1-1-2023

Medical Imaging Professionals Experiencing Workplace Interprofessional Conflict: A Phenomenological Study

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Medical Imaging Professionals Experiencing Workplace Interprofessional Conflict: A Phenomenological Study

by

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A Dissertation Presented to the
Halmos College of Arts and Sciences of Nova Southeastern University
in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy

Nova Southeastern University
2023

Robert C Moody Jr.
June 2023

Nova Southeastern University
Halmos College of Arts and Sciences

This dissertation was submitted by Robert Moody under the direction of the chair of the dissertation committee listed below. It was submitted to the Halmos College of Arts and Sciences and approved in partial fulfillment for the degree of Doctor of Philosophy in Conflict Analysis and Resolution at Nova Southeastern University.

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Dedications

I dedicate this work to my parents, Sandra Traynor and Robert Moody for always encouraging me to do my best, instilling the value of education, and helping me learn the value of hard work.

I also dedicate this work to my entire family, including those who are no longer with us, and who have always loved and supported me along this long journey. I may be the first, but I will not be the last.

And one final dedication: To the allied health professionals whose invaluable work saves millions of lives every year, often at great personal sacrifice.

Acknowledgments

I wish to thank my dissertation committee for agreeing to help me on this journey: Dr. Dustin Berna, Dr. Strawinska-Zanko, and Dr. Neil Katz.

Thank you, Kevin Traynor, for your support over the years and for being there when I needed you the most.

A special thank you goes to Dr. Jason Roberts for also being a part of my original committee, for your valuable insights, and for your patience and understanding.

Thank you, Dr. Nicole Quint and Dr. Stefan Buckman, for giving me friendly counsel along the way.

Thank you, Dr. Sam Yoders, for giving me the opportunity to teach at Nova Southeastern University and for placing your faith in me teaching vascular sonography to so many students.

Thank you to my coworkers for putting up with me during this stressful time in my life: Dr. Cathie Scholl, Dr. Stan Timofeev, Francine Leonard-Luckett, and Linda Beaulieu.

Thank you to all my students for putting up with me for all these years as I went through this journey.

And thank you to all my friends who are too many to mention for being there for me during the best of times and also during the lowest of times.

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Abstract

Workplace interprofessional conflict in hospitals presented serious concerns regarding patient care delivery and hospital efficiency at the systemic level. Literature evaluating conflict in hospitals inconsistently defined interprofessional conflict and oversampled nurses and physicians in research studies. An unknown systemic factor was likely influencing interprofessional conflict between healthcare professionals. Complex systems theory, the theory of professions, and social conflict theories were utilized to organize the literature review and guide research design targeting allied health professionals and their lived experiences with interprofessional conflict. Medical imaging professionals were selected as a purposeful sample within the larger population of allied health. Interpretive phenomenology was used as the research method exploring the lived experiences of ten medical imaging professionals through semi-structured interviews. Interprofessional conflict was present in the sample and emerged in four experiential themes: Territoriality, professional abuse, systemic disruptions, and demoralization. The meaning underlying these themes was a phenomenon called dual agency, also referred to as professional dissonance, indicating conflicting values between medical imaging professionals and their employers. Conflicting values between medical imaging professionals and the hospital system undermined the system's purpose and potentially influenced patient care delivery.

Keywords: Interprofessional conflict, medical imaging professionals, dual agency, hospitals, phenomenology, conflict resolution, professional dissonance

Chapter 1: Introduction to the Study

Exploring social conflict for the purpose of resolving it presents a daunting task for those involved in the field of conflict analysis and resolution. Workplace conflicts are particularly challenging as they involve not only micro-level interpersonal conflict, but also macro-level organizational conflict (Raines, 2013). This conflict may emerge from perceived differences (Hocker & Wilmot, 2014, pp. 13-21) or from overlapping incompatible social as well as professional boundaries (Abbott, 1988; Coser, 1956); such complexity proliferates limitless variables to consider if conflict were to be successfully resolved at the macro-level (Meadows, 2008; Rogers et al., 2013). Therefore, it is critical to encapsulate as much pertinent information as possible related to the conflict before proclaiming a diagnosis of the problem and offering solutions that may not resolve the underlying issues.

According to an integrative review by Almost et al. (2016) and a scoping review by Kim et al. (2017), interpersonal workplace conflict is an ongoing problem in health care, particularly affecting nurses and physicians in acute care hospitals. The primary concerns expressed by Almost and Kim were why hospitals experienced so much social conflict involving employees. Unfortunately, most of the literature reviewed by Almost and Kim focused on interpersonal conflict experiences concerning nurses and physicians. Absent from the literature—or marginalized as a miscellaneous category—were the experiences of allied health professionals who represent a significant population of hospital employees.

Providing both direct and indirect patient care in acute care hospitals, allied health professionals are vaguely defined as “those health professions that are distinct from

medicine and nursing" (ASAHP, 2018). Allied health professionals include over forty unique professions that are estimated to represent up to 60% of total healthcare workers in the United States (ASAHP, 2018). Apparently, not all hospital employees were represented, and the lived experiences of allied health professionals appeared to be marginalized in the literature reviewed by both Almost et al., (2016) and Kim et al., (2017). As a starting point for further research, their concerns inspired several questions, such as: Do we apply too much pressure to employees and hold too many expectations on hospitals and the professionals who work there; or are hospitals a reflection of our society as a place where latent conflicts manifest, exposing an inherently conflicted society?

After reviewing the collected literature pertaining to workplace conflict in hospitals, interpersonal conflict was a pervasive issue affecting nurses as both Almost et al., (2016) and Kim et al., (2017) claimed; but it also extended further into the hospital system via interprofessional conflicts. Interprofessional conflict involved one group of professionals engaged in conflict with another group of professionals, such as nurses versus doctors, or nurses and doctors versus allied health professionals (Bochatay et al., 2017; Kim et al., 2017). Given the expansive list of allied health professionals (ASAHP, 2018), it was necessary to focus on one purposeful sample of allied health professionals—medical imaging professionals—to identify interconnections within the hospital system that were potentially compromised due to interprofessional conflict. By examining the lived experiences of medical imaging professionals, it could strengthen the approach to resolving systemic conflict/s in acute care hospital systems (Bar-Yam, 2004; Rogers et al., 2013). The best way to accomplish this, from the lens of conflict analysis

and resolution, was to gather the stories of medical imaging professionals and understand their relationship to interprofessional conflict/s.

Chapter 1 introduced this dissertation, summarizing the background, purpose, and significance of this study. First, background information was provided to frame workplace conflict in health care as a pervasive issue that years of peer-reviewed studies have analyzed. Second, a summary of the problems uncovered from reviewing the literature in Chapter 2 was briefly discussed and framed as culturally relevant and worthy of research. Third, the purpose of this dissertation and the qualitative method to the research described in Chapter 3 was summarized; the two primary research questions necessitating the use of interpretive phenomenology were also introduced. Fourth, the significance of the research from Chapters 4 and 5 were summarized including relevant findings, limitations, and implications for future research. Finally, specific terms and phrases were defined for quick reference moving past Chapter 1.

Background

According to an integrative review conducted by Almost et al., (2016) and a scoping review by Kim et al., (2017), workplace conflict within health care systems was a major problem in the United States as well as globally. In the United States health care is the largest service-based industry "employing over 18 million individuals" with a remarkable 2.6% per year job growth rate accounting for one-third of all job growth through 2022 (Borkowski, 2016, p. 4). This growing industry exists in a state of economic "flux" from within and without, with "change" being constant within health care systems likely creating the impetus for workplace conflicts (Borkowski, 2016, pp. 4-5). According to peer-reviewed literature, the scope of this problem was alarming with

multiple studies indicating that workplace conflict was prevalent in acute care hospitals, primarily affecting nurses and physicians (Almost et al., 2016; Kim et al., 2017; Schlitzkus et al., 2014). This phenomenon of interpersonal workplace conflict in health care appeared to be heterogeneous in nature and multifactorial in its manifestation as well as exacerbation (Almost et al., 2016; Kim et al., 2017). Additionally, the effects of workplace conflict on hospitals elicited negative outcomes described by health care workers such as: High rates of employee turnover (Guidroz, Wang, & Perez, 2012), stress (Jones et al., 2013; Kelly et al., 2014), emotional exhaustion (Guidroz et al., 2012; Portoghese et al., 2017) burnout (Guidroz et al., 2012), horizontal violence (Ceravolo, et al., 2012; Goff, 2017; Hamblin L. E. et al., 2016) and decreased employee morale (Almost, et al., 2010). It was apparent from the literature that workplace conflict was perceived as a pervasive issue in hospitals involving nurses and physicians, yet it remained unclear how it was being addressed.

The failure to resolve workplace conflict in hospitals is costly for administrators as well as to the employees most affected by it. According to a report published by the Joint Commission (Scott & Gerardi, 2011) which oversees hospital accreditation in the U.S., conflict management is a necessary solution to avoid the financial burdens like high rates of staff turnover caused by conflict. Similar conclusions were expressed in an article that examined the potential legal ramifications of unresolved hospital conflict, suggesting that a conflict management system should be implemented to resolve issues internally through collaborative means (Morreim, 2014). In a service-based industry such as health care, the cost of labor is tremendous, including the training and retention of qualified nurses, physicians, and allied health professionals (Borkowski, 2016). With existing

nurse (University of St. Augustine, 2021) and physician (Boyle, 2020) shortages, hospitals must consider the loss of these professionals due to conflict-related issues as unacceptable. A conflict-endemic environment may lead to a potential human resource nightmare to maintain hospital staffing, as well as lead to potential negative effects on patients, such as medical errors related to miscommunication (Baldwin Jr & Daugherty, 2008). If a connection were made between workplace conflict and patient outcomes, this would be a stunning revelation that could have systemic ramifications.

Problem Statement

Two problems emerged after reviewing the literature related to interprofessional conflict and allied health professionals: The absence of allied health professionals' lived experiences with workplace conflict and the ambiguous definition/s of workplace conflict. Two literature reviews exploring conflict in hospitals focused on the phenomenon of interpersonal conflict involving nurses (Almost et al., 2016; Kim et al., 2017), presenting the first issue within the existing knowledge base as allied health professionals (ASAHP, 2018), comprising at least one-third of all hospital staff (HRSA, 2022), were noticeably absent from research sampling. Did allied health professionals experience workplace conflict, and if so, what form did this conflict take? According to the lived experience of allied health professionals, did workplace conflict in the hospital involve other health care professionals, or was it contained within their own profession? Currently, there are over forty distinct allied health professions (ASAHP, 2018) and obtaining a complete picture of interprofessional conflict involving this sample presented a daunting task. If allied health professionals worked under the same high stress conditions nurses reported in hospitals (Almost et al., 2016; Kim et al., 2017), it

suggested they too would experience the exact prevalence of conflict; however, without knowing their lived experiences, this is conjecture.

