicting them together, the nature and dynamics of the co-leaders’ working relationship were revealed. See Table 4.6 for an outline of how this section addressing Aim Two is presented.

Table 4.6 *Layout of the Findings for Aim Two*

The Nature and Dynamics of Co-leaders Working Relationship	
❖	Collaborative problem solving. <ul style="list-style-type: none"> <li>➤ Patient-related work</li> <li>➤ Organization-related work</li> <li>➤ Staff-related work</li> </ul>
❖	Allocating work within the dyad. <ul style="list-style-type: none"> <li>➤ Synchronous efforts.</li> <li>➤ Asynchronous efforts.</li> <li>➤ Working as a substitute.</li> <li>➤ Dividing work by talents.</li> </ul>
❖	Communication. <ul style="list-style-type: none"> <li>➤ Sharing information</li> <li>➤ Providing feedback to each other</li> <li>➤ Creating connections between co-leaders and staff</li> <li>➤ Setting department standards together</li> </ul>
❖	The nature of co-leaders’ work together: Interconnected constructs



**Collaborative problem solving.** The first dimension of the nature of the co-leaders' working relationship involves the various types of work the co-leaders performed together. The participants described stories of problem solving in a collaborative manner, and working on patient-related, organization-related, and staff-related problems. Co-leaders demonstrated a dynamic use of their complementary competencies when working together. By combining their diverse KSAs, the co-leaders were able to work together to address opportunities for improvement on their hospital units.

**Patient-related work.** Many of the participants' stories indicated that co-leaders were working collaboratively as a dyad. Furthermore, they occasionally tapped into the support of other leaders. A majority of the projects were dedicated to improving patient care, such as: (a) addressing and reducing medication errors, (b) standardizing the use of antibiotics, (c) decreasing the use of sedatives, (d) addressing persistently unresolved, complex patient situations, (e) addressing persistently unresolved workflow issues, and (f) purchasing and installing new patient care equipment.

In one example, the nurse manager and the medical director worked together to solve a simple workflow issue present on their unit, (i.e., consistently obtaining daily weights of the pediatric patients). MD3 described how the co-leaders worked together, brainstorming and planning various ways to solve the problem, then the actual steps they took to remedy the situation. Eventually each co-leader worked within his or her own professional network to achieve the desired outcomes. The nurse manager worked with the nurses to gather information about the etiology of the inconsistency, devised a solution with the medical director, and then coached the nurses through the revised process. At the same time, the medical director coached the residents on the plan to limit the frequency of the order to only when necessary. By limiting the request for the data to only high-risk patients, the importance of the data was elevated. Consequently, the nurses were more motivated to obtain the data. The success with resolving this problem was dependent on an inter-professional approach. For the co-leaders, this patient-focused problem presented them with an opportunity to work together as partners, planning a strategy together, and then coaching their own professional colleagues separately.

In another example of collaborative problem solving, the co-leaders worked together to address a complex patient problem, a medication error that led to a patient injury. NM4 reflected on when she and the medical director reviewed the incident and planned together how to address the problem. She revealed how the medical director coached the physician involved, and how she coached the nurse involved. As with the first example, this exemplar illustrated the inter-

professional nature of the problem and the collaborative problem solving strategies the co-leaders used to address it:

It happened to be on my unit. It was on a weekend of course. It always is. [Name of medical director] was the medical director, but of course not the attending doc. Monday morning we had the incident report outlining her falling over and hitting her head and needing suturing and all of that. It required a review of the situation by the medical director for our unit, which was [name of medical director] and by me, the director of that unit. The other adult units would have done the same thing with the correct players. The intervention was evaluated and determined to be an over-reaction to the situation, and it required both the physician to train, consult and talk with the doctor involved, and it required the nurse, me, to meet with the nurse that was covering and describe the problem. That's how we would handle it, if we have that sort of problem.

The use of a collaborative, inter-professional approach to follow-up on a patient-related problem allowed the co-leaders to work together and use their complementary competencies to address a patient-related problem that involved both nursing and medicine. Once the leadership partners devised a solution together, the co-leaders separately coached the frontline staff members involved, and stayed within their professional boundaries.

***Organization-related work.*** Some of the co-leaders discussed working together on projects that were directed toward organizational issues, such as: (a) addressing legal matters, (b) starting new programs, (c) expanding services, (d) creating new policies, and (e) overseeing the re-model of a unit. For example, NM4 recalled how she and the medical director worked together on the creation of a new assessment tool. Although the nurse leader drafted the initial document by herself, eventually the partners worked together to finalizing the document, and devise a plan to implement the tool. The dyad used their complementary skills and knowledge to assemble a robust proposal.

Co-leaders worked together in various ways to utilize their complementary competencies. When they addressed organization-related problems, their work together often included the use of their complementary spheres of influence. Not only did they combine their professional expertise to develop strategies, but also they combined their professional power to show a unified stance. MD1 recalled how the co-leaders worked together when breaking difficult news to the staff.

I remember when we said we were going to start having some telemetry beds. Normally I don't go to like the nursing meetings, staff meetings. But I did go to the staffing meetings . . . when we announced that we were going to work on getting telly beds. And why? Be

the champion. Answer questions, be the punching bag to some extent, 'cause it met with not so good news, but, but also to show that this is actually about patients and that the doctors really wanted this too, and felt it was really important. I was sort of you know, the MD rep, I guess.

By working together to introduce an organization-related change to the staff nurses, the co-leaders combined their influence to bring some disagreeable news to the staff. By presenting the change together, they made the news more palatable and diminished staff resistance.

***Staff-related work.*** Some of the co-leaders described working together on staff-related problems, such as: (a) addressing disruptive behaviors, (b) orienting new physicians to the unit, (c) training staff about a new policy, and (d) addressing staff layoffs. For example, the co-leaders of the adult ICU worked together to orient new residents to the unit. The dyad used their complementary, collective KSAs to develop and establish department standards, for both behavior and workflow processes.

Co-leaders worked together using their complementary competencies directed toward solving a range of staff-related problems. When they addressed inter-professional problems, their work together often included the use of their complementary spheres of influence. Not only did they combine their professional expertise to build behavioral norms, but also they combined their professional power to enforce department standards. Together, they provided the residents with their shared goals and vision, including setting their expectations regarding how physicians should conduct business and interact with the nurses. They communicated this information together, in-person and in writing (sent by email), as MD2 explained.

I just talked about my philosophy regarding nursing care in the ICU and how essential it is, and that doctors ought to get over hierarchical things. . . . So I developed along with [NM2], an orientation packet for oncoming medical students to residents. . . . When they actually, physically come on the unit, they get this little pamphlet about: rounds start at 8. [NM2] is the nurse manager, come to [her] with problems. Here's our bedside nurses. Here's how we expect orders to be written . . . which goes into detail about the way we expect them to conduct themselves, or present, or to interact with the nurses.

This type of collaborative problem solving was done with the intent to establish and maintain department behavioral norms and workflow processes. Furthermore, by role modeling effective, inter-professional collaboration, not only did the co-leaders promote the desired behaviors through talk, but also, by setting an example. Their efforts demonstrated one of the ways co-leaders

combined their collective complementary competencies to address inter-professional, staff-related concerns.

Taken all together, the collaborative problem solving the co-leaders performed together included a wide variety of leadership activities. Whether the work was focused on the patients, the organization or the staff, their combined efforts demonstrated many examples of how co-leaders used their collective complementary competencies.

**Allocating work within the dyad.** The second dimension of the nature and dynamics of the co-leaders' working relationship was centered on the various approaches the co-leaders took to combine or divide their work together. Participants' descriptions of allocating the work between the leadership partners included examples of who did what, with whom, and when. A majority of the evidence regarding work allocation described the co-leaders working synchronously, (i.e., side by side). Also, there were descriptions of asynchronous efforts. Sometimes the work appeared to be divided by the co-leaders with respect for an individual's talents. Or, the work was partitioned by availability (i.e., partners substituting for one another). Whether working on patient-related, organization-related or staff-related activities, often the nature and dynamics of the co-leaders' work together involved a mixture of synchronous and asynchronous efforts.

**Synchronous efforts.** When co-leaders worked side-by-side in a collaborative manner, this was termed a synchronous effort. For example, there was the story of collaborative problem solving discussed in the previous section, where NM4 reflected on how she and her medical director worked side by side to investigate a medication error. Even though the co-leaders worked separately during the coaching phase, the work of planning and strategizing was done concurrently.

In another case already described in the previous section, MD1 described how he and his partner worked together to plan the transition of a traditional medical unit into a medical unit with telemetry capabilities. In this case, not only did the co-leaders strategize together, but also they continued to work together, side by side, to present the plan to the staff nurses.

Besides working together concurrently as a dyad, the co-leaders sometimes worked synchronously with other leaders. MD4 recalled the intense efforts it took from the entire leadership team to open a new unit. In his story, he listed a cadre of people who helped at different stages in the process. He described how the leadership partners were embedded into a larger inter-professional leadership team, with all members working together, sometimes concurrently and at other times consecutively, to address a large organization-related issue.

**Asynchronous efforts.** Sometimes the co-leaders engaged in tandem work that was done on their own, but pulled together in a collective effort. This was termed an asynchronous effort.

Asynchronous effort means that although the co-leaders were working on a project collaboratively, they did parts of it in a sequential manner, not side-by-side. From an example previously presented, NM4 recalled how she and the medical director worked together on the creation of a new assessment tool. The tool was drafted by the nurse leader; then the dyad worked together side-by-side, so that the co-leaders could collaborate and combine their professional perspectives and clinical expertise. In this example, the co-leaders flexed between synchronous and asynchronous work.

In another case, MD2 recalled the work that he and his co-leader performed together to implement the use of a new medical device. He had no experience with this process, and had many questions. “How would I get materials management to buy this tube? How would get it on all of the code carts?” By first collaborating with the nurse manager, MD2 was then able to proceed on his own. So although their actions were at first synchronous, later the work became more divided. The medical director relied on the nurse manager for some aspects of the problem solving process. MD2 claimed that NM2 “is my resource person for this sort of the big [organization’s name] morass, which I don’t know very much about.” These co-leaders described the need, and the ability, to flex between synchronous and asynchronous work.

***Working as a substitute.*** Besides dividing and combining their work together, co-leaders also delegated work to each other. A particularly interesting finding was noted when one co-leader described how she and her partner occasionally substituted for one another. NM4 recounted how the co-leaders could stand in for each other when one was not available:

Simply, when one of us is on vacation we will say, “I’m going to be gone, which means you have to cover this part.” That happens in both these cases. With [name of Medical Director] it probably happens a little more because we’ve done it for so many years. And he knows he will have more calls about some of the things that I typically handle. Or, in his case, I know I’ll have more calls . . .

Besides vacation coverage, NM4 described how her physician partners could substitute for her when she had multiple crises occurring at the same time:

You can have a crisis in three programs, and then I have to decide which one I’m going to respond to. That makes it difficult for me. Usually I don’t have them all going on at once, or I’ve got some way that I can accomplish it. But, the bottom line is, if I really can’t get to one, I will page one of those medical directors and say, “you know what, you’ve got to do it because I can’t right now because of this”.

This type of work allocation is not often seen between nurses and physicians. But at the leadership level, nurse and physician co-leaders were able to fully rely on each other to stand in for the other during a difficult time.

*Dividing work by talents.* Co-leaders were often found dividing their work in a manner that used their complementary competencies to the dyad's advantage. By making use of the person in the partnership who was well suited for a particular leadership activity, the co-leaders accomplished their work more effectively. Many of the co-leaders described performing work together to develop frontline staff's knowledge and skills. MD4 described how he first educated the nurses in formal classes, then used advanced practice nurses (i.e., neonatal nurse practitioners) to reinforce concepts, and support the staff nurses' continued development.

NM2 described how her medical director excelled at teaching staff nurses and residents, especially with the use of his rolling laptop as an interactive teaching tool during rounds. Therefore, this medical director often assumed that role.

[The medical director] is very good at communicating with the nursing staff. He's really vested in one-on-one conversation with the bedside nurses. He'll set up times where he's in the break room . . . . I think [the medical director] is doing it in a more purposeful manner because of some of our research projects, sedation of patients, vent weaning process. And so he's much more vested in making sure that each nurse knows that process and can help make the right clinical decisions and judgments. So he'll take the time to do that.

Coaching the frontline was just one of the many components involved in this patient-related quality improvement project. These coaching sessions allowed time for staff to learn and ask questions of the physician leader, discussing complex points of the cases. Not only was this medical director delegated this portion of the work because of his teaching skills and clinical expertise, but also because of his influence. The co-leaders divided the work by their talents, in order to influence change across an inter-professional work process.

Three out of the four medical directors described conducting intense, one-to-one coaching sessions with both staff nurses and residents. For example, although MD3 worked collaboratively with his partner to strategize on solving problems, he described taking a solo lead on educating residents and nurses. He used a facilitated discussion approach with real-life case studies. MD3 was a team-oriented leader who had a distinct ability to use effectively an interactive teaching-learning process, which he referred to as "systems-based problem reporting." This was another

example of how the co-leaders divided their shared work using specific talents one of the partners possessed.

**Communication.** The third dimension of the nature and dynamics of the co-leaders' working relationship was centered on the methods which co-leaders used to communicate during their work together. Communication was described by the co-leaders in terms of its purpose. Co-leaders described a range of communication techniques to achieve various results, and four facets were found to be key to this co-leadership model: (a) sharing information, (b) providing feedback to each other, (c) creating connections between co-leaders and staff, and (d) setting department standards together in order to hold staff accountable. Communication was a vital component of the co-leaders' work together.

**Sharing information.** This first type of communication technique used by the co-leaders was centered on information sharing. Participants described various cases of how the co-leaders shared information in order to build a broader understanding of the topics at hand, to obtain a broader scope of professional outlooks, and to build a shared mental model of unit processes and policies. The co-leaders described sharing information in formal weekly or monthly meetings, but many occurrences took place spontaneously, which allowed for a timely response. Although the medical directors were not on-call 24/7, when asked about her access to her medical directors, NM4 responded emphatically that the medical directors were always available to her.

Informal meetings were the primary means of access between leadership partners when pressing concerns required a quick response. If co-leaders already had a cohesive partnership, support could be obtained with the use of quick transmission of facts. Information sharing was a main component of co-leaders' efficient and effective work together. Moreover, NM2 described how ongoing, formal meetings were also great way to keep apprised of the important matters.

Weekly, for an hour, so we talk about what is he hearing from the physician group at the weekly staff meetings. Is [Are] there things that we need to do? Is [Are] there any individual issues that I need to pay attention to? You know, is there something that I need to do on the unit? What's happening with the intern and resident program? How are the physicians feeling about that process or orienting that group?

These weekly debriefing sessions were an integral aspect of enhancing the effectiveness co-leaders' work together. Vital information that had an impact on the success of the department could be reviewed, and solutions developed in a proactive, inter-professional manner when opportunities for improvement were identified.

Sharing information also allowed co-leaders to both build a shared mental model and develop agreements about unit processes and policies. NM 3 explained how she and the Pediatric Medical Director used collaborative problem solving strategies in order to pool their power together, and to push the frontline staff toward change. By discussing the topic, then reaching an agreement, the nurse and physician co-leaders were able to take the next step of enforcing the policy change together. “I think that it’s an important [factor] that both medical director and the nurse manager work together on that same level and have the same agreement on those sorts of things.” These co-leaders shared information about how a high-risk medication should be used, in order to develop and enforce inter-professional collaborative guidelines.

***Providing feedback to each other.*** The second type of communication techniques used by the co-leaders was found to be how the partners provided each other with constructive feedback. Honest and open communication about how one’s behaviors were perceived by others in the department was a valuable tool, and one that co-leaders used to grow professionally. Two of the nurse managers (NM3 and NM4) described how they supported their physician partners by providing them with candid feedback that would enhance their stature within the nurses’ network. NM3 talked about how the medical director she worked with needed to debrief after stressful events. She provided him the space to let steam off, and then talked to him about how the nurses perceived his behavior during these times. By providing this valuable feedback to the medical director, NM3 strived to enhance his standing among the staff.

Likewise, NM4 offered feedback to her physician partner in an attempt to build his ability to be more likable, and thus, more influential. In turn, she asked for feedback about her own public image to achieve similar results.

There’s probably always something he suggests. I suggested to him, as he met our new management team . . . how to present himself to those individuals because he was thought to be a very rigid, opinionated, difficult person to talk with. Again, that was a surprise to me and I told him that. He of course was very shocked to be thought of in that way. He did thank me for that, and he actually used some of those ideas and created a more positive relationship with some of the other people he had to deal with.

Honest feedback between the co-leaders helped the partners grow professionally. This level of respect and honesty was a tremendous resource and an important aspect of co-leaders’ work together. Eventually the feedback not only aided the individual co-leader in professional growth, but as a dyad, it added to their combined power and influence.