Workplace conflicts manifesting in hospital systems presents unique opportunities for conflict analysis due to their potential effects on patient care delivery (Borkowski, 2016; Hocker & Wilmot, 2014). Referencing an article by Baldwin & Daugherty (2008), Hocker & Wilmot wrote "Serious interprofessional conflict results in an alarmingly higher number of medical errors than when teamwork is not in conflict" (2014, p. 6); however, few studies have provided evidence to support this claim (Jerng et al., 2017; Kim et al., 2017). A specific, quantifiable factor directly impacting patient care and a validated measure of conflict prevalence specifically tailored explicitly care professionals remains elusive when exploring workplace conflict. Without having this quantitative data, it is challenging to engage conflict resolution methods such as dispute systems design (Rogers et al., 2013) to mitigate these workplace conflicts. Several pieces of literature suggested workplace conflict indirectly affected patient care by negatively impacting the health, safety, and morale of nurses as well as physicians (Almost et al., 2016; Kim et al., 2017). Health care professionals engaged in workplace conflict were more likely to experience the effects of burnout, stress, and decreased morale which negatively impact optimal job performance (Almost et al., 2010). Such negative impacts on the mental health and well-being of hospital employees may represent a major hindrance to the optimal delivery of patient care.

The second issue uncovered in the literature review was the inconsistent definitions of workplace conflict, leading to confusion about the context of this phenomenon. For example, some literature used the vernacular "intraprofessional

conflict" to describe conflict between nurses (Jehn et al., 2013), while others used the phrase "interprofessional conflict" to describe the same conflict between nurses (Guidroz et al., 2012). At face value, both definitions seemed clear; however, the term "interpersonal conflict" was also applied to both examples (Guidroz et al 2012; Jehn et al,, 2013), leading to an assumption that all conflict was the same when it was different in effect. Therefore, it was important to clearly define what conflict was and who was affected, as most literature exploring the topic in the hospital environment dealt with the generalized term interpersonal conflict. Unfortunately, research that examined interpersonal conflict predominantly focused on the nursing profession and made several surprising claims regarding its widespread, systemic impact (Almost et al., 2016; Kim et al., 2017). The evidence gathered from most qualitative studies examining hospital conflict suggested interpersonal conflicts were prevalent amongst and between nurses and physicians, with the outcomes of these interpersonal conflicts sometimes leading to mental health issues such as burnout, hostile behavior/s such as bullying, or healthcare workers leaving their jobs via attrition (Almost et al., 2016). These outcomes of conflict were assumed to have a direct impact upon patient care and much literature was dedicated to discovering the causes of the conflict to mitigate its emergence (Almost et al., 2010). On the surface it seemed obvious that nurses and physicians who were angry, tired, combative, or emotionally detached from their jobs would lead to patients receiving poorer health outcomes. However, what if those effects were too focused on the individuals when a potentially larger issue, such as a flawed system for efficiently dealing with patient care was the real culprit? If all health care professionals described the same conflicts and the same outcomes, would that suggest systemic factors are affecting the

lived experiences of health care workers? Gathering the lived experiences of allied health professionals may be the key to understanding if interprofessional conflict was a pervasive issue.

Potential causes, or as one piece of literature called “antecedents” (Almost et al., 2016), as well as the effects of workplace conflict in hospitals have been well-documented in peer-reviewed literature. However, evidence exploring the incidence of conflict involving allied health professionals, who comprise a large population of health care workers within the hospital, was lacking (Almost et al., 2016; Kim et al., 2017). Literature suggested the conflict described in hospitals was likely interprofessional, implying a systemic element may be involved given the interactions between allied health, nurses, and physicians (Gaudine et al., 2011; Jerng et al., 2017). To address interprofessional conflict and uncover if the hospital system was involved, complex systems theory would need to be utilized to identify elements within the hospital system and map the interconnections between them (Meadows, 2008). It is currently unknown if there is one primary, systemic element related to conflict, or if many elements and their interconnections within the system are related (Meadows, 2008). For instance, nurses and doctors are frequently in conflict with each other (Almost et al., 2016), but their conflict potentially extended its influence into their day-to-day involvement with facilitating care with allied health professionals when scheduling tests, coordinating therapy, or simply transporting the patient through the hospital; without knowing the lived experience of allied health professionals this assertion remains conjecture. It was also critical to understand if this conflict was “contagious” as one piece of literature suggested (Jehn et al., 2013) or was only prevalent in nurses and physicians.

The primary limitation noted in the literature were the broad generalizations made regarding the pervasiveness of hospital conflict when not all health professionals were included in the research sampling (Almost et al., 2016; Kim et al., 2017). Allied health professionals include over forty unique medical specialties comprising at least half of the average hospital workforce (ASAHP, 2018). Either willfully ignored due to sample/selection bias, or neglected due to oversight, allied health professionals are a vital part of patient care in hospitals. Researchers focusing on nursing or physicians have engaged in hyperopia, eager to draw broad conclusions without examining every element within a complex system (Meadows, 2008). To make an analogy: Analyzing the research pertaining to conflict in hospitals and drawing substantial conclusions was akin to a car mechanic performing a vehicle inspection, ignoring at least 1/3 of the vehicle, and then declaring it broken.

On the contrary, one piece of literature suggested specific allied health professionals in the United Kingdom—radiographers—were the least bothered by conflict and possessed higher rates of job satisfaction than doctors and nurses (Jones et al., 2013). Another piece of literature found allied health professionals scored higher in "agreeability" based on the "Big Five" personality test (Braithwaite et al., 2016), suggesting they are potentially more compassionate and trusting towards others and potentially less inclined toward conflict. The conclusions drawn from both Braithwaite et al., (2016) and Jones et al., (2013) suggested allied health professionals were not as affected by workplace conflict as nurses and physicians allegedly were (Almost et al., 2016). This population could represent either an outlier to the collected data on

workplace conflict in health care, or potentially represent a key to resolving workplace conflict if their lived experiences were collected and analyzed.

Purpose Statement

Based upon discovering significant gaps in the literature pertaining to allied health professionals and the ambiguous descriptions of workplace conflict, the purpose of this dissertation was to analyze and reflect upon the lived experiences of medical imaging professionals. Four theoretical frameworks were utilized to explore this interdisciplinary topic: Social conflict theory (Coser, 1956), workplace conflict (Raines, 2013), complex systems theory (Bar-Yam, 2004; Meadows, 2008) and the systems of professions (Abbott, 1988). While systems theory is macro in scope, it is only effective if a complex system is mapped entirely such that all the elements and interconnections are noted and congruent with the purpose of the system (Meadows, 2008). Overlooking even one element or interconnection could render systems analysis inaccurate (Meadows, 2008; Rogers et al., 2013). Due to time and resource constraints, the examination of the entirety of allied health professionals and their systemic relevance to health care was not feasible as well as too broad. Instead, to address the gaps pertaining to the absence of allied health professionals lived experiences from the systemic hospital model, it was necessary to seek micro level insights to further add to the knowledge base. Even then, with over forty unique allied health professions (ASAHP, 2018), the scale of this endeavor was too vast and a smaller sample within the allied health professions presented an opportunity to examine key interconnections within the hospital system. Gaining insight into the lived experiences of a smaller sample, medical imaging professionals, was a small but

necessary step to expand our understanding of interprofessional conflict within hospitals extending our systemic insight into workplace conflict in health care.

Medical imaging professionals represented a significant sample within the allied health professions (ASAHP, 2018) frequently interacting with other health care professionals when performing their job duties. In acute care hospitals, medical imaging professionals are relied upon by physicians and nurses to assist in the diagnosis and treatment of diseases in patients. Seminal literature pertaining to social conflict suggested that conflict did not occur in a "vacuum" (Coser, 1956; Cheldelin et al., 2003; Hocker & Wilmot, 2014, p. 226; Pruitt & Kim, 2004) and with this assertion in mind, medical imaging professionals may represent a nexus in the context of interprofessional conflict as they connect with nurses, physicians, and other allied health professionals. By examining the lived experiences of medical imaging professionals, the body of knowledge regarding interprofessional conflict in hospitals is expanded, opening doors to further research, and understanding workplace conflict phenomenon.

From a macro perspective, understanding the nature of conflict in hospitals for the purpose of damping it required a complete picture of the system if dispute systems design were to be implemented successfully (Meadows, 2008; Rogers et al., 2013). Despite a passion for complex systems theory (Bar-Yam, 2004) and dispute systems design (Rogers et al., 2013), the initial goal of this dissertation was too ambitious and too focused on a grand, systemic analysis of allied health professionals. The gaps in understanding the lived experience of allied health professionals would only further contribute to conjecture and incomplete analysis of systemic workplace conflict in hospitals. Entrance barriers to gain a complete picture of any hospital system were substantial, requiring far more time

and resources available for a dissertation. Additionally, legal issues pertaining to data access regarding conflict involving hospital staff as well as privacy laws protecting patients were prohibitive, leading to a change in direction in the choice of research method from quantitative to qualitative.

Research Question

To explore the lived experience of medical imaging professionals as a purposeful sample within the larger population of allied health professionals, one qualitative research question was proposed.

RQ1

In what form does interprofessional conflict present from the perspective of medical imaging professionals?

Semi-structured interviews were conducted on purposeful sample of ten medical imaging professionals who shared their lived experiences pertaining to interprofessional conflict while working in acute care hospitals. Chapter 3 described the method used explaining why interpretive phenomenology was chosen, the means of recruiting a purposeful sample, the collecting of lived experiences, and the analysis process that followed. Upon transcription, coding, and careful reflection of the lived experiences of the medical imaging professionals, interpretive phenomenology involving hermeneutic validation was used to achieve understanding of their shared experiences (Willis, 2007). The results and conclusions of this process were detailed in Chapters 4 and 5.

Significance of the Study

Interprofessional conflict was present in the purposeful sample and was interpreted in four experiential themes: Territoriality, professional abuse, systemic

disruptions, and demoralization. The meaning behind these experiences held a common phenomenological root: “Dual agency” (Waitzberg et al., 2022). Dual agency could also be described as “professional dissonance,” a state in which a health care professional felt torn between two obligations that created a moral crisis (Agarwal et al.,2020). Medical imaging professionals in the purposeful sample were torn between two professional obligations: Serving as “proxy agents” for their patients while serving the interests of the hospitals who employed them in a manner similarly described by Waitzberg et al., (2022). These two professional obligations were perceived as incompatible by most of the purposeful sample, leading to experiential descriptions of frustration, confusion, stress, and/or burnout consistent with professional dissonance (Agarwal et al., 2020). This study also suggested an incongruence between the stated values of hospital systems vis a vis patient care delivery and the necessity of earning revenue to maintain their existence as the purposeful sample indicated conflicts between their own values and that of their employers. From the lens of complex systems theory (Bar-Yam, 2004; Meadows, 2008), this implied a bidirectional crisis of purpose proximal and distal to hospital administration.

This study rectified some of the allied health professional sampling oversights in previous literature (Almost et al., 2016; Kim et al., 2017) by exploring the lived experiences of medical imaging professionals involving the phenomenon of interprofessional conflict. By obtaining a purposeful sample from the population of allied health professionals, the lived experiences of medical imaging professionals better facilitated our understanding of the hospital work environment and expanded the body of knowledge pertaining to workplace conflict. The addition of thick, narrative data from

interviews of medical imaging professionals was thought-provoking, and it humanized the experience of hospital workers grappling with their day-to-day job tasks. This step was necessary on the path of formulating a wider systems analysis of workplace conflict in hospitals and will help in the creation of future surveys designed to test quantifiable variables.

Definition of Terms

Allied Health. are professionals involved in health care delivery who are neither nurses nor physicians (ASAHP, 2018). There are over 40 distinct health care professions represented in this category, comprising at least 60% of all workers involved in the health care industry (ASAHP, 2018). Medical imaging professionals are included in this larger population.

Conflict. is defined in the general context as "perceived divergence of interest, a belief that the parties' current aspirations are incompatible" (Pruitt & Kim, 2004, pp. 7-8). Conflict may or may not result in confrontation as described by Pruitt and Kim's theoretical definition, therefore further description of "interprofessional conflict" and "interdepartmental conflict" is necessary.

Conflict Antecedent. defined as "sources of conflict" including "individual characteristics, contextual factors, and interpersonal conditions" (Almost et al., 2016). Using medical vernacular, these are the "symptoms" as well as the "history" upon which conflict develops.

Dual Agency. in the context of healthcare, dual agency referred to health care professionals serving as "dual agents" between the best interests of patients and the best

interests of hospitals (Waitzberg et al., 2022). Serving both interests caused ethical dilemmas due to value incompatibility.

Hospitals. provide acute, tertiary care to patients. Hospitals employ health care professionals as well as administrators and support services. Nurses and allied health usually comprise the largest population of health care professionals in hospitals whereas physicians and hospital administration are usually the smallest population.

Interdepartmental Conflict. occurs between two different groups of the same health care professionals working in different departments within the same hospital. This is group conflict that does not cross professional boundaries; for example, the nursing staff in the emergency department engaged in conflict with nurses in the maternity ward. Professional boundaries and hierarchies may be factors influencing the onset of interdepartmental conflict, but this may be strongly influenced by the hospital system itself, notably the hospital's culture.

Interprofessional Conflict. occurs when conflict takes place between two different health care professionals. For example, conflict between a nurse and a physician, or a physician and a physical therapist would constitute interprofessional conflict. Rather than viewing conflict through a "personal" lens, interprofessional conflict is often relative to external factors rather than internal factors influencing the conflict, such a professional boundary and/or a hierarchy.

Medical Imaging Professionals. represent a purposeful sample within the larger population of allied health professionals (ASAHP, 2018). For this dissertation, medical imaging professionals included radiologic technologists (RTs) who performed X-Ray, computed tomography (CT), magnetic resonance imaging (MRI), interventional

radiology (IR), positron emission tomography (PET), and nuclear medicine procedures. Radiologic technologists are credentialled through the American Registry of Radiologic Technologists and/or state licensure in the United States (ARRT, 2022). Also included in this purposeful sample are diagnostic medical sonographers (DMS), also referred to as ultrasound technologists; their official job titles varied based upon their specialty credentials they held by the American Registry of Diagnostic Medical Sonography (ARDMS, 2022) or Cardiac Credentialing International (CCI, 2022).

***Professional Boundaries*.** delineated where one health care professional's scope of practice began and ended. These boundaries are dictated by hospital policies and by legal stipulations established by medical licensing and professional credentialing organizations (ARDMS, 2022; ARRT, 2022; ASAHP, 2018; CCI, 2022). For example, a common professional boundary maintains that physicians, physician's assistants, and nurse practitioners are the only health care professionals legally allowed to diagnose a patient's condition; it is illegal for other professionals to diagnose a condition.

Professional Dissonance. is a phenomenon where a healthcare professional recognizes their personal values aren't aligned with the values of the hospital. The resulting moral distress caused demoralization to foment and inevitably led to burnout (Agarwal et al., 2020); this phenomenon was also closely related to dual agency (Waitzberg et al., 2022) in how the dissonance experienced was often related to serving two conflicting interests which led to frequent moral/ethical dilemmas.

***Professional Hierarchies*.** indicate the strata upon which health care professionals are delineated according to competence, authority, or power. Professional hierarchies are also related to administering patient care in hospitals, adhering closely with professional

boundaries established by legal stipulations and professional credentialing. While related to the boundaries set by a professional scope of practice, the professional hierarchy is established by education level, work experience, and/or position within the organization (Abbott, 1988; Bar-Yam, 2004). The apex of professional hierarchies in hospitals are physicians in supervisory roles as well as hospital administrators uninvolved in direct patient care (Borkowski, 2016).

Chapter 2: Literature Review

To reiterate the problem introduced in the previous chapter, interprofessional conflict in the hospital environment is an ongoing issue that may influence the delivery of patient care. Interprofessional conflict is defined as interpersonal conflict occurring between different health care professionals, such as conflict between allied health professionals and nurses. It has been hypothesized that interpersonal conflict correlated with patient health outcomes, potentially having a negative impact on healthcare delivery (Askew, 2011; Bochatay et al., 2017), but insufficient evidence has been provided to strongly support these claims (Baldwin Jr & Daugherty, 2008; Jerng et al., 2017). There has been, however, a plethora of evidence demonstrating the effects of interpersonal conflict on the mental and physical well-being of hospital employees (Almost et al., 2016; Guidroz, Wang, & Perez, 2012; Kim et al., 2017; Portoghese et al., 2017). Those pieces of literature suggested that employees embroiled in interpersonal conflict may not be performing their job duties as well as employees who are not engaged in interpersonal conflict, which in turn suggested the delivery of patient care could be compromised.

Additional evidence suggested nurses were the primary hospital employees who were often embroiled in intraprofessional as well as interprofessional conflict (Almost et al., 2016; Brewer et al., 2013). Several hypotheses were offered as to how and why those conflicts occurred, and some of that qualitative research was plausible in attempting to piece together the conflict puzzle (Janss et al., 2012). However, most of that research focused on variables that were difficult to quantify, such as the perception of "incivility" in the workplace (Spence Laschinger et al., 2014). Unfortunately, those types of variables were subjective, often leading to generalized conclusions such as the work environment

was potentially based upon “lower status” or “power imbalances” disproportionately leveled against nurses (Apesoa-Varano, 2013). Were those valid conclusions to make applicable to all nurses, regardless of demographics? Moreover, did those conclusions also apply to physicians who have reported being the targets of aggression and contempt from nurses (Schlitzkus et al. 2014)? Additionally, what about allied health professionals, who constitute one-third of the providers of direct care to patients in hospitals? (ASAHP, 2018) The answers are likely systemic factors rather than internalized, negative perceptions of high-stress hospital work environments that several pieces of literature suggested (Almost et al., 2016; Kim et al., 2017).

If a preliminary conclusion could be drawn from most of the literature related to conflict in hospitals, it suggested conflict was caused by as well as the outcome of interpersonal conflicts. From an outward perspective, hospital workers are part of the problem—if not the problem—as well as a potential solution to addressing the prevalence of conflict. However, this seemed incorrect as well as myopic in the approach to resolving the still unknown systemic factors that likely facilitated interpersonal conflict manifestation. Revisiting literature that suggested conflict in hospitals was apparently a pervasive global issue (Almost et al., 2016; Kim et al., 2017), there was an implication that workplace conflict was systemic and potentially related to how a hospital, or individual departments within a hospital, operated. Therefore, interpersonal workplace conflict was not the focus of this dissertation; rather, the emphasis was on workplace conflict occurring between health care professionals a la interprofessional conflict. Rather than exploring the issue of conflict from the micro perspective, as much of the literature reviewed for this dissertation did, workplace conflict was analyzed from a macro

perspective, framing the interprofessional conflict through a systems theory lens (Bar-Yam, 2004; Bertalanffy, 1968; Meadows, 2008; Rogers et al., 2013).

The initial question posed by this research was: How much of the workplace conflict described in the literature was related to the hospital system itself? Quantifying the exact amount of interprofessional conflict was obviously impossible; however, it was possible to examine one of the major blind spots in the reviewed literature: The lived experiences and perspectives of allied health professionals involved in workplace interprofessional conflict. This research added a unique perspective and addressed the underrepresentation of allied health professionals who worked with nurses and physicians daily to diagnose, support, and treat patients (ASAHP, 2018). Allied health professionals were involved in patient care situated between the roles filled by physicians and nurses, usually providing therapeutic services (such as physical and occupational therapy, e.g.), diagnostic testing (such as radiology technologists and sonographers, e.g.), or highly specialized care (cardiovascular technologists and nuclear medicine, e.g.). In other words, allied health professionals are not only elements within the hospital system, but they also served a vital interconnection in the system of care delivery. If the same interprofessional conflict was as prevalent in allied health professionals as it was amongst nurses and physicians, then it would suggest interprofessional conflict was potentially systemic, and therefore potentially related to the hospital organization itself.

Chapter two pertained to the literature collected and reviewed exploring the topic of interprofessional workplace conflict in hospitals. First, this chapter detailed the strategy used for searching for literature, noting the key words, ideas, and subjects used to gather relevant material for inclusion in this dissertation (Hart, 2014). Second, the

theoretical lenses through which literature was analyzed, categorized, and discussed were described in detail justifying the focus of the research. Systems theory (Bar-Yam, 2004; Bertalanffy, 1968; Meadows, 2008; Rogers et al., 2013), conflict theory (Coser, 1956; Pruitt & Kim, 2004), and the systems of professions (Abbott, 1988) were all used as the theoretical frameworks and *lenses* through which literature was reviewed. The origins of these theories are briefly discussed as well as their evolution into the iterations utilized for content analysis. Next, a thorough review of pertinent literature allowed for the development of a conceptual framework related to the overall research goal, exposing several unanswered quantitative and qualitative research questions related to interprofessional conflict in the hospital setting. The literature pertaining to interprofessional conflict was thus framed according to several predominant themes: Conflict antecedents, professional boundaries/hierarchies, and value conundrums. Key concepts involving each theme were also explored in further detail as key interconnections between other themes. Finally, a summary of the most significant findings was restated before moving on to chapter three which covered the methods through which the research for this dissertation was conducted.

Strategy for Literature Search

Peer-reviewed literature for this dissertation was collected using databases available through Nova Southeastern University's Alvin Sherman Library online. Due to the multidisciplinary nature of this dissertation, databases included ProQuest, EBSCOhost (specifically CINAHL and MEDLINE), PubMed, NSUWorks, and Sage Publications (SAGE Journals Online). Two exclusionary criteria were used for literature collection: Peer-reviewed literature was limited to the past ten years of publication as

well as publication in the English language. Given the scholarly expectations associated with doctoral level analysis, international articles were included in this review (Hart, 2014), so long as they were published in the English language. Several peer-reviewed articles as well as books older than the ten-year exclusionary criteria were included due to their content relevance, or to serve as references cited by more recent literature.