*Creating connections between co-leaders and staff.* The third type of communication techniques used by the co-leaders was focused on creating connections. Although many instances of the co-leaders' communication techniques exemplified the purposes of sharing information and providing feedback within the dyad, some of the co-leaders' communication practices were centered on creating connections with the frontline staff. By proactively seeking staff's opinions, problems could be identified and valuable information could be channeled to the co-leaders. Co-leaders described the use of a bi-directional communication technique as a problem-finding strategy. NM2 described how she and the medical director asked for the staff nurses' input on their quality improvement project focused on reducing the use of sedation in the ICU.

A sort of letter went out to the nursing staff as well, after [MD2] met with individual nurses and asked them what they thought about, what were the things they think of when they're looking at patients that need sedation. . .

This communication technique created a more democratic atmosphere in the department, developing a sense of connectedness between the co-leaders and their staff. In addition, the information collected from these encounters allowed the co-leaders to develop a more robust plan; a plan that was more apt to succeed.

MD3 described how he encouraged the staff nurses and residents to communicate problems to the co-leaders by writing down problems they experienced in a notebook. By using this written format, frontline staff were able to be more connected to the co-leaders. In addition, frontline staff were able to communicate problems at the time they were discovered.

How do they communicate issues to me if it's 2:00 in the morning? So, we developed basically this book. . . . Nurses would literally write down frustrations they were having that moment, that time, write it down, and get it all out. And I would ask for a date and a medical record number or specifics so we [could] help drill down on what the issue was. Although face-to-face communication was an excellent method for keeping channels open between co-leaders and their staff, written communication was also a valuable tool. Whether the written exchange of information was electronic (e.g., email) or with pen and paper, MD3 felt that this communication technique allowed the nurses to both vent their frustrations as well as feel connected to their leaders.

Several of the medical directors made themselves available to the frontline staff with an open door policy, and explicitly invited staff nurses to bring them information. MD2 described this relationship:

I've had very few staff nurses contact me while I'm sitting here [in his office]. I mean, they can, they know they can beep me, they know my email isn't very hard to find, but I would say the vast majority of them contact me regarding issues when I'm physically on the unit, which I am a lot . .

This access to information across professional boundaries helped break down barriers between the professions, and built a more effortless flow of information. Furthermore, this communication strategy helped to break down hierarchical relationships, and enhanced the effectiveness of the nurse and physician co-leaders.

***Setting department standards together.*** The fourth type of communication technique used by co-leaders centered on setting practice standards and the behavioral norms within the department. By establishing standards together, the leaders could speak with a single voice, and push with the force of two inter-professional leaders for the principles they wanted to instill.

As discussed previously, the nurse and physician co-leaders of the ICU worked together to orient new residents to their unit. They provided them with behavioral expectations regarding how to both conduct their business and interact with the nurses. The co-leaders communicated this information together, in-person and in writing. This type of communication was done collaboratively to establish norms, and was very effective coming from the co-leaders in a combined effort, rather than from each leader separately.

Getting physicians to comply with department standards was no easy task. The benefit of using the nurse-physician co-leadership model was that it allowed for the nurse and the physician leaders to both role model effective inter-professional collaboration and communicate standards together. NM2 explained how the co-leaders exerted their influence. She recalled the work they did together trying to get the physicians to comply with the standards they set:

And we're pushing back. No, that's not acceptable. You need to have a process in your group to stay current, so that when you come, you know what you're teaching the interns and residents. You're the one responsible to demonstrate how we work together. You need to know about the changes, so that you're on top of them and can lead that process. And we'll help, we'll remind you, but that is not our primary responsibility - your learning. You have a team process over here that you need to pay attention to.

The strength of this co-leadership model was demonstrated by how firm this nurse manager's remarks were to the staff physicians. This level of push back would be difficult for either leader to do successfully by his or herself.

Similarly, MD2 felt that if the co-leaders communicated their expectations together, this technique would increase their effectiveness. “If she wants things done about doctor care, it needs to come through me because I’m the only one with the *cheetos* that can communicate effectively back to the physician group.” When attempting to set unit standards, the pooling of formal leadership at the top of the department allowed these nurse and physician co-leaders to rein in diffuse physician power, and increase standardization.

**The nature of co-leaders’ work together: Interconnected constructs.** The fourth part of this section that addresses Aim Two is centered on how the three dimensions of co-leaders’ work together (i.e., collaborative problem solving, work allocation and communication) are frequently intertwined. In fact, many of the participants’ stories provided descriptions of all three dimensions in the same report.

For example, one nurse manager richly described her and her partner’s efforts during a quality improvement project. In this story, all three dimensions are readily identified. The two co-leaders used collaborative problem solving strategies to improve a patient-related issue, first by evaluating the department’s current process in order to make a gap analysis, then design a plan. Problem solving continued as the plan was modified by the dyad, over and over again, as the project evolved. The co-leaders allocated work in several different ways, such as having the medical director provide staff education, and by collecting and collating data to show improvement. The nurse manager was responsible for motivating the nurses and tied the nurses’ performance to their evaluations. The co-leaders frequently shared information with each other, built a shared mental model and established practice agreements regarding the practice change. Eventually the dyad used their combined influence and power to enforce the standards, and with enough pressure, change ensued. Regarding when the project concluded, NM2 commented: “But it’s much more collaborative, and it’s much more [a] key mindset that this is important, and it’s patient quality, and everybody sees it as patient quality rather than disruption of patient process now.” This story detailed some of the complexities and challenges nurse and physician co-leaders faced in implementing innovations, but the co-leaders’ efforts resulted in a successful practice change, and an even deeper culture change.

### **Synthesis of the Findings**

The aims of the study were addressed by both identifying factors that enhanced and hindered role development and by providing many examples of co-leaders working together. This last section of the findings reveals the two essential themes that were uncovered from the evidence in the data and a conceptual framework is proposed. The first theme is *Shared Role Space: Moving*

*from I to We*. The second theme is *Partnered Leadership: The Dynamic Use of Complementary Competencies*.

The first theme represents how the participants described the creation of a space where the two leaders come together, the shared role space. It portrays a sense of how nurse-physician co-leaders moved from a paradigm of *I* as the leader, to a sense of *We* as the co-leaders.

The second theme represents the manner the co-leaders worked together in partnered leadership, which was described as how the partners used their collective complementary competencies. The partners' work together was a blending of synchronous and asynchronous work. Although separate in their descriptions, the two themes were interconnected, in that the work of co-leadership, partnered leadership, occurs within the shared role space.

### **The Conceptual Framework**

The conceptual framework (see Figure 4-1) portrays the two themes as interrelated, in that the co-leaders' work together occurs within the shared role space. It reflects the integrated structure of the partnership, in that all the leadership work that is done by either leader is completed within the context of the shared space. Neither leader is ever a solo leader anymore while in this relationship; whatever either person does reflects on the partnership of the dyad. Although each leader has an existence outside partnered leadership, they do not exist outside the shared role.

The shared role space is comprised of shared responsibilities, the integration process, with its affective and logistical elements, and the complementary competencies. The co-leaders' complementary competencies are also depicted as part of the partnered leadership theme, but are circled in blue, indicating that they originated in the shared role space.

Partnered leadership, the work of the co-leaders, is comprised of collaborative problem solving, work that is allocated between the co-leaders, and communication. Co-leaders' work has three central foci: patient-, organization- and staff-related work. The work is allocated in two ways, divided and combined efforts, which are depicted by the use of a striped field, denoting a dynamic process and movement as the co-leaders engage in various activities of leadership. Communication is a key element in partnered leadership; the flow of information is the currency for knowledge workers in a knowledge-based organization. Although contextual factors were not discussed in the findings, macro- and micro-level factors are known variables with leadership research, thus are depicted as surrounding the shared role space where the co-leaders work.

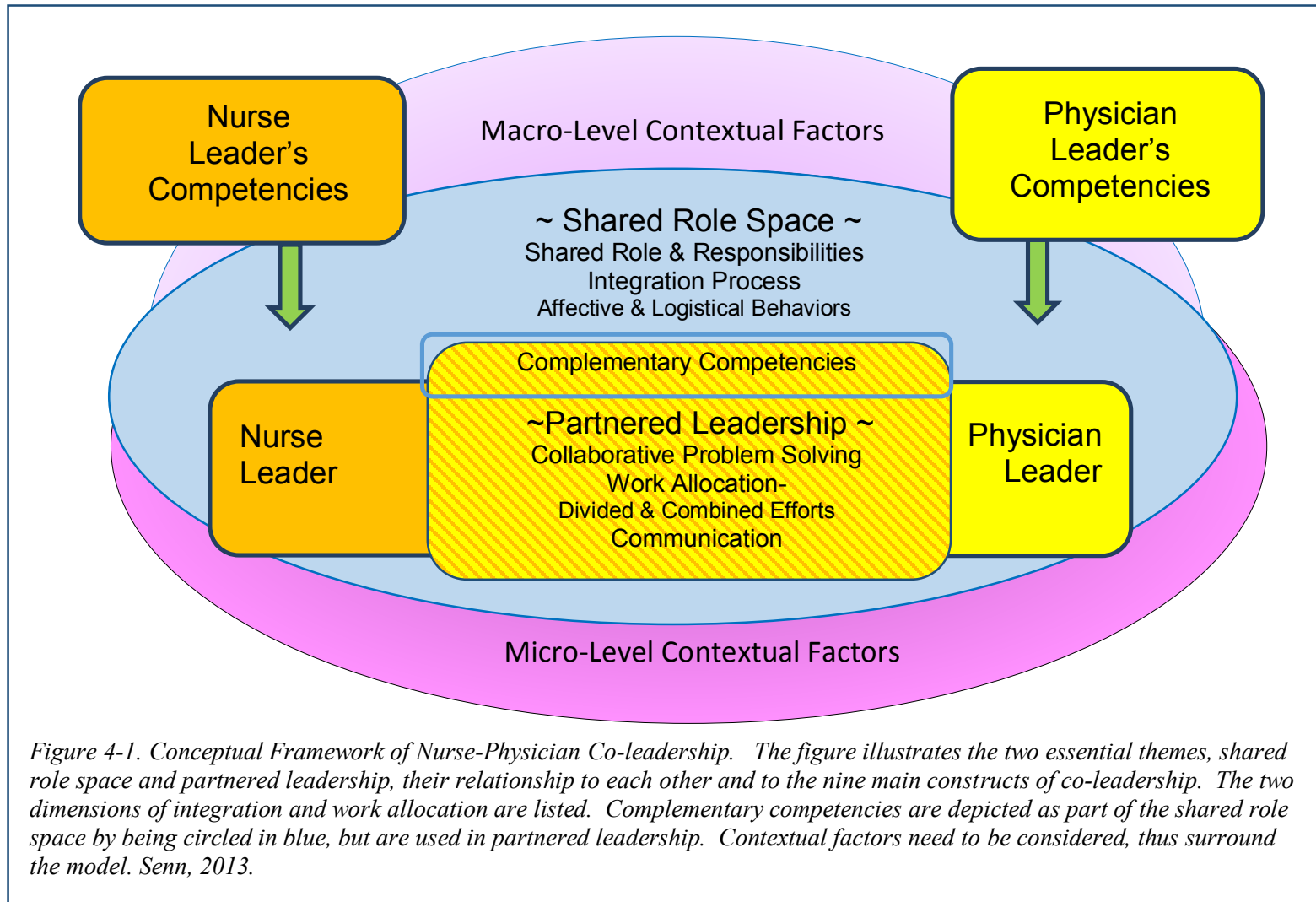


Figure 4-1. Conceptual Framework of Nurse-Physician Co-leadership. The figure illustrates the two essential themes, shared role space and partnered leadership, their relationship to each other and to the nine main constructs of co-leadership. The two dimensions of integration and work allocation are listed. Complementary competencies are depicted as part of the shared role space by being circled in blue, but are used in partnered leadership. Contextual factors need to be considered, thus surround the model. Senn, 2013.

## CHAPTER 5 - DISCUSSION

The purpose of this study was to better understand a unit-based, plural leadership model (i.e., nurse-physician co-leadership) used in some hospitals in the U.S. today. This chapter starts with a brief comparison between the theoretical underpinnings of plural leadership and the findings of this study. Then the study findings are compared to the current literature specifically addressing co-leadership in business, education and healthcare. Next, a critique of the study is presented, including its strengths, weaknesses and limitations. Finally, the implications for research, nursing practice and inter-professional education are discussed.

### **Theoretical Considerations: Plural Leadership in General**

Foundational concepts of plural leadership were synthesized in two review articles (Denis et al., 2012; Yammarino et al., 2012) and many of the same characteristics were evident in the findings of this study. The authors of the two review articles described the characteristics of nine types of plural leadership models, four proposed by Denis et al., and five proposed by Yammarino et al. These authors suggested that because research focused on plural leadership is still so new, that ideas generated from the research of one model may be useful in the study of other plural leadership models. “The integration of elements or aspects of these various collectivistic leadership approaches may be possible for a more comprehensive view of “we” leadership and practice. In this way, the weaknesses of one approach can be off-set by the strengths of another” (Yammarino et al., p. 397). So although this study was centered on just one type of plural leadership model, some of the findings were similar to other plural leadership models and included in this discussion when appropriate.

Plural leadership models were defined as occurrences that involve “multiple individuals assuming . . . leadership roles over time in both formal and informal relationships” (Yammarino et al., 2012, p. 382). This general definition agreed with the findings in this study, where formal leaders (i.e., a medical director and a nurse manager), assumed the formal shared role of providing leadership to the hospital unit staff nurses and the physicians who worked there. Researchers suggested that these formal relationships between leaders occur in large and small groups or teams, dyads and triads (Denis et al., 2012). The participants in this study echoed these conclusions, and described that their partnership consisted of an integrated leadership structure, specifically the “pooling together” of two different professionals who were responsible for managing the hospital department (Denis et al, 2012, p. 221).

### **Links to Existing Research on Co-leadership**

This section of the discussion contains information about how the findings from this study are similar to, or different from, the evidence that was found in the literature specific to co-leadership. The discussion is presented by each of the two aims of the study. Although the findings in this study are specific to co-leaders from a healthcare setting, a majority of the findings echoed the results presented in the literature from business and educational settings. Interestingly, a few of the findings from this study were found to be unique to nurse-physician co-leaders.

#### **Aim One: Factors that Enhance and Hinder Co-leaders Role Development**

**The KSAs that leaders' brought into the role.** Researchers suggested that careful selection of the role incumbents greatly contributed to the development of successful working relations between co-leaders; but more importantly, just because certain attributes make for a strong leader, different attributes may be responsible for the development of a strong co-leader (Gronn & Hamilton, 2004). Researchers listed various factors that contributed to success of co-leadership. Co-leaders need to be equally capable (Rosengren & Bondas, 2010), have an inclination to cooperate and collaborate with others (O'Toole et al., 2002), be considered legitimate leaders within an existing framework of relations (Gronn & Hamilton, 2004), and be able to find satisfaction in serving a worthy cause (Heenan & Bennis, 1999). The findings in this study echoed the evidence derived from the literature.

***Strong technical and interpersonal skills enhanced role development.*** A prerequisite for being a strong co-leader starts with some of the same attributes that it takes to be a strong individual leader. Leaders in this study talked about their strong technical skills and interpersonal competencies as a pathway into their shared role. Not all the examples from literature were in agreement with this finding. Some co-leaders were described as having strength in only one or the other of the requisite leadership skills (Heenan & Bennis, 1999). These gaps in their expertise appeared to pre-define their participation in the shared role; the partner with the requisite skill was chosen to perform those activities. Vine et al. (2009) presented an example of this, recalling a case study where one co-leader was always given the role of pumping up the staff, or breaking bad news to staff, because that individual was more closely connected to the staff, and had better interpersonal skills.

But Court (2003) found that one co-leader's lack of certain leadership skills contributed to the failure of the partnership. Court suggested that the strength of the partnership could not offset the deficiencies found in one leader's skills set. Some of the participants in this study

identified gaps in their skill sets. Although they felt that the gap may have hindered their role development, it did not lead to a failure of the partnership.

***An inclination toward teamwork enhanced role development.*** Successful co-leaders need to have an inclination toward teamwork (Gilmore, 1999). Fischbach et al. (2007) labeled this desired behavior as the “ability to collaborate” (p. 32). Many of the co-leaders in this study were depicted as having a predisposition toward power sharing and an attitude of collaboration. Specifically, the physician leaders were described as “a nurse advocate,” “team-oriented,” “very passionate about collaborative education,” “works well with nurses,” and “approachable.” Interestingly, nurse leaders were not always described in this fashion. NM2 was described by MD2 as being “very administratively savvy, but she’s also very much a people person.” On the other hand, MD4 described the nurse manager he worked with as “confrontational.”

Some participants appeared to have stronger predispositions toward inter-professional collaboration than others. These select few truly embodied the requisite skills for shared leadership. If a participant lacked the intense desire or skills to collaborate, his or her role development was hindered.

***Part time work may hinder role development.*** The transition from full-time clinician to part-time clinician and part-time business leader was somewhat unique for physician leaders. In one of the few quantitative studies on co-leadership, the author reported that 48 co-principals working in private and public schools across the United States were surveyed, and that 92% of them worked full time (Eckman, 2006). Only 8% of the respondents worked part time, and that was typically 50% of a full time equivalent. None of the co-leaders in Eckman’s study worked as little as 10%. None of the other authors reported that a co-leader had another fulltime job, like the physicians did in this study.