Keywords used in most article searches included “conflict” “hospitals” and “allied health.” As literature was collected and reviewed, new keywords and phrases were introduced to the search such as “interprofessional” and “interdepartmental” preceding the “conflict” search term. Most of the literature used the phrase “interpersonal conflict” when describing the type of conflict explored by the researchers (Almost et al., 2016). It was therefore necessary to disambiguate the terms “interpersonal conflict” and “interprofessional conflict” as they implied two different types of conflict. For example, “interpersonal conflict” literature often implied conflict between two individuals working in the same department, usually sharing the same professional background. It also implied the same conflict occurring within one “group” such as a department of nurses. The purpose of this research was to examine conflict occurring between individuals not sharing the same professional backgrounds who typically did not share the same workspace/s. This type of interprofessional conflict was the focus of this literature search.

In total one-hundred and two peer-reviewed articles were collected from September 2019 to December 2021 with fifty-eight of them organized thematically and reviewed. In addition to peer-reviewed articles, twenty-six books (including textbooks) were also incorporated into this dissertation to serve two key purposes: First, they were used to reference theories learned during didactic course work; second, they were

necessary to explore conflict related to professionalism and the praxis of systems theory. Such theories and praxis included: Conflict theory (Carpenter & Kennedy, 2001; Cheldelin et al., 2003; Coser, 1956; Hocker & Wilmot, 2014; Lemert, 2013; Pruitt & Kim, 2004), general systems theory (Bertalanffy, 1968), complex systems theory (Bar-Yam, 2004; Meadows, 2008; Rogers et al., 2013; Thurner et al., 2019), and theory related to professions (Abbott, 1988; Schon, 1983).

Most of the literature collected for this dissertation involved interpersonal conflict in hospitals pertaining to the nursing profession (Almost et al., 2016; Kim et al., 2017) and physicians (Schlitzkus et al., 2014) which presented a limitation that necessitated a need to expand into other health care professions for further insight. Noticeably absent were conflict experiences and data related to allied health professionals in the hospital setting. Allied health, also known as "allied health professions," encompassed over forty unique medical specialties related to direct and indirect patient care (ASAHP, 2018). The relevance of including allied health in the literature search should therefore be obvious as these health professionals are hardly in the umbra of hospital care. This was a vast undertaking and needed to be narrowed down for the sake of time and potential relevance to systemic conflict in hospitals, as not all allied health professionals (ASAHP, 2018) worked in front line patient care.

Later in the thematic organization process of the literature, medical imaging professionals such as diagnostic medical sonographers and radiologic technologists were investigated as a potential purposeful sample as they directly interacted with patients as well as a wide array of other healthcare professionals. To gather insights into these professions, websites representing their professional licensure and membership were

visited to gather information about professional responsibilities and scope of practice, such as the American Registry of Diagnostic Medical Sonographers, (ARDMS, 2022), Cardiac Credentialing International (CCI, 2022), the American Registry of Radiologic Technologists (ARRT, 2021), and the American Society of Radiologic Technologists (ASRT, 2021).

Theoretical Foundations

Throughout the review of literature, several interesting themes and conclusions emerged exploring the topic of interprofessional workplace conflict in hospitals. To bridge the interdisciplinary gap of conflict analysis and health care, the theoretical lens utilized to examine the literature was systems theory, first described by Ludwig van Bertalanffy (1968). However, the use of general systems theory—as noted by Bertalanffy—was not a feasible framework to use for analyzing sociological phenomena, as it was intended to analyze mechanical processes (Bertalanffy, 1968) and complex, tangible phenomenon such as the human body. Over time, general systems theory evolved into complex systems theory incorporating biology, physics, and the social sciences (Thurner et al., 2019). For this dissertation, a combination of Donella Meadow's (2008) work on systems theory, and the analysis methodology posited by Rogers et al., (2013) were the "lens" through which the literature was analyzed. The work of Yaneer Bar-Yam (2004) describing complex systems theory was also utilized to better understand potential issues involving hospital systems. An essay written by Andrew Abbott (1988) establishing the systems of professions theory was used to better understand the nature of professions and professionals working within a system.

Additional theories and theorists were mentioned in specific pieces of literature as needed throughout this literature review.

Systems Theory

Employing systems theory for analysis required a thorough examination of an existing structure, organization, and/or entity. The attention to detail necessary for analysis was important such that the system was deconstructed into the most important parts. While general systems theory developed by Bertalanffy (1968) was the primogenitor of systems analysis, it was the work of Donella Meadows (2008) that inspired this detailed analysis of interprofessional conflict in the hospital setting. Using her approach to complex systems theory, a system is broken down into "elements" whereby "interconnections" between these elements are noted as influential to the overall system; additionally, every system must also have a "purpose" for which they serve to function (Meadows, 2008). The purpose of many systems is to self-perpetuate, but they may also represent the foundation upon which other smaller systems require to function. In the context of this dissertation, systems theory was applied to the average hospital system in the United States, given a broader application of systems theory would not apply to hospital systems in countries featuring nationalized healthcare. There are two reasons for focusing on hospitals in the United States related to the overall purpose of this health care system: It is profit-driven and based on health care being a privilege versus a right.

Elements. A system is made up of many smaller parts, and these parts are called "elements" in the same vernacular used in chemistry and physics (Meadows, 2008). Hospitals in the United States were described as "tertiary care" facilities (Merriam-

Webster, 2023), meaning they provided a variety of specialized services to patients that went beyond basic care. In other words, the hospital can diagnose and treat almost every condition a patient could experience, which a primary care physician working in a private practice would only be partially able to perform. Emergency rooms, intensive care units, maternity wards, operating rooms, and radiology departments are just a few of the many elements that make up the hospital's internal system representing sub-systems within the larger system complete with their own purposes and interconnections. Elements within this hospital system also involved the many health care professionals working in the hospital, the equipment being used to diagnose and treat patients, and even the patients themselves. Of these elements, people were considered the most complex, as well as the most susceptible to changes in the system (Bar-Yam, 2004, p. 143).

Interconnections. In systems theory it is imperative to identify how the identified elements are all connected to each other. The most visible elements are often merely "the tip of the iceberg" and it is important for those examining a system to be aware that interconnections between visible and invisible elements play a key role in the function of a system (Meadows, 2008). Without these connections, there is no system; also, should a vital interconnection between elements is weakened or even broken, the system could hypothetically fail (Meadows, 2008). Yaneer Bar-Yam described several of these interconnections, using an example of pharmacists filling prescriptions written by doctors, noting how simple mistakes in miscommunication could lead to medical errors that could harm patients (2004, pp. 131-162). Many errors noted in the modern medical system are attributed to a system that is not "complex enough" to adequately handle the number of interconnections present (Bar-Yam, 2004, pp. 131-132). An inadequate

system, lacking complexity, could hypothetically create conflict through poorly developed interconnections, or a lack thereof. Specific to this dissertation, interconnections between different health care professionals are of particular interest as this could play a role in interprofessional conflict/s.

Purpose. Every system must have a purpose (Meadows, 2008). Some systems serve the purpose of self-perpetuation, some systems may exist within other systems while others may represent a much broader, external locus of control (Bar-Yam, 2004). The purpose of the hospital is to diagnose and treat patients, who exist as both consumers who need hospital services as well as customers able to choose which hospitals to patronize (Borkowski, 2016). Often the purpose of the hospital is noted as its mission, defined by a "mission statement" describing its goals and objectives (Schueler & Stulberg, 2020). Given health care in the United States is regarded as a privilege and not a right guaranteed by law, hospitals must exist as businesses vying to attract customers, many of whom are not able to pay for the cost of receiving hospital care "out of pocket" without utilizing insurance (Borkowski, 2016). This purpose seems paradoxical in treating medical conditions because if all diseases were cured, and all Americans were healthy, hospitals would be holding onto failing business models. Unfortunately, this is a paradox inherent to the health care system in the United States, often derisively called the "sick care" system (Marvasti & Stafford, 2012). It is the purpose of hospitals to heal people, but hospitals must also be self-perpetuating systems with numerous sub-systems working in harmony to function effectively in generating a profit. Every private hospital or system of hospitals in the United States is a "for-profit" hospital despite being labeled

as “not for-profit;” the difference is the hospital’s accountability to either shareholders (for-profit) or the community (not for-profit) funding the hospital (Herring et al.,2018).

In summary, interprofessional conflict in hospitals is a potential example of when the system is not working effectively, which may affect the overall system’s purpose of health care delivery. The primary example in which hospital purpose is affected by conflict can be found in the high cost of labor (Gliadkovskaya, 2021; Southwick, 2022). Conflict was associated with increased hospital staff turnover, burnout, and a unique phenomenon called “care fatigue” (Epstein & Hamric, 2009; Guidroz et al., 2012; Portoghese et al., 2017) whereby nurses and other health care staff may feel compelled to leave the profession entirely for their own physical and mental well-being. However, the purpose of the system is also affected by communication errors which slow, if not entirely disrupt, the flow of care patients received. Medication errors (Bar-Yam, 2004), misdiagnosis of serious conditions, tests ordered erroneously, and delayed scheduling important tests as well as procedures are also evidence of the purpose of the system is being disrupted. These issues are likely related to interprofessional conflict occurring between elements in the hospital system. As systems theory posits, if one element of the system is affected by a disruption in the interconnections with other elements, the system potentially fails (Meadows, 2008).

Conflict Theory

Currently, no universal definition of conflict theory exists (Cheldelin et al., 2003). A distinction should be made between conflict theory and conflict resolution theory, as one is meant to be diagnostic and deconstructive while the other is intended to be diagnostic and transformative. While we can define conflict and its specific subtypes (i.e.,

interpersonal and interprofessional conflicts), examine how it developed, predict its escalation given the right circumstances, and create solutions for resolving said conflict/s, conflict theory is both an epistemological and ontological lens through which we view society. Conflict theory was intended to be deconstructionist by nature, a response to positivism, and potentially radical in its approach to instigating structural changes to society (Cheldelin et al., 2003; Hocker & Wilmot, 2014; Pruitt & Kim, 2004). To understand conflict is to attempt to understand human nature, with its near-infinite variables contributing to multiple systems. Nevertheless, conflict theory attempts to understand this complexity, utilizing an amalgamation of multiple sociological and psychological concepts. The question many conflict theorists have asked over the past Century is whether conflict has a positive or negative effect on humanity; this is explored at both the macro and micro level with mixed conclusions pertaining to social conflict (Coser, 1956). A conclusion shared by most conflict theorists is that violent conflict is detrimental to individuals as well as humanity (Galtung, 1969) based on historical evidence pertaining to both war and criminality.

The origin of conflict theory is often credited to Karl Marx (1848) who posited social conflict was caused by "structural inequalities" (Cheldelin et al., 2003, p. 16), a vague, macro-level description of 19th Century society at the dawn of the industrial revolution. Marx was primarily known for his contributions to economic theory, and the "class struggle" between the bourgeoise and proletariat (Marx & Engels, 1848), noting an unequal distribution of wealth and power between the two classes, leading to social conflict. His proposed solution was giving the proletariat workers control over the means of production (Marx & Engels, 1848), thus granting ownership of their own labor as a

means of achieving social equity. Unfortunately, the implementation of his theory led to extreme measures taken to achieve equity in the forms of National Socialism and Communism, costing millions of lives in the 20th Century alone, with the same class struggles he observed going unresolved into the 21st Century.

Max Weber expanded upon Marx's observations, taking particular interest in the unequal distribution of power based upon status/class, noting how it was used to dominate and oppress others (Cheldelin et al., 2003). Weber's contribution to conflict theory was describing how "authority" and "legitimacy" were granted to those in power in social systems, employing a term he called "normative consensus" (Rubenstein, 2003, pp. 168-169), describing a system where conflicts may be resolved in an agreed upon manner by a majority of individuals. Hypothetically, if the system of resolving social conflicts was deemed illegitimate by a consensus of those existing within said system, conflict would undoubtedly occur to counter the perceived oppression.

Two types of conflict are particularly relevant to this dissertation: Social conflict and organizational conflict. The first, social conflict, is used to explore issues pertaining to relationships within and between social groups (Coser, 1956). The second type of conflict, organizational, directly relates to conflicts that develop within the workplace (Raines, 2013).

Social Conflict. Georg Simmel is credited as the "predecessor of modern conflict theory" (Cheldelin et al.2003, pp. 15-16) due to his insights into social conflict. Simmel focused on social conflict and its role in group formation and dynamics, hypothesizing that without conflict, social structure might not exist (Coser, 1956, p. 31); conflict plays an important role in driving people to form groups, arguably as important a role as the

need for cooperation. In response to Georg Simmel's essay *The Sociology of Conflict,* Lewis Coser both critiqued and expanded upon the conceptualization of social conflict and its effect upon sociology (Coser, 1956). Coser, like Simmel before him, was particularly interested in examining the potential benefits of conflict to society, a transformative view of the typically detrimental perception of all social conflict.

Social conflict is about boundaries and hierarchies within as well as between groups. The phenomenon of "social mobility" (Coser, 1956, p. 36) is an important factor in social conflict as individuals within groups will compete for status and recognition within the group. Individuals who perceive they could climb an established social ladder will legitimize and accept the structure of the group or organization; additionally, those who gain status appear to also gain power over the group. Power plays a role in social conflict as increased status and recognition form a hierarchy by which those ranked higher benefit more than those ranked lower in status. This is where the concept of privilege enters the discussion given those with higher status will exhibit power as well as privilege as a signal of dominance. As those dominated individuals without privilege come into conflict with those who exert their power and privilege, the "legitimacy" of the group or system comes into dispute due to an imbalance in status and the denial of equality to every individual (Coser, 1956, pp. 36-38). Without this "legitimacy" granted by consensus, the group or organization will descend into conflict and fail.

Coser (1956, p. 157) concluded "that conflict tends to be dysfunctional for a social structure in which there is no or insufficient toleration or institutionalization of conflict." It is the social structure itself that plays a significant role in the development as well as resolution of conflict. He claimed that it is the "rigidity" (Coser, 1956, p. 157) of

the social structure that holds more influence than conflict in how it could allow conflict to "accumulate" and escalate. This assertion expanded on Georg Simmel's "safety valve theory" of conflict being a sort of "cathartic" release of hostility that would not permanently destroy the relationship between two individuals (Coser, 1956, p. 41). Social conflict in this context is an energy transfer conducted to avoid reaching critical mass; indeed, the idiom "blowing off steam" may apply as a biological and psychological necessity regarding pent-up hostility.

Social communication is a key interconnection in the hospital system and social conflict between health care professionals may pose concern in a system that is too rigid and devoid of "safety valves" to deescalate conflict (Coser, 1956, pp. 41-43). For example, a hospital is an example of a system consisting of multiple professional groups working in proximity under high stress conditions (Borkowski, 2016). If conflict were to emerge and the system did not allow it to be expressed in a healthy, productive manner, the results could be a systemic failure, such as a labor strike or a government-mandated shutdown. Granted, those are two extreme examples of a systemic failure; what is more likely to occur at the systemic level are multiple, repeated communication breakdowns involving multiple professionals leading to a series of unfortunate events affecting patient care.

While exploration of violent conflict was not the focus of this dissertation, the elements of structural violence were suggested as present in several pieces of literature, as individuals as well as groups with power in hospitals "oppressed" or "marginalized" those lacking in power literature (Apesoa-Varano, 2013; Janss et al., 2012). These disproportional power dynamics and potential inequalities in decision making within

hospitals were relevant concerns pertaining to conflict antecedents as well as literature exploring professional hierarchies at the macro—or systemic—level. It was possible the lived experiences of allied health professionals would reveal evidence of structural or even overt acts of violence witnessed in the hospital environment.

Organizational Conflict. Social conflict occurring within businesses, academic institutions, government bureaucracy, or any other structured group can be classified as organizational conflict (Raines, 2013); it is also known as "workplace" conflict. Rather than examining conflict at the micro level involving individuals, organizational conflict examined the entire system and the presence of hierarchies and structural boundaries that influence conflict. Conflict theory suggested that social hierarchies are based upon power, specifically involving conflict between those who hold power versus those who do not hold power; this disproportionate power dynamic creates conflict between individuals, organizations, and nations (Pruitt & Kim, 2004; Raines, 2013). However, were hierarchies within highly structured organizations such as hospitals based upon power or something else? An attempt to redefine the concept of power in business suggested that power is a state in which managers and organizational leaders were working effectively with the resources at their disposal, furthering the goals of the organization in an efficient manner (Raines, 2013, pp. 57-58). While this redefinition suggested the presence of a power hierarchy and subordination, it also suggested collaborative power was more effective than a show of dominance (Raines, 2013). Competent leaders were likely the most effective leaders in those organizations and the prevalence of conflict could be reduced.

Health care systems and hospitals are inundated with both social and organizational conflicts (Borkowski, 2016), complicating efforts to resolve them at the systemic level. Numerous factors may exist as to why conflict is so prevalent, as many pieces of literature have explored from the micro and macro perspectives (Almost et al., 2016; Kim et al., 2017). Hospitals in the United States are complex systems based upon for-profit business models (Borkowski, 2016); this is a unique situation as health care is regarded as a privilege and not a guaranteed right as it is in other countries such as Canada and the United Kingdom under single-payor health care systems. This may present a larger issue that influences the manifestation of conflict in U.S. hospitals as the purpose of the system is called into question.

Systems of Professions Theory

The title of this dissertation uses the word interprofessional in an organizational context directly modifying the word conflict. It implied that the reader understood what the definition of a professional was as well as what professionalism stood for, which according to Andrew Abbott (1988) may not be accurate. Our understanding of professions, professionals, and professionalism have been debated for decades while our systems of labor have evolved. Abbott (1988) performed a deep dive into the history of how certain professions came into existence while others faded into obscurity; he also explored why this happened, and how professions and the professionals working within them, are systems within a larger system. In other words, the interconnections relative to the professions within a system are the most critical aspect of understanding the birth, life, and death of any profession (Abbott, 1988). Focusing on one profession, or one professional within a system may not provide a complete picture if one were assessing

the nature of the system itself. Returning to systems theory, this implied the focus of systems analysis should not focus solely on elements or get carried away by debating the purpose of the system. The interconnections between professions were key to understanding what worked and what did not work within a complex system, such as a hospital environment (Abbott, 1988; Meadows, 2008). Thus, the emphasis of this dissertation on interprofessional conflict within the hospital environment was inspired by the work of Andrew Abbott (1988) with the intention of further examining systemic interconnections.

Professionals working in the hospital setting are heteronomous in nature (Abbott, 1988), meaning they are administered or managed by others who do not share the same profession. Doctors, nurses, and allied health professionals do not run hospitals, keep payrolls, or manage the facilities upon which the medical work is accomplished. These tasks are handled by administrators, human resource professionals, facilities managers, and other laborers who do not provide direct patient care (U.S. Department of Labor, 2023). Yet, if one or more of the interconnections between any of these professionals broke down and failed, conflict occurred, and the mission of the hospital was not fulfilled. The focus of this dissertation was on the interconnections involving allied health care professionals (ASAHP, 2018) working in direct patient care roles; these professionals comprised at least one-third of the hospital workforce and greatly impacted the delivery of patient care. The daily interactions of allied health professionals working with doctors, nurses, and other allied health professionals presented a potential flaw involving interconnections within the hospital system. Employing conflict theory as a means of analysis, along with complex systems theory, allowed for exploration of the

collected literature for trends, patterns, and discrepancies involving interprofessional conflict at the systemic level.

Review of Literature

The process of searching for literature related to conflict in hospitals uncovered an abundance of material, revealing it was not only a relevant subject, but also the focus of many peer-reviewed studies seeking to address and/or alleviate the problem. Literature reviewed for this dissertation was organized thematically, beginning with broader articles that utilized expansive literature reviews and meta-analyses pertaining to conflict in health care. These articles served as starting points for further research, given they identified themes in the existing literature and exposed several research gaps. Based upon patterns identified in the literature, three conceptual themes emerged pertaining to conflict in hospitals: Conflict antecedents, professional boundaries and hierarchies, and value conundrums experienced by healthcare professionals. Each of these conceptual themes were relevant to understanding interprofessional conflict from the lens of systems theory. The first theme, using the vernacular "conflict antecedents" mentioned in an integrative literature review conducted by Almost et al. (2016), explored issues and events leading to the onset of interprofessional conflict. Next, the second theme related to how both professional boundaries as well as hierarchies related to power and competence influenced interprofessional conflict. A final theme addressed ethical and moral crises experienced by health care workers in the context of how those issues were also related to the onset of interprofessional conflict.

Conflict Antecedents

The term “antecedent” was first encountered in an integrative literature review conducted by Almost et al, (2016) which examined how conflict could be managed in healthcare teams. They defined the term “antecedent” as “sources, causes, and predictors” of interpersonal conflict (Almost et al., 2016, p. 1492). This theoretical definition was created and tested in a previous study conducted by Almost et al, that concluded the complexity of conflict was “affected by dispositional, contextual, and interpersonal factors” (2010). Dispositional factors were defined as the individual’s “core beliefs” influencing their personality traits, perception, and capacity to deal with conflict (Almost et al., 2010). In other words, self-esteem, self-control, and the style of the individual employed to deal with conflict were all considered “dispositional” factors. Contextual factors were described as external factors outside of the individual’s locus of control, such as the unpredictability associated with the delivery of nursing care (Almost et al, 2010). According to Almost et al, (2010) nurses performed their duties in unstable work environments, filled with unpredictable situations and a high degree of job variance related to providing direct patient care that facilitated a conflict-rich environment. Interpersonal characteristics were associated with “unit morale” and a term the authors called “interactional justice” describing the importance of respectful, intraprofessional relationships nurses must keep and the necessity for preserving dignity and respect amongst the nursing team (Almost et al., 2010). The researchers appeared to be the first to define and apply the phrase “intra-group conflict” to nurses (Almost et al, 2010), then updated their conceptualization of “antecedents” for their 2016 integrative literature review.