This level of involvement appears to be unique to nurse-physician co-leadership. In terms of availability to work collaboratively with one’s partner, the extreme limits on physician’s time may have hindered the development of the shared role. But the very act of staying involved in their clinical practice was also deemed as beneficial to their role development. Scholars have shown that it is important for physicians to continue their clinical practice in tandem with their leadership role (Iedema et al., 2004; Kaissi, 2005), because maintaining their clinical role provided physicians with a source of legitimacy, as well as affording them a continued connection to their professional colleagues. Disch et al. (2001) noted similar challenges in the medical director’s role “juggling administrative and clinical responsibilities” (p. 370), but not all physicians in this study noted these challenges. So, although all the physician participants had



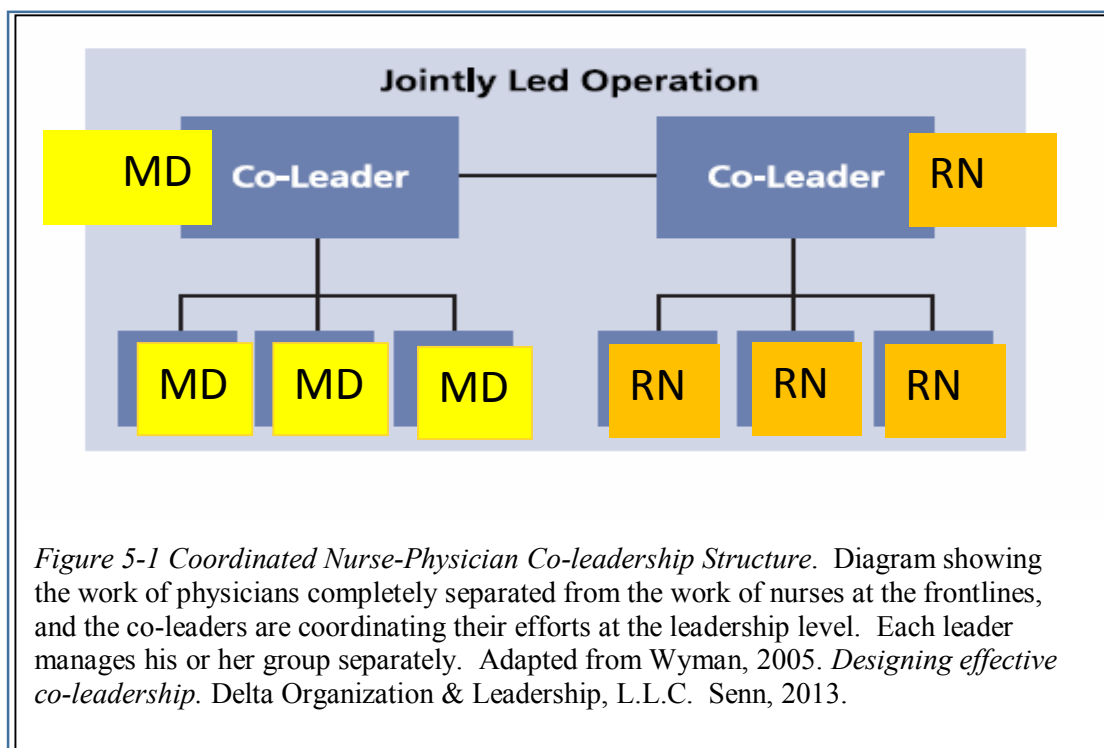
similar time limitations and conflicting job stressors, only some of the physician leaders described feelings of frustration in juggling the heavy demands on their time. Therefore, this suggests that other variables may be mitigating the variation found in this factor, and further investigation is warranted.

**Aspects of the shared role space.** This section contains the comparisons between the study findings and the relevant research focused on several important facets of the shared role: the clarity of the role, the shared responsibilities, the structure of the shared role, and the blending of the leaders' competencies within the shared role space.

***Lack of clarity hindered role development.*** Researchers suggested that, for the sake of accountability, "tasks must be divided" (O'Toole et al. 2002, p. 78). Knowing that task allocation can be done in various ways, they recommended it be done by business line, by interests (innovation versus operations), by skills (technology versus people), or by personality bent (strategy versus implementation). That being said, they also advised that "most effective approach to task division is to have a fluid approach . . . in the final analysis, it doesn't matter so much *how* responsibilities are divided, as it matters that the individuals involved are clear about their roles" (O'Toole et al., 2002, p.78).

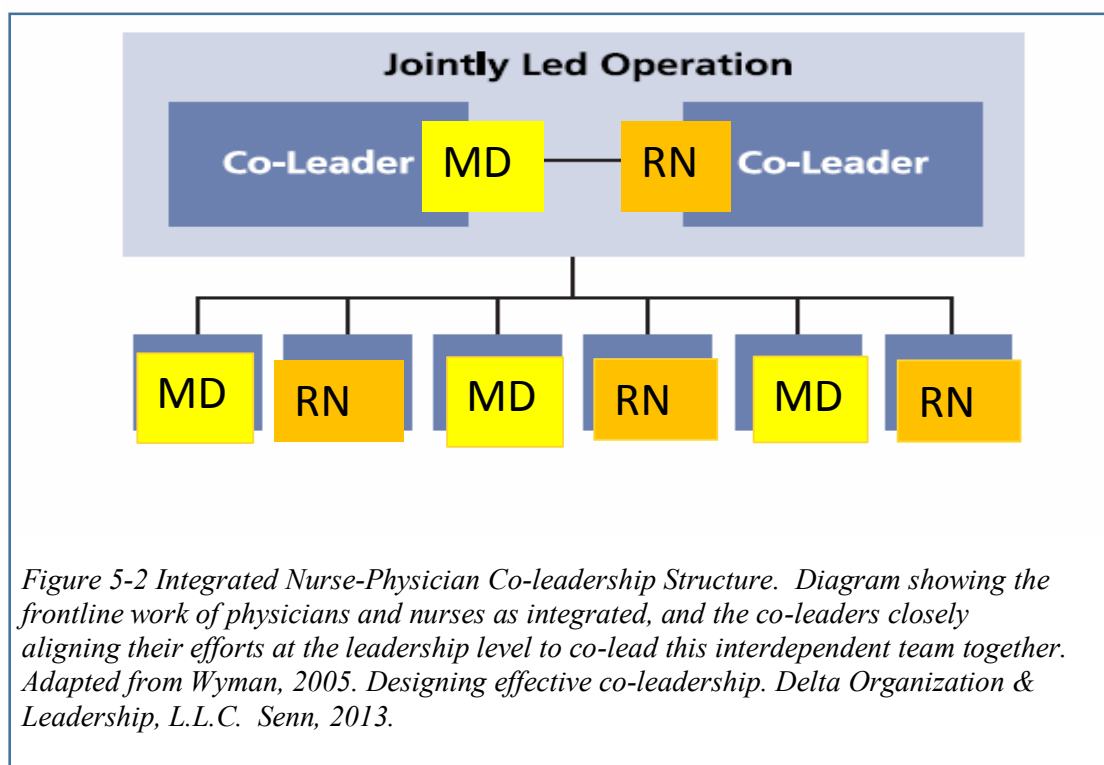
Participants in this study stated that there was a lack of clarity at times, which contributed to a lack of effectiveness, and hindered their role development. Although all participants were clear that the nurse manager was responsible for the hospital unit's daily operations, there was less clarity regarding the physician leader's responsibilities. Many aspects of their work were not transparent.

***An integrated approach enhanced role development.*** Wyman (2005) distinguished between the coordinated and the integrated jointly-led co-leadership models. The *coordinated* model typically involves two clear sub-units, each led by one of the partners (see Figure 5-1), whereas the *integrated* model typically involves the operation being led as one unit, and two leaders run it together (see Figure 5-2). Although both models require effort to keep the work aligned, Wyman suggested that the integrated approach requires more effort, and a higher level of alignment than the coordinated structure. This model can be of great benefit for co-leaders whose frontline staff are completely separated.



But on hospital units in the U.S., frontline physicians and nurses are not separated. None of the participants in this study described the shared role as just being coordinated; the work that the frontline staff does was considered integrated. Thus, some aspects of co-leadership are integrated too. MD1 indicated she viewed the shared role as both a coordinated and an integrated structure when she stated: “[the nurse manager] sort of running things on a daily basis, making sure that everything is running okay. She’s also helping oversee [the] charge nurses and scheduling and issues like that . . . my job, I oversee the scheduling of the physicians, but we interact where there’s patient care issues.”

All of the other participants indicated that they considered co-leadership to be an integrated, jointly led model. Participants clearly reported that the shared role included shared responsibilities, and the co-leaders expressed overlap between the roles. “I think there’s a lot of overlap. I think both of us are responsible for the unit. So I think it’s not only the nursing part for me, but also to make sure that the physicians stay within policy” (NM3). These experiences were consistent with an integrated approach.



In the healthcare literature, shared accountabilities were identified as setting care priorities, establishing quality improvement projects, allocating of department resources and working on patient care issues together (Reid-Ponte, 2004). Other scholars suggested that the joint responsibilities included problems focused on staff and patients (Steinert et al., 2006), and coaching the frontline staff, orienting new physicians, and being available to assist providers experiencing complex patient care issues (Kim et al., 2012). The shared role included working on *root cause analysis* exercises together, and implementing appropriate counter measures (Kim et al., 2012, p. 110). By viewing the care of the patient at the bedside as an integrated, inter-professional practice, the leadership role took an integrated practice too. By advocating for an integrated approach to the shared role structure, role development was enhanced.

***Different reporting structures hindered role development.*** A unique structural difference was found in this study; some co-leaders expressed that they had different loyalties from their partners, due to their different employers. Having different employers meant that co-leaders have different reporting structures, and accountability and reward structures. Kim and colleagues (2012) reminded us to consider the challenges related to these differences. First, different clinical departments have different physician structures, and the physician leader's social network may not extend to all the physicians that work on that unit. Also, physicians'

reporting structures are different than those of nurses. Additionally the ancillary staff that are part of the unit's frontline services, may, or may not report to either of the co-leaders (Kim et al., 2012), even though the practice is interdependent.

In addition, these different reporting structures can create a disciplinary problem for co-leaders, and hinder role development and effectiveness. Nurse managers have no authority to discipline staff physicians, and in turn, medical directors have no authority to discipline staff nurses. As MD2 commented about his partner "If she wants things done about doctor care, it needs to come through me, because I'm the only one with the *cheetos* that can communicate effectively back to the physician group." Although this professional boundary might be hard to break through for some co-leaders, both NM2 and NM4 provided examples of when each of them pushed staff physicians to comply with department standards without the medical director present.

These findings suggest that nurse-physician co-leaders can be recognized as substitutes, similar to the evidence described in both the business (O'Toole et al., 2002) and education (Gronn & Hamilton, 2004) co-leadership literature. But because all the nurse and physician co-leaders did not experience this scope of influence, the shared role alone did not afford them this level of authority. Other mitigating factors must be responsible for these unique findings.

***Perception of diversity as a strength enhanced role development.*** The literature on co-leadership clearly illustrated complementary competencies as a central theme in co-leadership (Alvarez et al., 2007; Gronn & Hamilton, 2004; Heenan & Bennis, 1999; Miles & Watkins, 2007). Although the inputs (i.e., each leader's skills) into the shared role space represent their individual KSAs, it is within the shared role space that these different individual attributes are combined. Complementary competencies means that the two set of skills are perceived as separate and different, "but which also blend harmoniously" (Gronn & Hamilton, 2004, p. 17). When differences in skill sets were perceived by the co-leaders as complementary, this finding implies diversity was considered a strength of the relationship, which in turn enhanced role development.

The complementary competencies can also be perceived as binary opposites (e.g., Leader A is outgoing, and Leader B is quiet); but this dualistic explanation reduces the complex nature of complementarity to a rather simplistic view, which can lead to a splitting (i.e., creation of silos) within the shared role. Instead, skill sets should be considered as "differences by degrees" (Gronn & Hamilton, 2004, p. 17), which implies a situation of co-leaders building on the partners' skills. Perceiving the other's skills on a scale, rather than just present or absent, implies

a more complementary view of the partnership, thus “their pairing is made all the more robust by the totality of these attributes offered by their particular combination” (Gronn & Hamilton, 2004, p. 17).

Though this positive spin on co-leaders’ differences can play an important part in enhancing the dyad’s shared role development, the understanding of their complementary competencies also provides a very important contribution into understanding how the partners work together. Co-leaders can use their understanding of the dyad’s complementary competencies as a basis to decide how to allocate work, by determining which person might be best equipped to take the lead on certain matters.

*Types of complementary competencies.* Researchers reported that co-leaders’ competencies can be differentiated into four dimensions of complementarity: task, expertise, cognitive and role (Miles & Watkins, 2007). Although these four dimensions appear to encompass almost all the major tasks of leadership, other scholars identified one more facet of leadership, the political dimension. One’s personal affiliation with a certain group has been proposed as a competency (Paré et al., 2008). In healthcare, bringing a physician into a co-leadership model was seen as a political move, a way to increase all the staff physicians’ understanding and support in the delivery of care (Baldwin et al., 2011). In academia, the paired leaders were chosen for their political diversity, in order to bridge different values and goals found throughout the institution (Bunnell, 2008). Additionally, in corporate mergers, co-leaders were selected for their functional, as well as their symbolic/political value (Zander & Butler, 2010). See Table 5.1 for a summary of these five complementary competencies, their definitions, and an example of the leadership activity related to the competency.

The participants in this study never described their partners as being “opposites” in any of the five dimensions, except for the rare comments about having different employers, and having different levels of influence over staff physicians’ behaviors. Most of the participants expressed appreciation of their partner’s unique skill sets.

Sub-optimal use of the partner’s complementary competencies appears to hinder the role development. O’Toole et al. (2002) noted several examples of co-leadership that were not successful. Although failure was attributed to various factors, they found that in some cases, co-leaders were too similar. Instead of complementing each other, the co-leaders fought for a solo role. O’Toole implied that there are two factors related to success: co-leaders who have differences, and co-leaders who have trust. “First there needs to be different skills, temperaments, perspectives, then mix in trust. . . The odds on the success of shared leadership

appear to go up when the individuals play different and complementary roles” (p. 75). Even though other factors may affect role development, nurses and physicians clearly have differences in their professional expertise and political influence, therefore establishing differences should not be a problem in this pairing.

Table 5.1 *Five Types of Complementary Competencies*

Type	Definition	Example of leadership activity
Task	Daily business functions	External issues vs. internal issues; dividing up the different business groups
Expertise	General business management activities	Sales, marketing, finance, operations; Medicine, Nursing
Cognitive	Individuals ability to process information	Big picture thinker vs. detailed execution; Visionary vs. practical
Role	Social role	Push vs. pull; diplomat vs. warrior; good cop vs. bad cop; guardian vs. entrepreneur
Political	Influence over others	The social and professional networks a leader can sway because of his or her position of power

*Note.* Adapted from *The Leadership Team: Complementary Strengths or Conflicting Agendas?* By S.A. Miles and M.D. Watkins (2007), Harvard Business Review, April, p. 90-98. Senn, 2013.

But one organizational characteristic that does hinder role development in hospitals is the hierarchical differences between nurses and physicians. For an organization to implement a co-leadership structure, the organization itself must value collaboration. For example, Goldman Sachs has a long tradition of plural leadership. The model has been in place for 25+ years, with a succession of co-CEOs moving through the shared role. “Collaboration became the name of the game at Goldman for the next 25 years” the entire company experienced a cultural shift in terms of moving toward cooperation, and away from competition within the firm (O’Toole et al., 2002, p. 73). “The shared leadership model worked well in investment banking where it is often extended down the line to co-heads of major business units” (p. 74). This suggests that contextual variables, such as a culture of collaboration, the acceptance of diversity, and the level of hierarchical traditions, need to be taken into consideration as the work to design a co-leadership model begins.

Although it is important for co-leaders to divide tasks, it is just as important for co-leaders to share accolades and credit. O’Toole et al. (2002) provided an example of a failed partnership, where even though the organization had an earlier pairing of successful co-CEOs, the second time around was disastrous. At Disney, “an earlier team had done a better job divvying

up power and authority, but because members of the later team competed for time ‘in front of the mirror’ (attention and credit in the press),” the second pairing failed. So even though an organization has a culture of collaboration in place, and a history of success with co-leadership, the partners themselves must perceive their competencies as complementary, and manage their egos in order for the shared role to develop and succeed.

**Integration and alignment.** The literature regarding co-leadership in business, education and healthcare described the integration process as a critical element to the development of the shared role, and ultimately, effective co-leadership. Researchers have listed various factors of the integration process that contribute to the success, such as: fostering togetherness, cultivating egalitarianism, balancing power and building mutual goals (Heenan & Bennis, 1999), building outstanding coordination, communication, and trust (Miles & Waltkins, 2007), and developing good working and social relationships that heighten the co-leaders’ mutual awareness of their partners’ competencies and style (Alvarez et al., 2007).