By analyzing 44 different studies examining conflict in the hospital setting, Almost et al., (2016) utilized three theoretical themes they considered "antecedents" to interpersonal conflict: Interpersonal conditions, individual characteristics, and contextual factors. Compared to the 2010 study (Almost et al., 2010), Almost et al., (2016) changed the term "dispositional characteristics" to "individual characteristics" though the definition of what this constituted remained the same. Six sources of conflict were identified from their review of literature: Poor communication, lack of support, lack of emotional intelligence, differing personality traits, working conditions, and role ambiguity which they placed into one of the three theoretical themes (2016). The phrase "role ambiguity" (Almost et al., 2016) stood out as a particularly interesting source of conflict, implying confusion existed within job roles as well as confusion about an overlap of job duties that was explored later in the professional boundaries and hierarchies theme.

In conclusion Almost et al. (2016) posited that the key to mitigating conflict was not only awareness that conflict was taking place, but also encouraging health care staff to be accountable for their actions by practicing healthy conflict interactions. Their conclusion addressed the conflict antecedents at the individual, or micro level, offering several suggestions to manage as well as resolve conflict (Almost et al., 2016); however, one of the identified thematic antecedents to conflict, "contextual factors," seemed to go beyond the micro level of analysis. For example, the "contextual factors" the authors described included: Work environment, accountability, lack of resources, role ambiguity, and confusing decision-making processes (2016, p. 1497). These factors extended beyond the individual's locus of control, suggesting a broader, systemic issue was involved.

Unfortunately, most of the literature they reviewed did not examine the effects of conflict interactions within hospitals presenting a major exclusionary limitation pertaining to the "working environments" evaluated (Almost et al., 2016). Regardless of this limitation, their conclusions should not be dismissed given health care systems extend beyond acute care hospitals to include doctor's offices, medical imaging facilities, and rehabilitative facilities that contributed to the larger system that were evaluated in the literature (Almost et al., 2016).

A second limitation to the integrative review by Almost et al. (2016) was that most of the literature focused on the nursing profession. While nurses represented most health care workers employed by hospitals (U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis, 2017), physicians and allied health professionals (ASAHP, 2018) also represented a significant population. Most of the research reviewed by Almost et al. (2016) did not focus on physicians or allied health professionals, suggesting potential sample bias (Field, 2013; Willis, 2007). Many of those peer-reviewed studies made broad conclusions about the nature of conflict in hospitals based upon sampling nurses only (Almost et al., 2016); this was a significant limitation noted in the literature that did not address the lived experiences of allied health professionals in dealing with conflict antecedents. What if workplace conflict was not prevalent amongst allied health professionals, or that their interactions with nurses and physicians did not present evidence of interprofessional conflict?

Another limitation applied to the literature Almost et al. (2016, p. 1491) reviewed was the interchangeability of the terms "interpersonal conflict" and other types of

conflict, such as “intragroup conflict” or “task/process conflict.” As investigated in the professional boundaries and hierarchies’ section of this literature review, there was also a distinction between “task conflict,” “process conflict,” and “interpersonal conflict” (de Wit et al., 2012; Todorova et al., 2014). Using these terms interchangeably was confusing and given much of the research reviewed by Almost et al. (2016) did not apply a universal definition of workplace conflict in the hospital environment, it was necessary to redefine the term for disambiguation. Thus, the phrase interprofessional conflict was used primarily to avoid the confusion in vernacular uncovered in Almost et al. (2016) whose research focused on examining intra-group conflict involving only the nursing profession.

Multiple conflict antecedents reported by Almost et al. (2016) also appeared in other literature, some of which were referenced in their article, such as: Stress (Jones et al, 2013; Kelly et al, 2014), horizontal violence/bullying (Ceravolo et al., 2012; Goff, 2018; Schlitzkus et al., 2014; Spector et al, 2014), incivility (Spence et al., 2014), verbal abuse from physicians (Andersen et al, 2010; Brewer et al, 2013), emotional exhaustion (Guidroz et al, 2012; Portoghese et al., 2017), and differing conflict resolution styles (Askew, 2011; Moreland & Apker, 2016). However, it seemed horizontal violence, bullying, and overt acts of violence occurring in hospital workers were the result of conflict antecedents, though literature suggested more of a cause-and-effect relationship. Those incidents, if not triggered by some intrapersonal or interpersonal issue, suggested an entirely different problem that was adjacent to the issue of interprofessional conflict but not a direct antecedent. Several overt and covert antecedents likely contributed to interprofessional workplace conflict involving allied health professionals as it was unlikely isolated to nurses.

Almost et al. (2016) served as a starting point for further research given their publication evaluated literature related to hospital conflict up to 2016. Conflict antecedents mentioned by their study were also noted in several more recent publications. For example, a study published by Bochatay et al. (2017) identified six sources of conflict based on 82 interviews conducted in Switzerland: "Relationships, patient-related tasks, other tasks, team processes, structural processes, and social representations" (p. 86). They asserted the primary cause of conflict described by interviewees involved two professionals disagreeing on how to proceed with patient care (Bochatay et al., 2017). Based upon this implication, conflict was more than simply interpersonal disagreements, but potentially related to a larger, systemic context such as professional boundaries, or hospital-related policies controlling patient care. One of their findings also posited that the responses to workplace conflict by managers/supervisors were inadequate in meeting the expectations of employees embroiled in conflict (Bochatay et al., 2017). Did this imply a systemic barrier to conflict intervention, or perhaps a lack of confidence in engaging in conflict? Either way, it suggested workplace conflict was not managed in a productive, efficient manner.

Another literature review, written by Kim et al., (2017), was also helpful in conceptualizing conflict antecedents by reviewing 99 studies and finding conflict antecedents could be broken down into three categories: Individual factors, interpersonal factors, and organizational factors. Examples of the individual factors included: Communication and conflict management styles, personality traits, worldview, self-esteem, self-perception, etc. which directly or indirectly contributed to conflict. Interpersonal factors were defined broadly as "incivility" which ranged from minor

disagreements up to the intention to harm others (Kim et al., 2017). Organizational factors involved the work environment, such as workflow, the structure of the organization, and ambiguity about professional functions (Kim et al., 2017). Despite such an expansive review, they concluded that "current research falls short of generating findings that can sufficiently explain the complex nature of conflicts occurring in dynamic healthcare environments" (Kim et al., 2017, p. 287). Indeed, there was no explanation that perfectly fit into a model explaining all interprofessional conflict in the hospital setting; the research could only identify conflict antecedents occurring at the individual level or posit that workplace conflicts originated due to extraneous factors (Kim et al., 2017).

Two conclusions from their literature review stood out: First, regarding organizational factors only a few studies examined hierarchical differences as contributing factors in either interpersonal conflict or in the analysis of team dynamics (Kim et al., 2017). What role did professional hierarchies play in conflict, and was this related to the power struggles between health care professionals as suggested by other literature (Apesoa-Varano, 2013; Janss, 2012)? Second, the authors noted how the nursing profession was the dominant source and subject matter (54%) of the literature reviewed (Kim et al., 2017). Only 38% of the literature included "interprofessional team members" which demonstrated too much sample homogeneity (Kim et al., 2017). Similarly, the literature review conducted by Almost et al., (2016) encountered the same issue and it was a notable limitation. The nursing profession did not represent all health care professionals despite comprising, on average, the largest population working within hospitals (U.S. Department of Health and Human Services, Health Resources and

Services Administration, National Center for Health Workforce Analysis, 2017), and it was premature to assign broad generalizations about conflict in hospitals based upon oversampling one professional group.

A unique analysis of conflict antecedents conducted by Jerng et al., (2017) utilized an incident reporting system within the National Taiwan University Hospital to explore interpersonal conflicts. Their study was also one of the few that was able to quantify patient safety events with workplace interpersonal conflict (WIC), finding within a three-year span 1.7% of 8,555 safety incidents involved WIC (Jerng et al., 2017). Interestingly, Jerng et al. found that 96% of these incidents involved service processes and the delivery of care, such as transfer of patients (20%), surgery (16%), lab tests (17%), and medical imaging (16%). It should be noted the aforementioned "service processes" (Jerng et al., 2017) directly involved allied health services, specifically "transfer of patients," "lab tests," and "medical imaging" which should be considered interprofessional conflict, given patients interacted with at least two hospital workers representing at least two different professions. These were also examples of what other authors described as "process" or "task" conflict (de Wit et al., 2012; Jehn , 1995; Jehn ., 2010; Kim et al., 2016; Todorova et al., 2014), which were then described by Jerng et al. (2017) as a modified definition of interpersonal conflict. While the authors viewed the WIC reporting between departments as a limitation to their analysis of interpersonal conflict, it demonstrated the willingness for hospital workers to engage in interprofessional conflict (Jerng et al., 2017). Were the conflict incidents reported as retaliation for unresolved interpersonal conflicts, or were the individuals reporting the incidents genuinely concerned that conflict was a legitimate patient safety issue? It could

even be hypothesized that the utilization of a formal reporting system made it easier for reporting workplace conflict, given the impersonal nature of computer-based reporting systems. This assertion is explored further in the values conundrum section of the literature review in a study by Robb et al.,(2015) that explored the difference in "speaking up" behavior between real and "virtual" medical interactions. Dehumanizing conflict interactions could present a detriment to any conflict resolution process by ignoring personal narratives and the lived experiences of those involved in conflict (Cooper, 2014; Raines, 2013; Rogers et al., 2013).

Jerng et al., (2017) suggested that conflict should be reported through the incident reporting system, as it promoted an organizational culture of accountability. While the reporting system was designed for identifying incidents related to patient safety, the inclusion of WIC provided quantitative evidence to support that patients are indeed affected by both interpersonal and interprofessional hospital conflict (Jerng et al., 2017). Their research has potential to resolve conflict in hospitals but needs further exploration; replication of their study could yield different results based on cultural differences as well as hospital sample sizes. Utilization of a WIC reporting system could be a useful diagnostic tool for identifying workplace conflict when present, but it may not address deeper, systemic issues within the hospital system.

Another antecedent that likely had a systemic influence on conflict was the concept known as austerity which in this context applied to extreme economic measures impacting the delivery of health care. Authors Owens, Singh, and Cribb (2019) explored the effects of austerity on the UK National Health Service, finding that such government-sponsored measures to cut costs associated with delivering health care likely influenced

professionalism and the professional ethics of health care workers. They argued that professionalism in health care workers was potentially undermined by the overlap of social, ethical, and economic factors that austerity impacted; specifically, the lack of resources available to provide adequate care to patients (Owens et al., 2019). A lack of resources could lead management and health care providers in hospitals to reduce the quality-of-care delivery by making unethical decisions to save time and money (Owens et al., Singh, & Cribb, 2019); while unethical decisions regarding patient care would be unlikely, it was probable that reductions in hospital staffing were more likely to occur in response to austerity. An example of such would be reducing the number of nurses, physicians, and allied health professionals available to treat patients, increasing physical and emotional stress on the remaining staff, disrupting systemic efficiency. Despite these reductions in staff, the high expectations in delivering quality care would not diminish further burdening staff and their standards of professionalism (Owens et al., 2019). The association between austerity, ethics, and professionalism in the context of interprofessional conflict was explored further in the values conundrums theme.

A notable limitation to the study by Owens et al., (2019) applied to a health system funded by, and subject to administration through, the United Kingdom which is not the same as the privatized health care system utilized in the United States (Borkowski, 2016). Austerity measures involving hospitals within the United States could be different in their effects on the system, likely influenced by private insurance companies and the demand for profitable services. Regardless of the type of health care system, employees affected by austerity measures represented “visible aspects” in the context of systemic elements including nurses, physicians, and allied health professionals

(Meadows, 2008). Austerity measures that reduced the number of employees would likely impact the system's interconnections as well as the total number of elements present (Meadows, 2008).

This concluded the overview section exploring literature that defined and identified potential conflict antecedents in the hospital environment. To summarize, conflict antecedents presented a paradoxical relationship in the literature, as it was uncertain if workplace conflict was preceded by multiple antecedents or conflict created the environment for those antecedents to emerge. Great care must be taken to avoid applying causation to antecedents which may represent correlations with workplace conflict. Further analysis of the literature is needed to examine the strength of these correlations as well as identify if other factors were responsible for interprofessional conflict at the systemic level. The following subsections focused on antecedent themes related to potential systemic conflict, the first of which focused on stress and emotional exhaustion.

Stress and Emotional Exhaustion. Several articles suggested that work-related stress had a negative impact on the health and well-being of nurses and other health care professionals (Almost et al., 2010; Jones et al., 2013; Kelly et al., 2014; Moreland & Apker, 2016). The use of the word "stress" was also related to several other terms used to describe the experiences of nurses: "emotional exhaustion" (Guidroz et al., 2012), "care fatigue" and "role ambiguity" (Portoghese et al., 2017). What did these terms represent, and how were they related to conflict?

To begin, it was necessary to explore the origin of the term stress and note how it related to what the authors of the literature review were describing. The modern

conceptualization of “stress” was first applied to humans by endocrinologist Dr. Hans Selye after he observed what he described at the time “general adaptation syndrome” while experimenting on lab rats (Tan & Yip, 2018). Selye later changed the descriptive terms from “general adaptation syndrome” to “stress” given the phenomenon resembled the term as it was applied in physics (Tan & Yip, 2018). Stress was thus described by Selye (1956) as a “nonspecific response of the body to any demand” with the unique understanding the body’s response to stress involved three phases occurring over time; in other words, stress as Selye described it was chronically present during a “nonspecific demand” (Selye, 1956; Szabo et al., 2012; Tan & Yip, 2018). This was unique from the understanding of acute stress responses, specifically the “fight or flight” response noted by Walter Cannon (1914) in how it involved a sequence of three phases: Alarm, resistance, and exhaustion (Selye, 1956; Szabo et al., 2012). Alarm in this context indicated an initial reaction to a “stressor,” or external event, followed by resistance where the individual attempted to maintain a normal state/homeostasis, then concluded by the individual becoming exhausted from so much resistive effort (Szabo et al., 2012; Tan & Yip, 2018). In other words, while the human body reacts the same way physiologically to an event or threat, the individual’s unique emotional response as well as perception of said event or threat are why stress uniquely affects the human body. If one individual, or a group of individuals perceived an external event as potentially threatening, their response may initiate a conflict spiral (Pruitt & Kim, 2004). A conflict spiral is an escalation effect related to stress, particularly if the stress is repeated over time (Szabo et al., 2012; Tan & Yip, 2018); therefore, stress is a valid concept applicable

to interpersonal as well as interprofessional workplace conflict as it likely impacted all parties involved, including those tasked with finding resolution.

Stress was not the only term used in the literature used to describe similar effects on nurses and/or other health care professionals. Another term, "emotional exhaustion" was mentioned as influential on interpersonal conflict that involved nurses (Guidroz et al., 2012; Portoghese et al., 2017), but what did it mean? Was emotional exhaustion the same as stress and were both terms used interchangeably? A study by Guidroz et al., (2012) defined "emotional exhaustion" as a form of "distress" either caused by, or resulting from, interpersonal workplace conflict/s. Their definition of emotional exhaustion was based upon the definition of "burnout" posited by Christina Maslach (1982), who identified emotional exhaustion as one of three key components indicating a depletion of emotional resources; further refinement of her definition posited it as "the basic individual stress component" (Guidroz et al., 2012, p. 70) in the development of burnout (Maslach et al., 2001). Their definition was like the third phase of the stress response described by Selye (1956) with an attempt to ascribe the process to workplace environments rather than vaguely describing a "nonspecific demand" leading to a physiologic response. The definitions of burnout and emotional exhaustion were shared by Portoghese et al., (2017) who also referenced Christina Maslach's seminal work (1982). To alleviate potential ambiguity for this dissertation, the theory that stress contributed to burnout through emotional exhaustion (Maslach et al,, 2001) fits the conceptual model.

Literature exploring conflict amongst nurses mentioned work-related stress as a critical factor related to burnout and employment turnover (Guidroz et al., 2012).

However, while conducting their literature review, Guidroz et al., (2012) identified a potential gap in the dynamics of interpersonal conflicts related to nurses. While many pieces of literature examined interpersonal conflict involving nurses (Almost et al., 2016; Kim et al., 2017), few explored the interpersonal conflicts nurses experienced with physicians, patients, and patient family members. Guidroz et al., sought to "test a model of workplace conflict where the negative effect of conflict on nurses will be experienced via emotional exhaustion" (2012, p. 69). The term "emotional exhaustion," was utilized as a process variable potentially having a decisive effect on the "well-being" of nurses (Guidroz et al., 2012). Two studies were conducted at two different American hospitals involving a cohort of Registered Nurses (RNs) exploring the "mediating effects" (Guidroz et al., 2012) of emotional exhaustion on interpersonal conflict originating from four different sources: Doctors, supervisors, patients, and other nurses. Their findings were consistent with previous research investigating the mediating effect of emotional exhaustion, finding that conflict with patients, physicians, and supervisors were all predictive of emotional exhaustion (Guidroz et al., 2012). An unexpected finding of their research was that conflict involving only nurses was not associated with emotional exhaustion, leading the researchers to posit intraprofessional camaraderie could dampen emotional exhaustion (Guidroz et al., 2012). Pertinent to this dissertation, their unexpected finding contradicted literature that noted high levels of aggression and conflict between nurses (Almost et al., 2016; Kim et al., 2017), suggesting other potential explanations as to what instigated conflict in hospital settings.

Of particular importance to this dissertation, the following conclusion made by Guidroz et al., suggested conflict was related to the work environment: "Supervisor,

physician, and patient conflict could be workplace stressors, whereas nurse conflict may actually be an outcome. Conflict with physicians, supervisors, and patients could reflect excessive job demands and nurses could react to those job demands through engaging in conflict with their coworkers," (2011, p. 77). To emphasize, the term "coworkers" used in this context was not referring to other nurses but may refer to both physicians as well as allied health professionals. One of the limitations of their study was the exclusion of more specific criteria identifying who those coworkers were, demonstrating an underrepresentation of allied health professionals in hospital population sampling concerning workplace conflict (Guidroz et al., 2012). What remained unclear about their conclusions was whether workplace conflict caused emotional exhaustion amongst nurses or was an effect from it; this was one of the reasons why interprofessional conflict was the focus of this dissertation and not interpersonal conflict which presented a paradox.

A similar study related to emotional exhaustion explored the effect/s supportive coworkers had on the hospital work environment adding "role stress" as another variable for consideration (Portoghese et al., 2017). The researchers defined role stress as the worker's behavioral expectations given their specific environment and job duties, suggesting that if roles were not clearly defined, both stress and burnout would likely occur (Portoghese et al., 2017). Two hypotheses were proposed: The first simply determined if "lack of role clarity" was associated with emotional exhaustion; the second proposed "the relationship between lack of role clarity and emotional exhaustion is moderated by a supportive coworker climate" (Portoghese et al., 2017, p. 188). Both hypotheses were supported by the results of their analysis, indicating "emotional exhaustion decreased with role clarity (standardized coefficient $\gamma_{10} = -0.46$, $P < 0.01$)" and

"role clarity was significantly and negatively related to emotional exhaustion at higher levels of supportive coworker climate ($\gamma = -0.44$, $P < 0.01$)" (Portoghese et al., 2017, p. 190).

Portoghese et al. (2017) did not reference the study examining emotional exhaustion in nurses by Guidroz et al., (2012), so it was unclear if they were aware of their conclusion that a positive coworker climate could dampen the effects of emotional exhaustion. Instead, they based their hypotheses and concept modeling on Bakker and Demerouti (2007) whose work hypothesized that high job demands combined with limited resources could lead to increased employee burnout, suggesting that "role clarity" played an important role in "buffering" this effect. Their hypothesis also suggested that if employees were given more resources, this could lead to higher levels of cooperation and employee engagement (Bakker & Demerouti, 2007). In other words, if a hospital employee had clearly defined roles in an environment based on professional cooperation, this would lessen/dampen the negative effect/s of stress and stymie the development of burnout. The findings of Portoghese et al., (2017) not only supported Bakker and Demerouti's theory (2007) that role clarity is associated with emotional exhaustion, but also extended it to include the effects of the group upon the individual. Their revised theory (Bakker & Demerouti, 2007; Portoghese et al., 2017) indicated that a strong support network of coworkers combined with clearly articulated roles and responsibilities in the work environment decreased the likelihood of emotional exhaustion. This suggested if a hospital system had a strong support system in place for nurses as well as allied health professionals, interprofessional conflict could be decreased.

A quantitative study conducted by Jones et al. (2013) tested the idea that staff perception of their hospital working environment was associated with support networks, stress, and overall job satisfaction. Their study sampled a small unit of oncology staff (N = 85) of varying medical disciplines in a hospital in Scotland with work-related stress described as "demand/control" and job satisfaction described as "effort/reward" over the working environment (Jones et al., 2013). According to their findings, emotional distress was not associated with either "demand/control" or "effort/reward" but was related to job satisfaction; these results indicated as job demands increased, job satisfaction decreased as workers reported less control over their work environment (Jones et al., 2013, p. 52). Their findings also revealed differences between professional groups, with nurses (42%) and medical staff (50%) reporting more incidents of stress-related sickness than radiographers; nurses and support staff reported lower levels of managerial support and job satisfaction than the rest of the sampled professionals (Jones et al., 2013). Radiographers, which fell under the category of allied health professionals according to the National Health Service in Scotland (NHS Scotland, 2020), reported lower levels of stress and the highest levels of job satisfaction (Jones et al., 2013, p. 51). These findings supported other literature that suggested nurses work under more stressful conditions and perceive a lack control over their working environments; the combination of these factors as indicated in similar literature led to burnout or other physical manifestations related to prolonged stress exposure (Guidroz et al., 2012; Portoghese et al., 2017).