***Strong integration process enhanced role development.*** The integration process was described as two dimensions: (a) the relational dimension of shared goals, shared knowledge, and mutual respect, and (b) the communication dimension of frequent, timely, and accurate information and problem-solving [non-blaming] communication (Havens et al., 2010). The participants in this study echoed these findings. In addition, some participants described that the role development was enhanced if the partners had previously worked together. Gronn and Hamilton (2004) found that a previous opportunity to work together was helpful; it provided “an opportunity for each partner to ascertain the other’s strengths and weaknesses, and limits to their individual capabilities” (p. 12). Whether building on a previously established relationship, or just starting from scratch, many of the participants in this study described the importance of working on their relationship. Those findings resonated with Gilmore’s (1999) work outlining the important elements of developing productive pairs: having enough time and history together, in order to build trust, understand and value each other’s areas of expertise, and a develop a passion for the same goals.

Some of the nurse and physician co-leaders in this study described frequent, impromptu meetings, and regularly scheduled weekly meetings as an important aspect of their role development, whereas others only met monthly and appeared less connected with their partners. “Coordination and alignment begin with communication. When there are only two co-leaders, communication often takes place spontaneously and constantly” (O’Toole et al., 2002, p. 79). O’Toole et al. described how successful co-leaders at Intel were well coordinated and aligned

because they met every Friday morning to “share their thoughts, debate issues, develop common positions, and plan the agenda” so they could speak with a common voice to their subordinates (p. 79).

***Weak integration process hindered role development.*** Several of the participants in this study described scarcity of resources and divergent objectives as hindrances to the integration process and their role development. MD3 attributed long distances between partners as a hindrance, in addition to his nurse manager having different loyalties after going through a merger. MD1 reported that large numbers of people she had to supervise was a deterrent. Additionally an inability to openly provide one’s partner with feedback was cited as an interference to integration (NM1), which suggests inadequate skills for doing this. O’Toole and colleagues (2002) described similar factors, with an example from one company where “insufficient communication among the co-leaders led to an irreparable divergence of views and opinions. . . . Subordinates accentuated the rift by ‘shopping ideas’ with the two leaders, which led to further conflict and a resulting decay in the level of trust” (p. 79).

Lack of time was seen as a deterrent by several participants. Researchers reported that it took two nurse co-managers more than a year to develop common goals (Rosengren & Bondas, 2010). During that time, the co-leaders described learning to overcome their natural competitiveness, and develop respect for their partner’s weaknesses, as well as their strengths. An initial lack of equality delayed the development of their “two-getherness.” Eventually they learned to make joint decisions without destructive criticism.

Although differences of opinions arise naturally in the work place, conflicts can become especially fierce when resources are scarce and objectives are divergent (Bolman & Deal, 2008). Although conflicts are considered a natural human experience, conflict resolution can be a difficult skill to learn and use well. A lack of cohesion and an inability to provide honest feedback may be viewed as a lack of conflict resolution skills. Two research teams (Reid & Karambayya, 2009; Schnurr & Chan, 2011) investigated the complexity of partner disagreements in a co-leadership model. A social constructionist theory of role enactment was used by some scholars to frame their understanding of co-leaders’ behaviors, thus framing disagreements as “a complex process that involves the moment-by-moment negotiation of power relations” (Schnurr & Chan, 2011, p. 205). These findings suggest that co-leaders can be inherently challenged by power struggles among themselves. Enhancing the co-leaders’ abilities to hold *crucial conversations*, as described by Patterson, Grenny, McMillan and Switzler (2012), could be helpful in addressing these hindrances to integration and role development.



A variety of factors have been identified that affect role development in nurse-physician co-leadership. Some emerged from the data, and others were identified after surveying the data and the evidence in the literature. See Table 5.2 for an overview of these findings.

Table 5.2 *Factors that Affect Role Development in Co-leadership*

<b>Factor</b>	<b>Enhance</b>	<b>Hinder</b>
Justification to change leadership model	Relevant	Not relevant
Engagement of key stakeholders – before model is changed	Engaged	Not engaged
Leader’s KSAs	Strong	Inexperienced
Attitude toward collaboration	Team-oriented	Self-oriented
Level of engagement	More than 10%	Only 10%
Clarity of role responsibilities	Clear	Not clear
Structure of shared role	Integrated	Coordinated
Reporting structure	Same	Different
Loyalties	Same	Different
View of diversity of KSAs	Strength	Weakness
View of complementary competencies	Degrees of difference	Polar opposites
Trust between partners	Present	Lacking
Relationships among frontline staff	Collegial	Hierarchical
Receiving credit	Shares spotlight	Wants spotlight
Communication- frequency	Weekly or more	Less than weekly
Communication – type	Open	Reserved
Shared knowledge and goals	Present	Absent
Respect	Strong	Weak
Conflict resolution skills	Strong	Weak

*Note.* KSAs= knowledge, skills and abilities

Although this table contains all the evidence uncovered in this study, some mitigating factors may not have been present in this study, and therefore, are not accounted for in this table. Day, Gronn and Salas (2004) suggested the use of the IMOI (inputs-moderators-outputs-inputs) feedback loop model to study team leadership. The IMOI approach is unique in that potential moderators and mediators are directly explored. Therefore mitigating factors, either the ones

found in Table 5.2, or other unidentified factors, should be considered when researching in the future.

### **Aim Two: The Nature and Dynamics of Co-leaders' Work Together**

Although the first and the second dimensions of partnered leadership, collaborative problem solving and allocating work, had several sub-categories identified during the analysis, basically the co-leaders described their work together as an integrated process, enacted by dividing and/or combining their complementary competencies in a series of dynamic actions. Paré and colleagues (2008) suggested that the individual leader's actions are "based on complementary collective competencies that have impacts on the decision-making process, mutual support and task sharing in the firm's various functions" (p. 66). In other words, the complementary competencies are the basis of the co-leaders work together. Co-leaders revealed stories of problem solving and work allocation when they divided and combined their work together on multiple occasions within each experience.

Gronn and Hamilton (2004) recognized that co-leaders' complementary competencies could be duplicative, overlap somewhat, or be separate, and that each variation allowed for different expressions of the leaders' skills. Duplicative use of co-leaders complementary competencies was described as "a creation having two bodies and one mind" (p. 20), and was not identified in this study. The other two expressions, overlap and separate, frequently appeared in this study. Separate expression of the co-leaders' complementary competencies is found when their attributes of a specific competency are separate and distinct, whereas overlapping expression is when their attributes are in that specific competency are more similar. "The idea of role overlap means that, while the two incumbents of a shared role space may mostly work within their preferred domains of specialist expertise and influence, for at least a small proportion of the scope and time of their mutual engagement they each substitute for the other" (Gronn & Hamilton, 2004, p. 18). In education, having one co-principal substitute for another may seem perfectly acceptable, but the idea of a nurse manager substituting for a medical director (or vice versa) appears to be a novel idea.

A more in-depth description of co-leaders' work together was forthcoming by the use of discourse analysis. Vine and colleagues (2008) illustrated how the management activities of the co-leaders were enacted. The results showed how leaders "orient themselves to different facets of leadership [e.g., task-oriented and maintenance-oriented] according to the specific contexts in which they are operating as well as in a process of dynamic interplay with their co-leaders" (p. 354). They described co-leadership as a process where there is a dynamic interplay (i.e., a back

and forth of sharing and/or dividing task-oriented and maintenance-oriented activities) during various management activities. Those findings are echoed by Court (2003); she noted that co-principals' work together could be shared, divided, or delegated.

**Mapping the dynamic interplay of complementary competencies.** In this study, the co-leaders' work was sub-categorized as either asynchronous or synchronous (i.e. divided or combined). Although all work within the shared role space is an expression of the co-leaders' complementary skills, some of the work was divided and done separately (i.e., asynchronously), and some of the work was done in an overlapping nature (i.e., synchronously). These distinctions echoed Gronn and Hamilton's (2004) work. With the five dimensions of complementary competencies and the two dimensions of work allocation set into a 5x2 table, a diagram is available that can show the possible options for expression the co-leaders' work together. For example, pushing frontline staff to adhere to unit standards may be performed together, whereas the tasks of coaching and teaching may be performed separately. Furthermore, with multiple actions occurring in every story told by the participants, leadership actions were numerous, and listed in chronological order. See Table.5.3 for an example of the dynamic interplay between divided and combined work in partnered leadership. Note that the numbers suggest the sequence of events.

Table.5.3 *Mapping the Dynamic Interplay of Co-leader's Work Together.*

Type of CC	Divided Work	Combined Work
Task	<b>4</b> -each leader doing some of the tasks - writing, coaching, teaching and finding resources, within professional boundaries	
Expertise		<b>2</b> -considering both professional perspectives
Cognitive		<b>1</b> -both considering the big picture and detailed execution
Role	<b>5</b> -pushing frontline staff separately, within professional boundaries	
Political		<b>3</b> -announcing initiative together to bridge diverse values and loyalties

*Note.* CC= complementary competency; numerical annotations denote steps done in chronological order

The co-leaders in this study described many examples of collaborative problem solving and work allocation as both synchronous and asynchronous efforts. One example of partnered leadership was described by MD3, who reported how he and the nurse manager worked together

to improve timely and appropriate weight measurement in the Pediatric department. Whereas the co-leaders brainstormed together to identify the underlying issues and to determine a strategy to improve staff performance, the implementation was done with a mixture of combined and divided leadership activities. The announcement of the project was done together, but the coaching was done separately (i.e., the nurse leader coached the nursing staff to collect the requested assessments, and the physician leader worked with the residents to request the assessment only when necessary). For the co-leaders, it was a perfect opportunity to combine their complementary competencies.

Partnered leadership was described by NM4, who reflected on how her medical director worked with another physician who was involved in a medication error, and she worked with the nurse involved. The co-leaders discussed together how medication administration is considered a complex process with numerous opportunities for errors to occur. The use of a collaborative, inter-professional approach to follow-up on a medication error report allowed co-leaders to adequately address practice issues that involved both nursing and medicine, even though the co-leaders worked separately and stayed within their own professional boundaries during the coaching phase. As NM4 reported “it required both the physician to train, consult and talk with the doctor involved, and it required the nurse, me, to meet with the nurse that was covering and describe the problem.” See Table 5.4 for an illustration of this example of partnered leadership, working together in reducing risk of medication administration.

*Table 5.4 Mapping Co-leaders Work Together in Reducing Risk*

Type of CC	Divided Work	Combined Work
Task	<b>4</b> -each taught, consulted and talked with colleagues within professional boundaries	
Expertise		<b>2</b> -both considered other’s clinical perspective
Cognitive		<b>1</b> -both discussed complex process of medication administration
Role	<b>5</b> -each provided threat of punishment for lack of behavior change	
Political		<b>3</b> -both bridged diverse objectives

*Note.* CC= complementary competency; numerical annotations denote steps done in chronological order

Examples varied not only across the different partnerships, but also within each partnership, depending on the circumstance. Arnone and Stumpf (2010) suggested that the way co-leaders divide or combine their work together is not limited to their competencies. “Roles and

responsibilities were typically divided by personal style, distinct competencies, and specific situations” (p. 17). Therefore, even when the same two leaders find themselves in a situation they have encountered before, specific contextual differences influence the way they allocate the work.

Although some stories of partnered leadership were brief, and may have illustrated use of only one or two of the complementary competencies, all the examples of partnered leadership could be illustrated with the use of a table as seen in Tables 5.3 and 5.4. A rather unique example of partnered leadership was described by NM4, who reported how co-leaders substituted for each other when one was not available, such as when NM4 recalled her plans for when she was away on vacation - “we will say, ‘I’m going to be gone, which means you have to cover this part’.” And in another case, NM4 described how the medical director could be called upon to replace her when multiple leadership activities were occurring at the same time. Although there were similar findings in business (O’Toole et al., 2002) and education (Gronn & Hamilton, 2004), no report of nurse and physician co-leaders substituting for each other was found in the healthcare literature.

**Communication.** The third dimension of partnered leadership, communication, has four sub-categories. Participants’ interviews included content related to this dimension: (a) sharing information with each other, (b) providing feedback to each other, (c) creating connections between staff and the co-leaders, and (d) setting and enforcing standards together. References to communication, a central element in collective leadership research (Friedrich et al., 2009), were found throughout this study too. Participants reported using various communication techniques in most of their combined leadership activities (e.g., sharing information, brainstorming, strategizing, problem solving, planning, implementing, coaching and celebrating successes).

***Sharing information with each other.*** Participants reported that sharing information was a core component of co-leaders’ communication strategies. Roberto (2009) described sharing information as a technique for problem finding, a strategy used to prevent problems before they happen. Gronn and Hamilton (2004) recognized that co-leaders used various communication techniques to enhance their work together (i.e., paralleling, positioning, anticipating, pooling and retrieving). Paralleling was described as “simultaneously [becoming] cognitively attuned to the same line of reasoning” (p. 22). Positioning was described as to be “acquainted with the latest information and to be kept up to date with information” (p. 22). Anticipating was described as “pre-meeting rehearsal talk, the intention of which is to ensure that a work group has ‘got its act together . . . and speaks with one voice” (p. 23). Pooling was described as “pooling of suggestions . . . collaborative groups wrestle with problems. . . problems do not always invite

easy solutions . . . the reality of problem solving is that, although one person may ultimately make the critical decision on how to proceed, no one individual is in a position to come up with the answer on his own” (p. 24). Retrieving was described as confronting the loss of information by “retrieval which calls for what might be termed talking it out talk. . . attempted clarification . . . re-assurance talk . . . and a sense of relief talk which marks the culmination of collective retrieval” (p. 26). Some of these techniques were similar to the experiences reported by the participants in this study, but without the use of discourse analysis to examine the fine details of the interactions, all examples in this study were referred to as information sharing.

***Providing feedback to each other.*** Participants clearly reported that the providing feedback to each other was a component of communication within the dyad. Both NM3 and NM4 described how they supported their physician partners by providing them with candid feedback that would enhance their stature within the nurses’ network. This type of open, honest feedback is not uncommon in co-leadership, and these experiences are consistent with the work of other scholars. Gilmore (1999) suggested that productive pairs have “trust of one another that enables direct talk and push back, even when the topic is centered in the other’s world” (p. 2). Courage is one of the attributes of all great co-leaders, and partners must be able to speak the truth to each other; one of the most important characteristics of partnered leadership is a willingness to solicit truth (Heenan & Bennis, 1999).

***Creating connections.*** Participants in this study reported that communication was used to create a connection with the staff. Examples provided included strategies such as: having an open door policy [MD2], asking staff to provide input [NM2], having staff write down problems in a notebook [MD3], and being physically present on the hospital unit so people could talk to the leader in-person [MD2, MD3, NM4].

Some researchers exploring co-leadership in healthcare had similar findings. Researchers reported how two nurse co-leaders described their communication efforts used to influence improvement in care as “transparent determination” (Rosengren & Bondas, 2010, p. 292). Decisions and priorities had to be transparent for both managers and staff. Inviting staff to participate in decision making process helped create a sense of empowerment in the staff. Baldwin (2011) also reported that clinical staff engagement, (i.e., both nurses and physicians), improved with the change to a co-leadership model.

Additionally, in a study focused on collective leadership, researchers described the use of both bi-directional and uni-directional communication as positively linked to team affective climate. When bi-directional communication is used “members of the group are likely to

perceive group processes as fair, which would positively contribute to affective climate” (Friedrich et al, 2009, p. 941). Uni-directional communication could be used to promote a sense of empathy; in this study empathy was linked to positive affective climate.

***Setting and enforcing standards together.*** Participants reported that setting and enforcing standards together was a core component of communication within the dyad. These experiences are consistent with the results of other studies in which co-leaders were encouraged to speak with a single voice (Alvarez et al., 2007), and to develop common positions on key issues and voice the same message (O’Toole et al., 2002).

Nurse and physician co-leaders in this study described their work as efforts to reduce undesired variations in practice and standardize it. Participants recalled the following: (a) reducing variation in sedation level due to the competing objectives of nurses and physicians [MD2], (b) reducing the variation between physicians in the use of antibiotics for treatment of pneumonia [MD1], (c) easing the tensions and variations in patient care between frontline nurses and physicians after a merger [MD3], and (d) minimizing the barriers that keep staff from doing the right thing by addressing tensions between nurses and allied services [MD4]). The co-leaders worked together effectively to reduce variations in the way the frontline staff provided patient care. “Here leadership is taken, not given, and a plurality of leaders is needed because no single individual alone could conceivably bridge the sources of influence, expertise and legitimacy needed to move a complex social system forward constructively” (Denis et al., 2012, p. 266).

Vine et al. (2008) described how co-leaders presented standards to their employees. These researchers revealed moment to moment management activities, noting that the co-leader closest to the minority staff, in ethnicity or education level, was the partner who used the maintenance strategies the most. But in this study, there were examples of both nurse and physician leaders crossing their professional boundaries to maintain standards. Communication strategies were employed in the enactment of all the five complementary competencies, and communication remains a central concept in research on co-leadership.

### **Unique Findings**

The findings in this study were similar in many ways to those from studies of co-leadership in business and education, but some unique differences in nurse-physician co-leadership were identified. Physician leaders transitioned into the shared role with the requisite skills, but typically maintained an active clinical practice at the same time. Their appointments as co-leaders were 10% (i.e., 4 hours per week), but the nurse leaders’ appointments were full time, or more (i.e., 40 to 60 hour per week). Although this dual role allowed physicians to maintain

legitimacy and kept them connected to nursing staff and physician colleagues, it created a personal conflict; often the physician participants complained of inadequate time available to address the demands of both roles. In addition, nurse and physician leaders have different reporting structures whether in academic or community hospitals, a factor not usually seen in business or education settings. This difference can lead to the different professionals having divergent goals.

Unique features of nurse-physician co-leadership that represent a positive finding were how the model was used as both a mutual and coalitional force on the unit. It was seen as a mechanism to enhance a democratic process, as well as a mechanism to channel diffuse power. Researchers studying other fields described co-leadership as either one or the other, not both. Nurse-physician co-leaders in this study described being able to substitute for their partner. Although this was described in both the business (O'Toole et al., 2002) and education (Gronn & Hamilton, 2004) co-leadership literature, it had not been described in nurse-physician literature before (Schmalenberg & Kramer, 2009; Schmalenberg et al., 2005).

#### **A Critique of the Quality of the Study**

The standards for evaluating qualitative studies are a contested issue, and for the last couple of decades, scholars have debated what criteria to use (Altheide & Johnson, 1994; Creswell, 1998; Hammersley 1990; Johnson et al, 2006; Lincoln & Guba, 1985; Patton, 2001). The controversy stems in part from the inevitable comparison with quantitative research. In addition, there is a wide variety of both qualitative methods used and philosophical positions taken in a research study (Symon & Cassell, 2004). This variety results in different paradigms, which in turn, complicate the issue of developing common evaluation criteria. Guba and Lincoln (2005) noted that there is little hope that researchers from different paradigms can resolve their differences, and that “such a resolution appears highly unlikely” (p. 185). Regardless, scholars agree that some criteria are universally appropriate, although others are relevant to specific qualitative methods, disciplines or epistemology commitments (Symon & Cassell, 2012). The evaluation of the strengths and weaknesses of this study was based on the compatibility among the overall research question, specific aims and the study design, and the extent to which appropriate criteria for assessing quality were met.

#### **Strengths**

The research question was focused on better understanding the human experience of engaging in a unique leadership role, nurse-physician co-leadership. The design of the study was based on the premise that face-to-face interactions are the best way to understand the mind of



another human being, and that one must participate in the mind of another human being in order to acquire social knowledge (Lofland & Lofland, 1995). In addition, the analytic process employed in this study (i.e., content analysis) was used to construct theory, not to prove or test existing theory. Therefore, the design of the study was congruent with the specific aims of the study.

Guba and Lincoln (1989) proposed four criteria to evaluate this type of naturalistic study (i.e., credibility, transferability, dependability and confirmability). Guba and Lincoln's philosophical position was naturalistic inquiry. The naturalistic inclination is focused on direct observation to aid in the comprehension of the world. These criteria are viewed as universal, and appropriate to evaluate general types of qualitative research (Symon & Cassell, 2012).

Guba and Lincoln's (1989) criteria address a full range of elements needed to evaluate the quality of a study. First, credibility is the degree to which there is confidence that the findings are truthful (p. 233). Transferability is the extent to which the findings have applicability in other settings (p. 235). Dependability is the degree to which the findings are reliable and could be repeated (p. 238). Finally, confirmability is the extent to which the findings of a study are shaped by the participants' experiences, and not just by the researcher's opinions (p. 240). Together, these four criteria address the important aspects found in this type of naturalistic, constructivist research. My use of the criteria proposed by Guba and Lincoln (1989) was appropriate for this study. Specific examples of how they were met are listed below.

**Credibility.** Judging the quality of a study can be accomplished by evaluating the extent to which the findings accurately describe reality. In this study, credibility was strengthened in several ways, such as the appropriate use of triangulation, the rigor used in sampling, the appropriate methods for gathering high quality data, and the evaluation of negative cases (outliers).

Triangulation is a method used to enhance credibility by allowing for differences to be compared in order to shed more light on a phenomenon (Patton, 2001, pp. 555-566). Patton described four types of triangulation (i.e., methods, sources, analyst and theory). In this study, I controlled for bias using two types of triangulation: source and theory. *Theory triangulation* refers to how the researcher can use multiple theoretical perspectives to examine and interpret the data (Patton, 2001). By extending the literature search into the fields of business and education, more light was shed on the various elements of co-leadership, which in turn increased my open-mindedness about the topic, and enhanced the impartiality of the study. Furthermore, by comparing the findings from this study to the findings from other settings, the overall credibility

of the study was enhanced. The findings in this study fit well with what was already known about co-leadership,

*Source triangulation* refers to how the researcher can use different resources to gather data (Patton, 2001). My use of participants who have different points of view (i.e., nurses and physicians) shed more light on the topic, which in turn allowed for more comparisons to be made, and enhanced neutrality in the study. If I had only examined the topic from one group's point of view, or from just one unit of the hospital, the findings may have been distorted. Source triangulation minimized the risk of bias.

The use of negative cases is an important tool used to enhance credibility (Miles & Huberman, 1994, pp. 263-265; 271). Presenting examples of factors that hindered role development, rather than focus only on cases that enhanced role development, more light was shed on the topic. These deviant cases broadened and confirmed the patterns that emerged from the data. Furthermore, I was able to follow up on surprises by testing if-then relationships, and checking for false relationships that could have resulted from the presence of a third variable.

**Transferability.** Judging the quality of a study can be accomplished by evaluating the extent to which the findings are useful to other people in other situations. In this study, transferability was strengthened in several ways (i.e., the use of thick descriptions and the use of maximum variation in sampling). By providing a thorough description of the study's methodology, setting, and participants, enough information was provided to permit adequate comparisons with other settings, thus transferability was strengthened.

The description of the findings from this study make it possible for others to map factors present in these particular U.S. hospital units, situations and people. Participants discussed experiences from their work on adult medicine units, adult critical care units, a pediatric critical care unit, general pediatric unit, special care nursery units, and behavioral health units. Although each area may have unique factors to consider, readers may find similarities to some aspects of the findings. Even though readers need to ascertain the transferability of the study findings for themselves (Thomas & Magilvy, 2011), the thorough descriptions provided allow readers that opportunity.

**Dependability.** Judging the quality of a study can be accomplished by evaluating the extent to which the findings may be reproduced. In this study, dependability was strengthened by using a systematic process of analysis, and by using the same interviewer for all interviews. I was the sole interviewer; therefore inter-interviewer reliability was not an issue. Although I was

a novice interviewer, before talking to any of the participants, I was coached by an expert in the field of qualitative research methods on the interview process and techniques.

In addition, I used a systematic process of analysis and maintained an audit trail (i.e., a log of decisions made during the analysis). Using the guidelines for the use of computer software in qualitative research (Weitzman, 2000), I was able to develop an audit trail with the use of NVivo 8 (QSR, 2013). The use of this software enhanced my ability to search and retrieve data when needed for review. NVivo 8 enhanced my ability to create memos while reading the transcripts, to create links between data and memos, and to analysis data using the *highlight and paste* coding function. Lastly, the software enabled my ability to display data after coding.

Dependability was further enhanced by developing clear definitions of the 11 coding categories, and by having mutually exclusive categories (Stemler, 2001). Initially, some of the terms used in plural leadership research were confusing, and the inconsistency was a challenge. By investing my time and effort at the beginning of the study to differentiate the terms used in plural leadership, the process of coding was more straight-forward because the elements were clearly defined. Therefore, by having a consistent method of coding data and an audit trail that captured the decision made during analysis, reproduction of the analysis is possible and dependability was enhanced.

**Confirmability.** Judging the quality of a study can be accomplished by evaluating the extent to which the researcher can demonstrate neutrality (Denzin & Lincoln, 2000). One's beliefs, values and assumptions may influence the research process at any stage. In this study, confirmability was enhanced in several ways, such as by reflecting on the research process each step of the way, and by trying to remain objective and aware of the use of myself as a research tool.

Confirmability was strengthened by the ability to trace findings to their sources. By depicting the actual sequence of events of how data were collected, processed, condensed and synthesized, transparency was maintained. By using NVivo 8 (QSR, 2013), I was able to refer to the original transcripts frequently during the analysis, to enhance the accuracy of capturing the participants' intent. Furthermore, I validated that the quotes I used exemplified the theme of the participants' stories. Thus relevant passages from the transcripts were used to demonstrate the findings. After the findings were formally written, transcripts were reviewed for a final time to corroborate that the evidence was consistent with the meaning expressed in the paper.

**Use of self as an instrument.** My role during this research project has influenced the work in several ways. Mostly, my involvement with both data collection and data analysis has

enhanced the quality of the work, but it may have hindered it too. Morse (2010) proposed that having an insider's versus an outsider's perspective can be helpful. The insider perspective was helpful in my case because I have a broad knowledge of healthcare, its regulations, professional hierarchies, and care practices. This allowed me to interpret material during the interviews, to ask pertinent probing questions, and to relieve participants of the burden of explaining their work in detail. Additionally, I was not naïve to the hospital as an organization, having worked in several different hospitals for more than 20 years.

However, my insider's perspective may have been harmful. An insider may have jumped to unconfirmed conclusions more easily than an outsider (Morse, 2010). Although my presence in the setting was too brief and too far removed from the *action* to cause any change on the hospital units, my presence in the interview room may have affected the data collection. My choices of probing and follow-up questions may have been affected by my insider's perspective, and my reflection and analysis of the data could have been influenced too. Thus, when reflecting on the data and writing the report, I was compelled to consider my potential effect on the participants during the interviews and my reactions to their comments.

As a qualitative researcher, I reject the notion that all bias can be eliminated, nor should it be. But I needed to minimize bias; therefore, I endeavored to build a broader perspective on the topic. Rossman and Rallis (2003) suggested that qualitative researchers can diminish their bias by establishing a comprehensive perspective about the topic of their study. By reading widely about the subject and exposing themselves to new and contrasting viewpoints, researchers can become more aware of the scope and complexity of the issues. My efforts to broaden my understanding of the topic of plural leadership, and my use of a systematic process of inquiry strengthened the trustworthiness of the study's results.

### **Limitations**

Patton (2001) advocated that all four types of triangulation (methods, sources, analyst and theory) be used to increase the credibility of a study. By using both qualitative and quantitative data in the same study, and participant validation, and multiple analysts, credibility could have been enhanced. But because this was a secondary data analysis completed as a dissertation, these limitations were not avoidable. The participants were no longer available for member checks. A second analyst could not be used due to the nature of doctoral work. In addition, a mixed methods approach was not an option because the data were collected several years prior to the analysis.

Another limitation arose from the differences between the design of the study and its implementation. The principal investigator's intent was to have ten participants in the sample, but due to a loss of data (i.e., two transcripts that could not be transcribed due to poor audio recording) and a lack of more nurse volunteers, the sample size was limited to eight people. Concern might be posed regarding the sampling technique, and the fact that some of the physician volunteers were turned away. Although one might speculate that this process would be a limitation, the use of purposeful sampling enhanced variation in the sample, which in turn, should reduce bias. Maximum variability among hospital departments and a balance of nurses and physicians participants was maintained to enhance equity.

Furthermore, I was a novice as an interviewer, and my technique had some weaknesses. In retrospect, I could have used more probing questions, and I could have held the focus of the discussion closer to the topic of co-leadership. On occasion, the topic drifted. That said, large amounts of relevant data were gathered during the interviews. None of these adaptations altered the basic study design, but rather accommodated spontaneous discussions that occurred during the interviews.

Lastly, transferability may be limited. Although, readers of this study should examine the results for themselves to consider whether the findings of this study could be used in their organizations, certain factors make the study very unique. Contextual factors must be kept in mind, and in particular, the use of a university-affiliated hospital may include elements that are not present in community based, non-teaching hospitals. For example, the physician leader's teaching responsibilities may have affected some aspects of his or her work, and would not be representative of a non-teaching hospital. Additionally, nurse-physician relationships may be different in a teaching hospital; some of the nurse leaders had worked with their physician partners when the physicians were residents. Their histories together affect the development of collegial relationships.

### **Implications for Future Research**

Leadership studies have a long history, and an impressive body of knowledge (Avolio et al., 2010). Not only have researchers offered a better understanding of individual traits and leadership styles, but also they have used theories of human interaction (e.g., systems theories, complexity theories, and social networking) as a means to explore processes in the workplace. However, research about plural leadership does not have a long history, and is still forming.

### **Differentiate Plural Leadership Research from Solo Leader Research**

Although plural leadership can be considered a branch of leadership science, it cannot be researched using the same conceptual framework as a solo leadership model. In terms of conceptual implications of plural leadership, “exploring *team leadership theories* as opposed to *theories of leadership applied in team settings* seems important. As such, scholars should not be transporting traditional theories of leadership from the individual to the team level” (Yammarino et al., 2012, p. 387). Learning to share leadership would be considered a new competency for leaders working in a plural leadership model. That was true in this study, where the work of the partnered leaders with shared responsibilities was examined as a whole, not just as two experts working side by side.

Leadership is typically regarded as a leader-follower interaction, where the leader and his or her followers share a purpose and cooperatively achieve some business function (Yammarino et al., 2012). This solo leadership process can be viewed by its antecedents and its consequences. Antecedents are considered human attributes (e.g., affect, cognition, personality, and exchange), whereas consequences are often described as effectiveness indicators, such as job satisfaction, commitment, loyalty, performance, absenteeism, turnover, stress, and safety (Yammarino et al., 2012, p. 383).

In plural leadership models, the antecedents may be viewed similarly, but the consequences are viewed differently. Consequences are viewed as two to three levels. First-level outcomes in many of the plural leadership models were listed as shared purpose, shared mental model, the ability to share information, and role complementarity (Yammarino et al., 2012). Similarly, the participants in this study described the need to develop the shared role space, with shared goals and responsibilities, as the first step toward working together. The follower and leader relationship is still important, but it's preceded by the development of the relationship between the two leaders.

The outcomes of the two leaders entering and developing a relationship in the shared role space, embody these first level outcomes. Researchers have suggested that second-level (i.e., intermediate and long term) consequences of plural/collective leadership can include characteristics such as team performance and synergy (Friedrich et al., 2009). Ultimately, there are third-level outcomes, such as improvements in patient care and development of highly reliability hospital units. Although intermediate and long term outcomes were not specifically analyzed in this study, the participants in this study described examples of what could be called team performance, such as effective collaborative problem solving, establishing shared

agreements, and enforcing department standards together. In addition, synergy was described by a couple of the participants who had achieved successful partnerships.

### **Differentiate Between Types of Plural Leadership**

Scholars must be knowledgeable and carefully choose specific terms when referring to unique concepts in plural leadership research. Due to an unfortunate trend found in the literature (Bolden, 2012; Sergi, et al., 2012), interchangeable terms and concepts must be addressed. Future researchers studying the topic of plural leadership must actively manage these inconsistencies, and be very clear to differentiate which type of collective/plural leadership is being examined. Note that in studies based in a hospital, other forms of plural leadership are prominent in the literature (i.e., shared governance, teamwork and co-management).

### **Consideration of Contextual Variables**

Researchers (Friedrich et al., 2009) studying plural leadership have suggested contextual variables that are important to consider, both at the macro-level (i.e., expertise and professionalism of the workforce, organizational structure, and work flow), and at the micro-level (i.e., the complexity and ambiguity of the work, resources for the frontline staff, and their social support). Researchers who examine complex organizations use four perspectives to attain the whole picture: the structures, the cultures, the politics, and how the employees are treated (Bolman & Deal, 2008). In addition, health systems scholars (Nelson et al., 2008) suggested four perspectives: three are similar (i.e., the culture, the support of frontline staff, and work flow patterns), and one is new (i.e., the flow of information).

In many organizations, it is common for leaders to manage the emotional and social concerns of their employees. But in some organizations, leaders must also contend with power structures emerging from multiple sources. This organizational structure is less common and can be considered unique to organizations that employ a large body of professionals, such as universities, hospitals and law firms (Mintzberg, 1983). Although administrators have positional power and strategize on ways to achieve their goals, in professional saturated organizations, there are often other people pushing back against the administrators with their own divergent goals. Informal leaders may use power that comes from other sources, such as: (a) control of rewards, (b) coercive power, (c) information and expertise, (d) reputation, (e) personal power, (f) alliances and networks, (g) access and control of agendas, and (h) control of meaning and symbols (Bolman & Deal, 2008, pp.203- 204). Similar results were found in this study, in that participants described power struggles with both frontline staff nurses and physicians working in

the hospital. Table 5.5 contains a list of contextual variables to consider in research based in a hospital setting.

*Table 5.5 Contextual Factors to Consider with Hospital Research*

Level	Variables
Micro-level	<ul style="list-style-type: none"> <li>➤ the complexity and ambiguity of the work</li> <li>➤ resources for the frontline staff, and their social support</li> <li>➤ department culture</li> <li>➤ the flow of information, work flow patterns</li> <li>➤ sources of power and influence</li> </ul>
Macro-level	<ul style="list-style-type: none"> <li>➤ expertise and professionalism of the workforce</li> <li>➤ organizational structure and work flow</li> </ul>

These contextual variables may be considered mitigating factors that can affect either the leaders, the followers, their relationships, or their workplace. As research on this topic moves forward, it will be important to consider key situational moderators, such as the leaders' KSAs and the followers' unique KSAs, and the relationships between the leaders and the followers. In addition, it will be important to consider the relationships between the leaders and interventions that facilitate this relationship. Lastly, key organizational factors need to be considered, especially the workflow and information flow processes, plus the department's culture and politics. Although contextual factors were not examined in this study, they are important aspects to respect in plural leadership research, and were portrayed as an integral part of the conceptual framework.

### **Use of Collective Complementary Competencies in Research**

Future researchers who wish to explore and illustrate the dynamic nature of co-leaders working together should understand that the use of the dyad's collective complementary competencies is an ideal means to depict the partners' work together. Co-leaders work together by allocating the different tasks to the two people to perform either together or apart. Researchers can illustrate this dynamic process by using the chart developed (see Table 5.6) from the findings in this study.



Table 5.6 Chart used to Identify Co-leader's Activities by Complementary Competency and Allocation of Work

Type of CC	Definition	Examples	Allocation of Work	
			Divided	Combined
Task	Daily business functions	Daily activities of management and quality improvement - writing, coaching, teaching, finding resources, collecting and evaluating data	Each leader doing some of the tasks - such as coaching, within professional boundaries	Both leaders doing tasks together - within or outside professional boundaries
Expertise	General business management activities	Nurse or medical expertise and scope of practice; Healthcare, Q&PS, regulatory and evidence- based practice knowledge	Strategizing; considering professional perspectives alone; considering use of resources alone	Strategizing; considering both professional perspectives together; considering use of resources together
Cognitive	Individuals ability to process information	Big picture vs. detailed execution; visionary vs. reality	Brainstorming; each leader considering either the big picture or detailed execution alone	Brainstorming; both considering the big picture and detailed execution together
Role	Social role	Push vs. pull; diplomat vs. warrior; good cop vs. bad cop; guardian vs. entrepreneur; within or outside professional boundaries	Pushing staff separately, within professional boundaries; each provide threat of punishment for lack of behavior change	Holding staff accountable together, within and outside professional boundaries; together they reward staff for positive behavior changes
Symbolic	Political relationship of power and influence	Addressing divergent goals and diffuse sources of power and influence; bridging diverse values and loyalties separately; building alliance	Announcing initiative alone, but with the understanding that both co-leaders are in alliance; one voice	Announcing initiative together to bridge diverse values and loyalties; one voice

Note. Adapted from “The Leadership Team: Complementary Strengths or Conflicting Agendas?” By S.A. Miles and M.D. Watkins, 2007, *Harvard Business Review*, April, pp. 90-98. CC= Complementary Competency;

The chart will allow the findings to be illustrated in multiple ways, depending on the results of each case. When specific aspects of the work are divided, an explanation of how the partners determined who would work on each aspect, and why, would be appropriate (e.g., was it a spontaneous decision, or was a decision matrix used, or did only one of the leaders have the KSAs needed for the task). In addition, if the partners worked in a synchronous manner, an explanation of how the partners accomplished that combined work would be noteworthy.

### **Refining the Conceptual Framework**

Qualitative research could be conducted to address different settings, such as community, non-research intensive hospitals, and different hospital departments (e.g., obstetrics and emergency department). Such work could result in further clarification of the conceptual framework. Similar to this study, content analysis could be used for this work. Furthermore, qualitative research using discourse analysis could prove valuable, providing researchers the opportunity to examine co-leaders' conversations in-depth to provide examples of the type of communication techniques that nurse-physician co-leaders are using in their interactions with each other, as well as with the frontline

### **Development of an Evaluation Instrument**

Eventually the research concerning nurse-physician co-leadership will move to measuring for effectiveness. Not only does this study bring the science a step closer to understanding how that might be done, but also one research team (Steinert et al., 2006) offered a questionnaire they had used to measure several aspects of nurse-physician co-leadership. They focused on measuring the differences between the physician leaders' and nurse leaders' perceptions of being a co-leader, and they measured participants' perceptions of the use of a plural leadership model within their hospital setting. But without the authors presenting the research within the context of a conceptual framework, it was difficult to appreciate how the concepts were related, and if effectiveness was measured (or attained). By placing their questionnaire items into the proposed conceptual framework, a measurement instrument can be started (see Table 5.7).

The majority of questionnaire items were focused on evaluating factors related to three areas: (a) the shared role space (i.e., integration, shared responsibilities, clarity of the role), (b) outcomes, and (c) balance measures (i.e., level of complications that resulted from use of the plural leadership model). They used two items that evaluated the leaders' skills, and a couple items related to the process of working together (i.e., partnered leadership). Note that participants answered all the questions in a positive manner, meaning that factors related to nurse-

physician co-leadership were seen in a positive manner, even the balance measures were not found to be a problem for both the nurses and the physicians. Using the results from this study, additional work is required to flesh out other the constructs; then work on testing the validity and reliability of the instrument could begin.

Table 5.7 *Questionnaire Items Placed into the Conceptual Framework*

<b>Framework Construct</b>	<b>Concept obtained from Questionnaire Item</b>
Antecedents	Would a different partner be better? What was my partner's level of competency? Level of commitment?
Shared Role Space & 1 <sup>st</sup> level outcomes	Level of cooperation; Level and type of conflicts with partner, conflict resolution abilities, level of role conflict and clarity, level of understanding partner's role, level of responsibility, amount and type of meeting, types of problems discussed - patient-oriented, staff-oriented or organizational
Partnered Leadership	Types of problems considered: patient, staff, and organizational; Level of problem solving abilities
2 <sup>nd</sup> level Outcomes	Level of: job satisfaction, department atmosphere, degree of problem resolution, diffusion of hierarchies, procedure efficiency and effectiveness, culture of collaboration in department, decision making ability to dyad
Balance measures	Amount of time commitment, feeling devalued in professional identity (or reputation - nurse or physician), willing to reject the practice, confusion for patients/families and people outside the organization, too many leaders, increased bureaucracy, rivalry between the professions, gender inequity, lack of motivation to be in leadership role because of the co-leadership model

*Note.* Adapted from "A nurse-physician co-leadership model in psychiatric hospitals: Results of a survey among leading staff members in three sites," by T. Steinert, R. Goebel, & W. Rieger, 2006. *International Journal of Mental Health Nursing*, 15(4), 251-257.

### **Consideration of the Unit of Analysis**

In general, unit of analysis issues, in both theory building and theory testing for collectivistic leadership approaches, require close attention (Gronn, 2002). Given the variety of units potentially involved (e.g., leader/leader, leader/team, leader/network, leader/organization, plus, leader/multi-team system), as well as multi-level effects, the complexities of plural leadership research can be extensive, and perhaps overwhelming, especially for a novice in the

area (Yammarino et al., 2012). Close consideration of the level of analysis must be employed in any future research attempted in plural leadership.

### **Implications for Nursing Practice**

Hospital administrators would benefit from a toolkit for creating nurse-physician co-leadership. Nurse and physician leaders who have been appointed to this model could also benefit from clarity regarding the shared role and the shared accountability, and may desire an idea of how they can distinguish if they are on the right track. When introducing the co-leadership model to key stakeholders, several tools that were identified or developed during this study may prove helpful.

#### **Pick the Right People**

Before ever selecting the candidates, review the advice for establishing a co-leadership structure (Alvarez et al., 2007; Arnone & Stumpf, 2010; Gilmore, 1999; Heenan & Bennis, 1999; Miles & Watkins, 2007; O'Toole et al., 2002). Although an ideal medical director may already be in place, it is important not to assume that he or she can easily transition into a shared role. It is not an intuitive process for a physician to share the spotlight with a nurse. Not only does the appropriate candidate need to have great clinical skills and self-confidence, but in addition, a successful co-leader needs to control his or her ego and have a desire to be collaborative. Individual differences in characteristics such as collective orientation, or a preference for working with others need to be considered when selecting individuals for situations that may involve plural leadership (Salas et al., 2011). A professional must be willing to keep his or her ego in check, otherwise, sharing power and responsibilities will be nearly impossible.

#### **Create the Shared Role Space**

Use of the conceptual framework presented in this paper can help both the administrators and the appointed leaders begin to intellectualize the components of the shared role. They must understand what they bring to the role, and how that complements their partners' skills.

It is important for co-leaders to be aware of their combined complementary competencies, and the strength these bring to the partnership. This awareness is important, so that when they get into the working phase of the partnership, they can recognize what they are doing, and when they are doing it. Eventually this process becomes intuitive, but until then, it should be purposeful. Co-leaders need to understand their partners' strengths and limitations, in order to use this knowledge to their advantage. Honest feedback in a non-blaming manner is essential for growth. Administrators can create the necessary infrastructure to enhance the process, and provide time and resources for integration to occur.

**Create the necessary infrastructure.** Elements such as orientation, clear role descriptions, evaluation processes, and meetings with superiors need to be put into place. The job description presented by Kim and colleagues (2012) can be used as a starting point and adapted to each department's specific needs. Later, it can be used to coach and evaluate the process.

These infrastructure elements are things that the organization builds to help the individuals know their responsibilities, to support them develop their competencies, and to reinforce the right behaviors. By knowing what co-leaders need to facilitate their transition, administrators can then put the systems and processes into place to help these people do their best work.

### **Facilitate the Integration Process**

It is important for administrators to emphasize the requirement that co-leaders establish and maintain a schedule of frequent meeting, at least weekly for the first year. The earlier stages of role development are a critical time, when information is shared to build the relationship, develop shared goals and knowledge, and identify the best ways to work together. Timely and accurate information sharing is a keystone of integration, along with development of trust. Although this foundation will develop over time, ongoing attention should be given to frequent meetings as the relationship evolves.

It is important to look for the presence of first level outcomes (e.g., level of alignment, integration and conflict resolution) at this time, before moving to intermediate and long-term outcomes (e.g., change management effectiveness, or creating a unit culture of collaboration). For the co-leaders, it is important to know that whatever they are doing at work, it is always within the context of the shared role space. Administrators must be mindful that co-leaders are a role model for nurse-physician collaboration, and that co-leaders are in a partnership 24/7, even though the position is typically only 5-10% of the physician's appointment.

### **Begin Partnered Leadership**

If possible, it would be best for the co-leaders to start with an easy win, so they can get a taste of success, and build synergy before moving into some extensive project. Later, they can practice different ways to perform their roles, consciously experimenting with various aspects of combining and dividing the work. Communication is a central theme and a prime resource to be managed. Co-leaders will find that their time is well spent when they craft their shared agreements, and rehearse their shared voice in private. The more cohesive their shared voice appears to the staff, the more power and influence they will obtain.

### **Focus on Inter-professional Education**

The potential to nourish the growth of the co-leadership model should begin early in healthcare professionals' careers, starting as early as pre-licensure education programs for nurses and physicians. As students learn about quality improvement and patient safety initiatives, it will be important to introduce the concepts of partnered leadership at the same time.

Creating a paradigm shift in the hospital culture is not easy. So, as universities have already begun addressing patient safety through inter-professional education of teamwork at the bedside, we are best served by capturing the attention of our young leaders, and introducing nurse-physician co-leadership as a valuable leadership model in healthcare today.

### **Conclusion**

Despite the limited empirical evidence of nurse-physician co-leadership in U.S. hospitals today, there are numerous reasons to incorporate a nurse-physician co-leadership model into our leadership structures. The literature examining co-leadership in business and education has established the relevance, usefulness and practicality of this plural leadership model. So instead of asking - *Should we?*, the question needs to be- *How do we?* This study is a step toward moving the science forward, in that it provides several contributions to the understanding of nurse-physician co-leadership, and to the literature on plural leadership in general. By increasing the understanding of factors that enhance or hinder the chances that a particular pairing of leaders will succeed, and by suggesting a tool to clearly describe the nature of their work together, the reality of using nurse-physician co-leadership as a strategy to enhance the implementation of Q&PS initiatives in U.S. hospitals is well within our reach.

Nurse-physician co-leadership is a plural leadership model with many potential advantages. The strength of partnered leadership lies in the combination of individual leaders' complementary competencies within a shared role. In this study, the findings suggested that nurse and physician co-leaders combine their skills of management, their professional expertise, their ability to process information, their social roles and their political power to achieve outcomes. The success of their performance together was linked to the development of the shared role.

The co-leaders achieved many of the important competencies listed by the National Center for Healthcare Leadership (2006) that they may not have achieved as a solo leader. The co-leaders established a system for getting and sharing information. They described obtaining valuable information by consulting with a range of resources, in order to get at the root of the problem. They described their commitment to helping the staff to succeed in order to create a

positive affective climate within the department, as well as a means to ensure that the patients received the best care possible. They established and maintained relationships with their colleagues and staff, and the combination of their two networks enabled a broad scope of influence within the department.

The co-leaders described holding people accountable to standards of performance by using the influence of their combined positional power. They imposed high standards of performance, and confronted performance problems together to ensure a timely resolution of deficiencies. They applied understanding of formal and informal structures within the hospital to build coalitions to address Q&PS goals. They were accountable to each other for their contributions to the dyad's success, at the same time protecting the reputation of the dyad by providing open and honest feedback in the privacy of the twosome. The co-leaders spoke of their partnership in a positive manner, and genuinely expressed valuing their partners' input and expertise. They displayed a willingness to learn from their partner, publicly crediting their partner's performance, thus creating a culture and symbol of effective nurse-physician collaborations. These various outcomes may not have been achieved by these same individuals working separately in a solo leadership structure.

Moving forward in this field of research, utmost attention must be given to the inconsistencies in the use of plural leadership terms. Use of the information presented in this study will help future scholars to differentiate the terms. With the challenges we face in interchangeable concepts and terms, the potential to dilute or confuse the key concepts is ripe. Words like collaboration, teamwork, and integration can all be considered in their own right, outside the phenomenon of co-leadership. It is important that terms do not become tangled, and the presence of co-leadership is correctly identified. That will ensure a true understanding of the practice and a rigorous evaluation of its potential.

In addition, attention should be given to the unique ways plural leadership can be measured. A roadmap was presented for the development of an evaluation instrument for nurse-physician co-leadership. Starting with the work of Steinert et al. (2006), antecedents, process measures, 1<sup>st</sup> and 2<sup>nd</sup> level outcomes and balance measures have already been identified. The findings presented in this study can be used to facilitate the next steps of instrument development.

Lastly, tools have been provided in this study to assist administrators with the development of these shared roles and increase their appreciation of the dynamic nature of co-leadership. The potential for nurse-physician co-leaders to be effective in implementing Q&PS initiatives is real, and with the support of hospital administrators, this success can be realized.

### References

- Agency for Healthcare Research and Quality, (2008). *TeamSTEPPS: Strategies and tools to enhance performance and patient safety* (Publication No. 06-0020-2, 2nd ed.). Washington, DC: Agency for Healthcare Research and Quality.
- Agency for Healthcare Research and Quality, (2013a). AHRQ Survey on Patient Safety Culture website. Retrieved at <http://www.ahrq.gov/professionals/quality-patient-safety/patientsafetyculture/index.html>
- Agency for Healthcare Research and Quality, (2013b). AHRQ Health Care Innovations Exchange website. Retrieved at <http://www.innovations.ahrq.gov/>
- Alexander, J. A. (2008). *Quality improvement in healthcare organizations: A review of research on QI implementation*. Washington, D.C.: Institute of Medicine.
- Altheide, D.L. & Johnson, J.M. (1994). Criteria for Assessing Interpretive Validity. In N. K. Denzin & Y. S. Lincoln (Eds.). *Handbook of qualitative research*, London: Sage.
- Alvarez, J. L., Svejnova, S., & Vives, L. (2007). Leading in pairs. *Sloan Management Review*, 48(4), 10-14.
- American Organization of Nurse Executives. (2006). Nurse manager leadership partnership learning domain framework. Retrieved from <http://www.aone.org/resources/leadership%20tools/NMLPframework.shtml>
- Ancona, D., Malone, T. W., Orlikowski, W. J., & Senge, P. M. (2007). In praise of the incomplete leader. *Harvard Business Review*, Feb., 93-100.
- Avakian, L. (2011). *Helping physicians become great managers and leaders: Strategies that work*. Chicago, IL: AHA Press.
- Arnone, M., & Stumpf, S. A. (2010). Shared leadership: From rivals to co-CEOs. *Strategy and Leadership*, 38(2), 15-21.
- Avolio, B. J., Walumbwa, F. O., & Weber, T. J. (2009). Leadership: Current theories, research, and future directions. *Annual Review of Psychology*, 60, 421-449.
- Baldwin, K., Dimunation, N., & Alexander, J. (2011). Health care leadership and the dyad model. *Physician Executive*, 37(4).
- Barenfinger, J., Sauter, R. L., & Lang, D. L. (2004). Improving patient safety by repeating (read-back) telephone reports of critical information. *American Journal of Clinical Pathology*, 121, 801-803.



- Batalden, P. B., Nelson, E. C., Mohr, J. J., Godfrey, M. M., Huber, T. P., Kosnik, L., & Ashling, K. (2003). Microsystems in health care: Part 5. How leaders are leading. *Joint Commission Journal on Quality & Safety*, 29(6), 297-308.
- Bhansing, P. V., Leenders, M. A. A. M., & Wijnberg, N. M. (2012). Performance effects of cognitive heterogeneity in dual leadership structures in the arts: The role of selection system orientations. *European Management Journal*, 30(6), 523-534.
- Birken, S. A., Bryan, S. D., & Weiner, J. (2012). Uncovering middle managers' role in healthcare innovation implementation. *Implementation Science*, 7(28).
- Bolden, R. (2011). Distributed leadership in organizations: A review of theory and research. *International Journal of Management Reviews*, 13(3), 251-269.
- Bolman, L. G., & Deal, T. E. (2008). *Reframing organizations: Artistry, choice, and leadership* (4th ed.). San Francisco, CA: Jossey-Bass.
- Boston-Fleischhauer, C. (2008). Enhancing healthcare process design with human factors engineering and reliability science- Part 1: Setting the context. *Journal of Nursing Administration*, 38(1), 27--32.
- Brennan, P. J., Rich, V., Doyle, J., & May, L. (2010). Leadership "machinery" for transitions-in-care at Penn medicine. Presentation made at the *American Hospital Association/Health Forum Leadership Summit*, San Diego, CA.
- Brunt, B. A., & Gifford, I. L. (2009). Patient safety, quality care, and service utilization with PLATO (physician leadership for accurate and timely orders): A pilot study. *Journal for Nurses in Staff Development*, 25(4), 11-15.
- Bujak, J. (2009). Engaging physicians in efforts to improve patient safety and clinical quality. *The Governance Institute*. Retrieved from <http://www.governanceinstitute.com/ResearchPublicationsResourceLibrary/tabid/185/CategoryID/71/List/1/Level/a/ProductID/1008/Default.aspx?SortField=DateCreated+DESC%2cDateCreated+DESC>
- Bunnell, T. (2008). The yew chung model of dual culture co-principalship: A unique form of distributed leadership. *International Journal of Leadership in Education*, 11(2), 191-210.
- Burke, M., Boal, J., & Mitchell, R. (2004). Communicating for better care: Improving nurse-physician communication. *American Journal of Nursing*, 104(12), 40-47.
- Carson, J.B., Tesluk, P.E., & Marrone, J.A. (2007). Shared leadership in teams: An investigation of antecedent conditions and performance. *Academy of Management Journal*, 50(5), 1217-1234

- Casanova, J. (2008). Medical staffs and nursing staffs: The need for joint leadership. *Physician Executive, 34*(6), 24-27.
- Cashman, S. B., Flanagan, P., Silva, M. A., & Candib, L. M. (2012). Partnering for health: Collaborative leadership between a community health center and the YWCA central Massachusetts. *Journal of Public Health Management and Practice, 18*(3), 279-287.
- Centers for Medicare and Medicaid Services. (2011). Retrieved from <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/downloads/highlights.pdf>
- Christensen, C. M., Grossman, J., & Hwang, J. (2009). *The innovator's prescription: A disruptive solution for health care*. New York, NY: McGraw-Hill.
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Cote, J. E., & Levine, C. G. (2002). *Identity, formation, agency, and culture: A social psychological synthesis*. Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Court, M. (2003). Towards democratic leadership: Co-principal initiatives. *International Journal of Leadership in Education, 6*(2), 161-183.
- Court, M. (2007). Changing and/or reinscribing gendered discourses of team leadership in education? *Gender and Education, 19*(5), 607-626.
- Crabtree, B. F., & Miller, W. L. (1999). Using codes and code manuals: A template organizing style of interpretation. In B. F. Crabtree, & W. L. Miller (Eds.), *Doing qualitative research in primary care: Multiple strategies* (2nd ed., pp. 163-177). Newbury Park, CA: Sage Pub.
- Creswell, JW. (1998). *Qualitative inquiry and research design choosing among five traditions*. Thousand Oaks, CA: Sage Publications.
- Creswell, J. W., Hanson, W. E., Clark Plano, V. L., & Morales, A. (2007). Qualitative research designs: Selection and implementation. *Counseling Psychologist, 35*(2), 236-264.
- Damschroder, L. J., & Hagedorn, H. J. (2011). A guiding framework and approach for implementation research in substance use disorders treatment. *Psychology of Addictive Behaviors, 25*(2), 194-205.
- Day, D. V., Gronn, P., & Salas, E. (2006). Leadership in team-based organizations: On the threshold of a new era. *Leadership Quarterly, 17*(3), 211-216.
- Dayton, E., & Henriksen, K. (2007). Communication failure: Basic components, contributing factors, and the call for structure. *Joint Commission Journal on Quality & Patient Safety, 33*(1), 34-47.

- Denis, J.L., Langley, A., & Sergi, V. (2012). Leadership in the plural. *Academy of Management Annals*, 6(1), 211-283.
- Denzin, N.K., & Lincoln, Y.S. (2000). The discipline and practice of qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.) *Handbook of qualitative research* (2<sup>nd</sup> ed.). pp. 1-32, Thousand Oaks: Sage Publications.
- Disch, J., Beilman, G., & Ingbar, D. (2001). Medical directors as partners in creating healthy work environments. *AACN Clinical Issues*, 12(3), 366-377.
- Disch, J. (2006). *Improving patient safety through Physician/Nurse partnerships: Seed grant application to AONE institute for patient care research & education*. Unpublished manuscript.
- Dopson, S., & Fitzgerald, L. (2006). The role of the middle manager in the implementation of evidence-based health care. *Journal of Nursing Management*, 14(1), 43-51.
- Duffield, C. M., Roche, M. A., Blay, N., & Stasa, H. (2011). Nursing unit managers, staff retention and the work environment. *Journal of Clinical Nursing*, 20(1-2), 23-33.
- Eckman, E. (2006). Co-principals: Characteristics of dual leadership teams. *Leadership and Policy in Schools*, 5(2).
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107-115.
- Fischbach, L. M., Smerz, C., Findlay, G., Williams, C., & Cox, A. (2007). Co-CEOs: A new leadership paradigm for social service agencies. *Families in Society*, 88(1), 30-34.
- Fitzsimons, D., James, K. T., & Denyer, D. (2011). Alternative approaches for studying shared and distributed leadership. *International Journal of Management Reviews*, 13(3), 313-328.
- Friedrich, T. L., Vessey, W. B., Schuelke, M. J., Ruark, G. A., & Mumford, M. D. (2009). A framework for understanding collective leadership: The selective utilization of leader and team expertise within networks. *Leadership Quarterly*, 20(6), 933-958.
- Follett, M. P. (1924). *Creative experience*. New York: Longmans, Green & Co.
- Gallagher, K., Nutting, P. A., Nease Jr., D. E., Graham, D. G., Bonham, A. J., Dickinson, W. P., & Main, D. S. (2010). It takes two: Using coleaders to champion improvements in small primary care practices. *Journal of the American Board of Family Medicine*, 23(5), 632-639.
- Gibb, C.A. (1954). Leadership. In G. Lindzey (Ed.), *Handbook of social psychology*, 2 (pp. 877-917). Reading, MA: Addison-Wesley.
- Gilmore, T. N. (1999). *Briefing notes: Productive pairs*. (Internal Working Paper No. RES7:990120). Philadelphia, PA: Center for Applied Research.

- Gilmore, T. N. (2010). Challenges for physicians in leadership roles: Silos in the mind. *Organizational & Social Dynamics, 10*(2), 279-296.
- Goeschel, C. A., Wachter, R. M., & Pronovost, P. J. (2010). Responsibility for quality improvement and patient safety: Hospital board and medical staff leadership challenges. *Chest, 138*(1), 171-178.
- Gourevitch, M. N., Caronna, C. A., & Kalkut, G. (2005). Acute care. In A. R. Kovner & J. R. Knickman (Eds.), *Jonas & Kovner's health care delivery in the United States* (8th ed.) pp. 212-247. New York: Springer Publishing Co.
- Graneheim, U. H., & Lundman, B. (2004). Qualitative content analysis in nursing research: Concepts, procedures and measures to achieve trustworthiness. *Nurse Education Today, 24*(2), 105-112.
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. *Milbank Quarterly, 82*(4), 581-629.
- Greider, K. (2012). The worst place to be when you're sick. *AARP Bulletin, 53*(2), 10-14.
- Gronn, P. (2002). Distributed leadership as a unit of analysis. *Leadership Quarterly, 13*(4), 423-451.
- Gronn, P. (2009). Leadership configuration. *Leadership, 5*(3), 381-394.
- Gronn, P., & Hamilton, A. (2004). 'A bit more life in the leadership': Co-principalship as distributed leadership practice. *Leadership and Policy in Schools, 3*(1), 3-35.
- Grubb, W.N., & Flessa, J.J. (2006). "A job too big for one": Multiple principals and other nontraditional approaches to school leadership. *Educational Administration Quarterly, 42*, 4. 518- 550.
- Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation*. Newbury Park, CA: Sage Publications.
- Guba, E. G. & Lincoln, Y. S. (2005). Paradigmatic controversies, contradictions and emerging confluences. I In N. K. Denzin & Y. S. Lincoln (Eds.). *Handbook of qualitative research*, (3<sup>rd</sup> ed.) London: Sage Publications.
- Hammersley, M. (1990). *Reading ethnographic research: A critical guide*. New York: Longman.
- Havens, D.S., Gittel, J.H., Vasey, J., & Lin, W.T. (2010). Relational coordination among nurses and other disciplines: Impact on the quality of patient care. *Journal of Nursing Management, 18*(8), p. 926-937.

- Hayes, C., Yousefi, V., Wallington, T., & Ginzburg, A. (2010). Case study of physician leaders in quality and patient safety, and the development of a physician leadership network. *Healthcare Quarterly*, 13(Spec No), 68-73.
- Hendren, R. (2010). Six steps to ensure new nurse manager success. *Health Leader Media*, (22).
- Heenan, D. A. & Bennis, W. (1999). *Co-leaders: The power of great partnerships*. New York, NY: John Wiley & Sons, Inc.
- Hines, S., Luna, K., & Loftus, J. (2008). *Becoming a high reliability organization: Operational advice for hospital leaders* (Publication No. 08-0022). Rockville, MD. Agency for Healthcare Research and Quality.
- Hodgson, R.C., Levinson, D.J., & Zaleznik, A. (1965). *The executive role constellation*. Boston, MA: Harvard Business School Press.
- Hollander, E.P., & Julian, J.W. (1969). Contemporary trends in the analysis of leadership processes. *Psychological bulletin*, 71, 387-397.
- Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277-1288.
- Huston, C. (2008). Preparing nurse leaders for 2020. *Journal of Nursing Management*, 16(8), 905-911.
- Iedema, R., Degeling, P., Braithwaite, J., & White, L. (2004). 'It's an interesting conversation I'm hearing': The doctor as manager. *Organization Studies*, 25(1), 15-33.
- Ingersoll, G. L. & Schmitt, M. (2004). Interdisciplinary collaboration, team functioning and patient safety. In Institute of Medicine (Ed.). *Keeping patients safe: Transforming the work environment of nurses* (pp. 341-383). Washington, DC: National Academies Press.
- Institute for Healthcare Improvement. (2006). *Protecting 5 million lives from harm*. Retrieved from <http://www.ihp.org/offerings/Initiatives/PastStrategicInitiatives/5MillionLivesCampaign/Pages/default.aspx>
- Institute of Medicine. (1999). In L. T. Kohn, J. M. Corrigan, & M. S. Donaldson (Eds.), *To err is human: Building a safer health system*. Washington, D.C.: National Academy Press
- Institute of Medicine. (2001). *Crossing the quality chasm: A new health system for the 21st century*. Washington, D.C.: National Academy Press.
- Institute of Medicine. (2010). In: D.E. Shalala & L. Burnes Bolton (Eds.). *The future of nursing: Leading change, advancing health*. Washington, D.C.: National Academy of Sciences.

- Jennings, B.M., Disch, J., & Senn, L.A. (2008). Leadership. *Patient safety and quality: An evidence-based handbook for nurses*. Rockville, MD: Agency for Healthcare Research and Quality.
- Joint Commission. (2009). *Sentinel event alert, Issue 43: Leadership committed to safety*. Retrieved from [http://www.jointcommission.org/sentinel\\_event\\_alert\\_issue\\_43\\_leadership\\_committed\\_to\\_safety/](http://www.jointcommission.org/sentinel_event_alert_issue_43_leadership_committed_to_safety/)
- Joint Commission, (2013a). *National Patient Safety Goals*. Retrieved from [http://www.jointcommission.org/2013\\_npsgs\\_slides/](http://www.jointcommission.org/2013_npsgs_slides/)
- Joint Commission. (2013b). *Sentinel event data- Root causes by event type*. Retrieved from [http://www.jointcommission.org/sentinel\\_event.aspx](http://www.jointcommission.org/sentinel_event.aspx)
- Kaissi, A. (2005). Manager-physician relationships: An organizational theory perspective. *Health Care Manager, 24*(2), 165-176.
- Kaissi, A. (2008). The role of nursing in bridging the gap between managers and physicians in hospitals. *Health Care Manager, 27*(2), 113-7.
- Kim, C. S., Calarco, M., Jacobs, T., Loik, C., Rohde, J., McClish, D., . . . Campbell, D. A., Jr. (2012). Leadership at the front line: A clinical partnership model on general care inpatient units. *American Journal of Medical Quality, 27*(2), 106-111.
- Kramer, M., & Schalenberg, C. (2003). Securing "good" nurse physician relationships: Exploring the link between collaboration and quality of patient care. *Nursing Management, 34*(7), 34-38.
- Leeman, J., & Sandelowski, M. (2012). Practice-based evidence and qualitative inquiry. *Journal of Nursing Scholarship, 44*(2), 171-179.
- Lencioni, P. (2002). *The five dysfunctions of a team: A leadership fable*. San Francisco, CA: Jossey-Bass.
- Leonard, M., Graham, S., & Vonacum, D. (2004). The human factor: The critical importance of effective teamwork and communication in providing safe care. *Quality and Safety in Health Care, 13*(Suppl 1), 185-190.
- Leslie, J. B. (2009). *The leadership gap: What you need, and don't have, when it comes to leadership talent*. Greensboro, NC: Center for Creative Leadership.
- Levinson, D. R. (2010). *Adverse events in hospitals: National incidence among Medicare beneficiaries* (No. OEI-06-09-00090). Department of Health and Human Services: Office of the Inspector General.
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: Sage Publications.

- Lofland, J., & Lofland, L.H. (1995). *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis*, (3rd ed.) Belmont, CA: Wadsworth.
- Macphee, M., & Suryaprakash, N. (2012). First-line nurse leaders' health-care change management initiatives. *Journal of Nursing Management*, 20(2), 249-259.
- Manojlovich, M. (2005). The effect of nursing leadership on hospital nurses' professional practice behaviors. *Journal of Nursing Administration*, 35(7-8), 366-374.
- Marini, S. D., & Hasman, A. (2009). Impact of BCMA on medication errors and patient safety: A summary. *Studies in Health Technology and Informatics*, 146, 439-444.
- Marquis, B. L., & Huston, C. (2012). *Leadership and management tools for the new nurse: A case study approach*. Philadelphia, PA: Lippincott, Williams & Wilkens.
- McCallin, A. M., & Frankson, C. (2010). The role of the charge nurse manager: A descriptive exploratory study. *Journal of Nursing Management*, 18(3), 319-325.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis* (2nd ed.). Thousand Oaks, CA: Sage.
- Miles, S. A., & Watkins, M. D. (2007). The leadership team: Complementary strengths or conflicting agendas? *Harvard Business Review*, 90-98
- Mintzberg, H. (1983). *Structure in fives: Designing effective organizations*. Englewood Cliffs, NJ: Prentice-Hall.
- Mishler, E. G. (1986). *Research interviewing: Context and narrative*. Cambridge, MA: University Press.
- Morse, J. M. (1994). 'Emerging from the data': The cognitive processes of analysis in qualitative inquiry. In J. M. Morse (Ed.), *Critical issues in qualitative research methods* (1st ed., pp. 22-43). Thousand Oaks, CA: Sage Publications.
- Morse, J. M. (2010). How different is qualitative health research from qualitative research? Do we have a subdiscipline? *Qualitative Health Research*, 20(11), 1459-1464.
- Muller, A., McCauley, K., Harrington, P., Jablonski, J., & Strauss, R. (2011). Evidence-based practice implementation strategy: The central role of the clinical nurse specialist. *Nursing Administration Quarterly*, 35(2), 140-151.
- National Center for Healthcare Leadership. (2006). Health leadership competency model Retrieved from <http://www.nchl.org/static.asp?path=2852,3238>
- National Priorities Partnership. (2010). *Preventing medication errors: A \$21 billion opportunity*. Washington, DC: National Quality Forum.

- National Quality Forum. (2003). *Serious reportable events*. Retrieved from [http://www.qualityforum.org/Topics/SREs/Serious\\_Reportable\\_Events.aspx](http://www.qualityforum.org/Topics/SREs/Serious_Reportable_Events.aspx)
- National Quality Forum. (2009). *Safe practices for better healthcare - 2009 update*. Retrieved from [http://www.qualityforum.org/Publications/2009/03/Safe\\_Practices\\_for\\_Better\\_Healthcare%e2%80%932009\\_Update.aspx](http://www.qualityforum.org/Publications/2009/03/Safe_Practices_for_Better_Healthcare%e2%80%932009_Update.aspx)
- Nelson, E. C., Batalden, P. B., Huber, T. P., Mohr, J. J., Godfrey, M. M., Headrick, L. A., & Wasson, J. H. (2002). Microsystems in health care: Part 1. Learning from high-performing front-line clinical units. *Joint Commission Journal on Quality Improvement*, 28(9), 472-493.
- Nelson, E. C., Godfrey, M. M., Batalden, P. B., Berry, S. A., Bothe, A. E., Jr, McKinley, K. E., . . . Nolan, T. W. (2008). Clinical microsystems, part 1. The building blocks of health systems. *Joint Commission Journal on Quality & Patient Safety*, 34(7), 367-378.
- Northouse, P.G., (2010). *Leadership: Theory and Practice*. (5th ed.). Thousand Oaks, CA: Sage Publications.
- O'Toole, J., Galbraith, J., & Lawler, E. E. (2002). When two (or more) heads are better than one: The promise and pitfalls of shared leadership. *California Management Review*, 40(4), 65-83.
- Patterson, K., Grenny, J., McMillan, R., & Switzler, A. (2012). *Crucial conversations: Tools for talking when stakes are high*. (2<sup>nd</sup> ed.) New York: McGraw Hill
- Paré, S., Menzies, T. V., Filion, L. J., & Brenner, G. A. (2008). Social capital and co-leadership in ethnic enterprises in Canada. *Journal of Enterprising Communities*, 2(1), 52-72.
- Patton, M. Q. (2001). *Qualitative research and evaluation methods*. (2<sup>nd</sup> ed.). Thousand Oaks: Sage Publications.
- Patton, P., & Pawar, M. (2012). New clinical executive models: One system's approach to chief nursing officer-chief medical officer co-leadership. *Nursing Administration Quarterly*, 36(4), 320-324.
- Pearce, C. L., & Conger, J. A. (2003). *Shared leadership: Reframing the how's and why's of leadership*. Thousand Oaks, CA: Sage Publications.
- Perren, A., Conte, P., De Bitonti, N., Limoni, C., & Merlani, P. (2008). From the ICU to the ward: Cross-checking of the physician's transfer report by intensive care nurses. *Intensive Care Medicine*, 34(11), 2054-2061.
- Pirnejad, H., Niazkhani, Z., van der Sijs, H., Berg, M., & Bal, R. (2009). Evaluation of the impact of a CPOE system on nurse-physician communication--a mixed method study. *Methods of Information in Medicine*, 48(4), 350-360.



- Porter-O'Grady, T. (1992). Of quorums and quality: Integrating shared governance and continuous quality improvement. *Aspen's Advisor for Nurse Executives*, 7(10), 6-8.
- Powell-Cope, G., Nelson, A. L., & Patterson, E. S. (2008). Patient care technology and safety. In: R. G. Hughes (Ed.), *Patient safety and quality: An evidence-based handbook for nurses*. Rockville, MD.: Agency for Healthcare Research and Quality.
- QSR (2013). NVivo 8: A qualitative research software product developed by QSR International, Victoria, Australia. Retrieved from <http://www.qsrinternational.com>.
- Rau, J. (2012). Medicare discloses hospital's bonuses, penalties by quality. *Kaiser Health News*, Dec 20.
- Reid-Ponte, P. (2004). Nurse-physician co-leadership: A model of interdisciplinary practice governance. *Journal of Nursing Administration*, 34(11), 481-4.
- Reid, W., & Karambayya, R. (2009). Impact of dual executive leadership dynamics in creative organizations. *Human Relations*, 62(7), 1073-1112.
- Reynolds, S. (2012). Evolving roles for physician leaders. *Massachusetts Medical Society Physician Leadership Institute*.
- Roberto, M. A. (2009). *Know what you don't know: How great leaders prevent problems before they happen*. Upper Saddle River, NJ: Wharton School of Publishing.
- Rogers, E. M. (2003). *Diffusion of innovations* (5<sup>th</sup> ed.). New York: The Free Press.
- Rosengren, K., & Bondas, T. (2010). Supporting "two-getherness": Assumption for nurse managers working in a shared leadership model. *Intensive and Critical Care Nursing*, 26(5), 288-295.
- Rossman, G. B., & Rallis, S. F. (2003). *Learning in the field: An introduction to qualitative research* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage
- Rycroft-Malone, J. (2004). The PARIHS framework--a framework for guiding the implementation of evidence-based practice. *Journal of Nursing Care Quality*, 19(4), 297-304.
- Rycroft-Malone, J. (2008). Leadership and the use of evidence in practice. *Worldviews on Evidence-Based Nursing*, 5(1), 1-2.
- Salas, E., Gregory, M. E., & King, H. B. (2011). Team training can enhance patient safety--the data, the challenge ahead. *Joint Commission Journal on Quality & Patient Safety*, 37(8), 339-340.
- Sandelowski, M. (1995). Sample size in qualitative research. *Research in Nursing and Health*, 18(2), 179-183.

- Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing and Health*, 23(4), 334-340.
- Sandelowski, M. (2004). Using qualitative research. *Qualitative Health Research*, 14(10), 1366-1386.
- Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing and Health*, 33(1), 77-84.
- Sandelowski, M. & Barroso, J., (2002). Finding the findings in qualitative studies. *Journal of Nursing Scholarship*, 34(3), 213-219.
- Schmalenberg, C., & Kramer, M. (2009). Nurse-physician relationships in hospitals: 20,000 nurses tell their story. *Critical Care Nurse*, 29(1), 74-83.
- Schmalenberg, C., Kramer, M., King, C., Krugman, M., Lund, C., Poduska, D., & Rapp, D. (2005). Excellence through evidence: Securing collegial/collaborative nurse-physician relationships, part 1. *Journal of Nursing Administration*, 35(10), 450
- Schnipper, J. L. Hamann, C., Ndumele, C. D., Liang, C. L., Carty, M. G., Karson, A. S.,... Gandhi, T. K. (2009). Effect of an electronic medication reconciliation application and process redesign on potential adverse drug events: A cluster-randomized trial. *Archives of Internal Medicine*, 169(8), 771-780.
- Schnurr, S., & Chan, A. (2011). Exploring another side of co-leadership: Negotiating professional identities through face-work in disagreements. *Language in Society*, 40(2), 187-209
- Sergi, V., Denis, J.L., & Langley, A. (2012). Opening up perspectives on plural leadership. *Industrial and Organizational Psychology*, 5(4), 403-407.
- Sexton, A., Chan, C., & Elliott, M. (2004). Nursing handovers: Do we really need them? *Journal of Nursing Management*, 12, 37-42.
- Shekelle, P. G., Pronovost, P. J., Wachter, R. M., Taylor, S. L., Dy, S. M., Foy, R., . . . Walshe, K. (2011). Advancing the science of patient safety. *Annals of Internal Medicine*, 154(10), 693-696.
- Sherman, R. O., Bishop, M., Eggenberger, T., & Karden, R. (2007). Development of a leadership competency model. *Journal of Nursing Administration*, 37(2), 85-94.
- Spillane, J. P. (2006). *Distributed leadership*. San Francisco, CA: Jossey-Bass.
- Stagg-Elliott, V. (2012). Hospitals' new physician leaders: Doctors wear multiple medical hats. *Amednews.Com*, (April 2011)
- Staggers, N., & Jennings, B. M. (2009). The content and context of change of shift report on medical and surgical units. *The Journal of Nursing Administration*, 39(9), 393-398.

- Steinert, T., Goebel, R., & Rieger, W. (2006). A nurse-physician co-leadership model in psychiatric hospitals: Results of a survey among leading staff members in three sites. *International Journal of Mental Health Nursing, 15*(4), 251-257.
- Stemler, S. (2001). An overview of content analysis. Retrieved from <http://PAREonline.net/getvn.asp?v=7&n=17>
- Symon, G. & Cassell, C., (2004). *Essential guide to qualitative methods in organizational research*. London: Sage Publications.
- Symon, G. & Cassell, C., (2012). *Qualitative organizational research: Core methods and current challenges*. London: Sage Publications.
- Thomas, E., & Magilvy, J. K. (2011). Qualitative rigor or research validity in qualitative research. *Journal for Specialists in Pediatric Nursing, 16*(2), 151-155.
- Thorpe, R., Gold, J., & Lawler, J. (2011). Locating distributed leadership. *International Journal of Management Reviews, 13*(3), 239-250.
- van Manen, M. (1997). *Researching lived experience: Human science for an action sensitive pedagogy* (2<sup>nd</sup> ed.). Toronto, Ontario: Transcontinental Printing Inc.
- Vine, B., Holmes, J., Marra, M., Pfeifer, D., & Jackson, B. (2008). Exploring co-leadership talk through interactional sociolinguistics. *Leadership, 4*(3), 339-360.
- Walker, J. (2001). Developing a shared leadership model at the unit level. *Journal of Perinatal and Neonatal Nursing, 15*(1), 26-39.
- Walsh, K.E., Ettinger, W.H., & Klugman, R.A. (2009). Physician quality officer: A model for engaging physicians in quality improvement. *American Journal of Medical Quality, 24*(4), 295- 301
- Walsh, K. E., Landrigan, C. P., Adams, W. G., Vinci, R. J., Chessare, J. B., Cooper, M. R.,...Bauchner, H. (2008). Effect of computer order entry on prevention of serious medication errors in hospitalized children. *Pediatrics, 121*(3), e421-427.
- Weeks, M. (2005). Nurse physician communication in the perioperative environment: Discourse and actions to transform health care. *Canadian Operating Room Nursing Journal, 23*(1), 48.
- Weiner, B. J., Amick, H. R., Lund, J. L., Lee, S. Y., & Hoff, T. J. (2011). Use of qualitative methods in published health services and management research: A 10-year review. *Medical Care Research & Review, 68*(1), 3-33.
- Weitzman, E. A. (2000). Software and qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *Handbook of qualitative research* (2<sup>nd</sup> ed.), pp. 803-820). Thousand Oaks: Sage Pub.

- Wilhelmson, L. (2006). Transformative learning in joint leadership. *Journal of Workplace Learning, 18*(7-8), 495-507.
- Wyman, O. (2005). *Designing effective co-leadership*. Delta Organization & Leadership, L.L.C. Retrieved from [http://www.oliverwyman.com/pdf\\_files/Designing\\_Effective\\_Co-Leadership\\_WP.pdf](http://www.oliverwyman.com/pdf_files/Designing_Effective_Co-Leadership_WP.pdf)
- Yammarino, F. J., Salas, E., Serban, A., Shirreffs, K., & Shuffler, M. L. (2012). Collectivistic leadership approaches: Putting the "we" in leadership science and practice. *Industrial and Organizational Psychology, 5*(4), 382-402.
- Zander, L., & Butler, C. L. (2010). Leadership modes: Success strategies for multicultural teams. *Scandinavian Journal of Management, 26*(3), 258-267.
- Zwarenstein, M., Goldman, J., & Reeves, S. (2009). Interprofessional collaboration: Effects of practice-based interventions on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews, (3)*.

## Appendix A – Permission to Use Data Letter

## UNIVERSITY OF MINNESOTA

*Twin Cities Campus**School of Nursing**5-180 Weaver-Densford Hall  
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April 27, 2013

Institutional Review Board  
University of Minnesota  
D528 Mayo Memorial Building  
420 Delaware Street SE,  
Minneapolis MN 55455

RE: Ref # 0603E82892

As the principal investigator for the research referenced above, I am writing this letter to affirm that I have given doctoral student Laura Senn permission to use the data that were generated from that study in the secondary analysis that she is performing for her doctoral dissertation. Please let me know if there are further questions ([disch003@umn.edu](mailto:disch003@umn.edu)).

Thank you



Joanne Disch, PhD, RN, FAAN  
Clinical Professor  
University of Minnesota School of Nursing  
308 Harvard St SE  
Minneapolis MN 55455

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## Appendix B – IRB Approval

Section 2:

**Date:** 26 June, 2013

**RE:** The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #4 EXISTING DATA; RECORDS REVIEW; PATHOLOGICAL SPECIMENS.

**Study Number:** 13U6E36921

**Principal Investigator:** Laura Senn

**Title(s):** Nurse-Physician Co-leadership: Exploring a Strategy to Enhance the Implementation of Quality and Patient Safety Innovations in U.S. Hospitals

This e-mail confirmation is your official University of Minnesota HRPP notification of exemption from full committee review. You will not receive a hard copy or letter. This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

If you requested a waiver of HIPAA Authorization and received this e mail, the waiver was granted. Please note that under a waiver of the HIPAA Authorization, the HIPAA regulation [164.528] states that the subject has the right to request and receive an accounting of Disclosures of PHI made by the covered entity in the six years prior to the date on which the accounting is requested.

If you are accessing a limited Data Set and received this email, receipt of the Data Use Agreement is acknowledged.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at (612) 626-6854.

You may go to the View Completed section of eResearch Central at <http://eresearch.umn.edu/> to view further details on your study.

The IRB wishes you success with this research.

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## Appendix C – Consent Form

### CONSENT FORM

#### Improving Patient Safety through Effective Nurse-Physician Partnerships

You have been invited to be in the first phase of a research study that is investigating how partnerships between Physicians and Nurses who are in leadership positions may contribute to improving patient outcomes in acute care facilities. Invitations to participate have been sent only to nurse managers and medical directors who are partners in providing clinical and/or operational leadership at UMMC- Fairview.

We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by:

Joanne Disch, Professor of Nursing at the University of Minnesota, School of Nursing and Director, Katharine J Densford International Center for Nursing Leadership

#### Background Information

The purpose of this study is: To examine the perceptions of medical directors and nurse managers regarding the experience of being clinical and operations leaders, and the factors that help or hinder them in being effective co-leaders in improving patient outcomes.

#### Procedures:

If you agree to be in this study, we would ask you to do the following things:  
Take part in a 60-minute interview. The interview will be conducted in a private space away from the patient care area. It will be audio taped and then transcribed.

#### Risks and Benefits of being in the Study

There are no risks to you, the participant.

There are no benefits to you, the participant.

#### Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject.

Research records will be stored securely and only researchers will have access to the records.

Tapes will be destroyed at the end of the study (approximately 3 months from now). Any identifying information about the participant and/or the patient care unit where you work will be blackened out in the transcripts. Names of individuals who are mentioned in the interview will be changed to a letter code. The informants will be reminded that the information gleaned from the interviews will be reported generally and not attributable to any one person.

**Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota nor will it affect your employment at UMMC- Fairview. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

**Contacts and Questions:**

The researchers conducting this study are: Joanne Disch and Laura Senn. You may ask any questions you have now. If you have questions later, you are encouraged to contact them at University of Minnesota- School of Nursing,

Joanne Disch- 612-625-1187 disch003@umn.edu

Laura Senn 612-624-6488 sennx002@umn.edu

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

*You will be given a copy of this information to keep for your records.*

**Statement of Consent:**

I have read the above information, I have asked questions and have received answers. I consent to participate in the study.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Investigator: \_\_\_\_\_ Date: \_\_\_\_\_



## Appendix D – Interview Guide

### Improving Patient Safety through Physician-Nurse Partnerships

#### Interview Questions

I am interested in the topic of collaboration between nurses and physicians.

Tell me about a time; share an example/story about when you were collaborating with the medical director (nurse manager/director).

What went well?

What went poorly?

Give me this example in detail- from beginning, to middle, to end.

How would you define collaboration?

What factors have you found to be important in promoting collaboration?

- Among the nurse and physicians on your unit?

- Between you and the medical director (nurse manager/director)?

How long have you two worked together?

How would you characterize your relationship?

How do you view your role in relation to the medical director (nurse manager/director)?

What sorts of things were helpful to you in transitioning into your role?

What could have been done to make the transition easier?

In carrying out your role on a daily basis:

What prevents you from being as effective as you could be?

What helps you to be effective?

Are there any other comments you'd like to make regarding your role as a clinical leader or in regards to collaboration between physicians and nurses?

Submitted by- Laura Seim