Unfortunately, the study by Jones et al., (2013) was hindered by a small sample size as well as sample bias often associated with conducting survey research (Willis, 2007); most respondents were nurses, and their clinical experience was based upon

working in an oncology hospital. A broader investigation involving multiple hospitals with larger samples could be beneficial in expanding their data pertaining to job satisfaction. The most relevant finding from the study by Jones et al., (2013) was the discrepancy in how radiographers reported their job satisfaction and lower stress levels. The specific details regarding radiographers were not revealed in the literature, only they served in a "therapeutic" capacity (Jones et al., 2013); further research revealed that all radiographers in Scotland, therapeutic or diagnostic, are regarded as allied health professionals in the same context defined in the United States (NHS Scotland, 2020). Based upon this revelation, it could be hypothesized that other allied health professionals would report similarly low levels of stress and increased job satisfaction in Scotland and perhaps even in the United States. If this were true, *why* were allied health professionals having such different experiences? Did the hospital system favor these professionals while disproportionately affecting nurses and physicians who reported higher stress and lower job satisfaction?

While the literature established a link between stress in the hospital environment to the potential development of interpersonal and interprofessional conflict, was it possible to determine if an individual's reaction to stress could predict their response to conflict? A quantitative study by Kelly et al., explored factors related to the prevalence of violent assaults on hospital staff, relationships between risk factors, and "whether social conflict and stress reactivity moderated the relationships between social conflict frequency and patient-on-staff assault" (2014, p. 1113). Again, the term "moderated" appeared in the literature referencing the potential relationship between conflict and stress, like the term "buffered" used by Portoghese et al., (2017) to describe the variable

they defined as “role clarity.” Unlike the study by Portoghese et al., (2017), Kelly et al. investigated violent assaults on forensic hospital staff, noting that patient-on-staff violence was a significant issue and 99% of survey participants reported conflict with patients (Kelly et al., 2014, p. 1115). Kelly et al., (2014) hypothesized that “reactivity” to stress would “moderate” conflict between patients and staff as well as interactions between staff members; in other words, individual responses to stress could influence their risk of conflict or even assault. Their study concluded that “stress reactivity” had a statistically significant, albeit small association with risk of assault from patients; additionally, they concluded that an interaction between an individual’s stress response to conflict and exposure to conflict either increases or decreases the risk of assault (Kelly et al., 2014, pp. 1118-1119).

Of interest to this dissertation, the survey by Kelly et al., (2014, p. 1116) noted that 92% of respondents also experienced conflict “occasionally,” “often,” or “very often” with coworkers, typically due to disputes regarding the treatment of patients (18.3%), disputes with managers (20.8%), or disputes with other staff (22.5%). Specific examples of these disputes were not provided, however the general categories suggested potential policy disputes, issues with treatment plans, and/or some other issue related to professional boundaries. In terms of staff reactivity to these conflicts between staff, the authors noted “reactivity to social conflict was normally distributed across staff members ($M = 1.94$, $SD = 0.43$). A third of participants reported moderate difficulty with letting go of conflict but only 12.1% reported having extreme difficulty” (Kelly et al., 2014, p. 1116). Related to what is known about the stress response and the effects of chronic stress (Maslach et al., 2012), these findings suggested a stressful, hospital work

environment may negatively influence staff member interactions. Individuals experiencing high levels of stress and having a difficult time "letting go" of conflict would likely contribute to an escalating conflict spiral as they gradually developed signs of burnout. An otherwise effective team experiencing little to no conflict would likely deteriorate in performance as individual members began to contribute to conflict with other professionals; like a damaged component of an engine, eventually the failure of one part could lead to the failure of the entire engine.

This section discussed the implications of stress as a conflict antecedent, noting that continued physiologic responses to various stress events, or merely working in a stressful environment such as a hospital, could contribute to employee burnout. The other concept explored in this section, emotional exhaustion, also contributed to hospital employee burnout that closely resembled stress responses reported in nurses. It remained unclear how these two conflict antecedents affected allied health professionals and their lived experiences with interprofessional conflict.

Conflict Resolution Styles. The ability of a health care worker to handle conflict as well as their own preference in dealing with conflict played a role associated with the effects of conflict antecedents. This was noted in the Almost et al., (2010) study using the phrase "conflict management style" to describe a "core process" related to how conflict antecedents affected positive or negative outcomes. Using the terms "agreeable" or "disagreeable" to describe conflict management styles, Almost et al., (2010) suggested agreeable styles such as collaboration led to reduced instances of conflict whereas disagreeable styles such as conflict avoidance or "domination" often led to more conflict. The previous subsection explored the effect/s of stress and/or emotional exhaustion on

conflict, noting several studies indicating these variables impacting conflict at the individual level (Guidroz et al, 2012; Kelly et al., 2014; Portoghese et al., 2017). There were underlying implications in these studies that these responses to stress as well as conflict were "moderated" by variables such as support networks (Portoghese et al., 2017), reactivity to stress (Kelly et al, 2014), workloads (Jones et al, 2013), or professional job duties (Guidroz et al, 2012). But what if the moderating variable was how individuals responded to conflict, as in their own personal style of handling adversity?

Two studies examined how individuals addressed conflict from a "style" lens. The first was a dissertation written by Rebecca Askew (2011) that addressed the relationship between conflict resolution "styles" utilized by nurses and different types of conflict. The other study by Moreland and Apker (2016) attempted to bridge the gap between stress and conflict by examining this relationship through how individuals communicate. While both studies addressed interpersonal conflict, there were implications relative to this dissertation suggesting possible bidirectional systemic influence. In other words, an individual's style of conflict resolution—or lack thereof—could potentially be related to systemic workplace factors while also having a significant influence on the work environment itself.

Askew's (2011, p. 17) dissertation examined whether a relationship existed between a nurses' different conflict resolution styles and "their perception of intragroup, intrapersonal, and intergroup conflict." Using the "contingency theory of conflict management" by Rahim (2001) as the framework for the research design, Askew (2011) utilized five conflict resolution "styles" that individuals employed when dealing with

conflict. The specific styles of conflict resolution identified and used as variables in her analysis mirrored the "dual concern model" (Pruitt & Kim, 2004, pp. 40-47) known to conflict resolution practitioners using the following terms: Accommodating/obliging, avoidance, collaboration/integration, competition/domination, and compromise (Askew, 2011, p. 13). According to Askew's survey results, the most used style was "integration" which was synonymous with collaboration (Askew, 2011, pp. 61-62); this was likely due to the influence of hospitals having "Magnet status" (2011, p. 69) as well as indicative of a culture actively promoting collaboration and cooperation between nurses. While support for the hypotheses exploring interpersonal conflict and intrapersonal conflict were noted in the results, there was no evidence supporting the hypothesis related to intergroup conflict. There was no correlation found between conflict resolution styles and perception of intergroup conflict; however, "a negative relationship was found between workgroup size and intergroup conflict (-.097, p =.042)" indicating that lower levels of conflict were associated with larger nursing units (Askew, 2011, p. 64).

Unfortunately, like so many other pieces of literature reviewed for this dissertation, Askew's research focused on the nursing profession, describing their role as "in the center of communication with multiple stakeholders" (2011, p. 14). While this was true regarding the role nurses played, they are a part of a larger system, and one could argue physicians and allied health professionals also embody significant roles in the web of communication. Another pitfall of her investigation was her use of the "intergroup" conflict as one of the dependent variables in the hypothesis (Askew, 2011): Intergroup conflict did not actually entail interprofessional conflict, but conflict between nurses working in the same floor/unit. The discussion over intergroup conflict focused on

the size of the unit/department rather than conflicts between different healthcare professionals which unfortunately did not help address the questions posed by this dissertation (Askew, 2011).

Jennifer Moreland and Julie Apker (2016) conducted a case study using an open-ended survey to explore the effects of communication on stress in nurses as well as how this population addressed workplace conflict. Employing "Wieck's (1979) model of organizing," they found that communication that was "exclusionary" contributed to both conflict and stress; this dysfunctional discourse represented a failure to communicate as well as a lack of support from hospital management (Moreland & Apker, 2016, pp. 817-818). Nurses were using differing "communication styles" as described by Wieck (1979) to disambiguate their confusing, stressful work environment (Moreland & Apker, 2016, p. 817). Workplace conflicts reported by survey participants were handled via both "respectful" and "disrespectful" discourse, with the latter representing a barrier to successful conflict resolution (Moreland & Apker, 2016, pp. 819-821). Thus, the real issue discovered by this study pertained to the intentions as well as potential outcomes of interpersonal conflicts between nurses.

Moreland & Apker utilized the metaphor of "fire" to describe the relationship they uncovered regarding nurse conflicts and stress: If stress was not under control, it could ignite conflict and become an uncontrollable conflagration (2016, p. 817). Expanding upon their fire metaphor, they framed this relationship between conflict and stress in a Promethean (Britannica, T. Editors of Encyclopaedia Britannica, 2022) manner: That conflict, like fire, can be "harnessed" for positive usage in the hospital environment (Moreland & Apker, 2016, p. 817). This is a transformative view of conflict

commonly discussed in the field of conflict resolution, with educational interventions seeking to improve communication and facilitate teamwork the key to mitigating social conflict as well as workplace conflict (Coser, 1956; Hocker & Wilmot, 2014; Pruitt & Kim, 2004; Raines, 2013). Other pieces of literature also supported this transformative approach to workplace conflict in hospitals (Almost et al., 2016; Brown et al., 2011).

Unfortunately, the study by Moreland and Apker (2016, p. 817) not only had a small sample size due to a low survey response rate of 18.4% (N = 135), but also centered on the nursing profession. Their study was only effective at studying intergroup conflict as well as interpersonal conflict; no conclusions could be drawn relative to interprofessional conflict. The lived experiences of allied health professionals may reveal similar issues—even correlate directly with—issues pertaining to exclusionary communication and the lack of support from management that were revealed by Moreland and Apker's (2016) study.

The style of handling workplace conflict is an issue dependent on the individual health care worker and presents a challenge for any conflict analyst to address as it demonstrates the complexity of the human factor. Do allied health professionals experience the same workplace conflicts and do their styles also vary as much as what has been described in the nursing population?

Horizontal Violence/Bullying. Several pieces of literature related to workplace conflict in nursing addressed the concept of horizontal violence, also described as "bullying" (Ceravolo et al., 2012; Goff, 2018). This phenomenon fell under the theme of conflict antecedents and warranted a brief synopsis as it greatly impacted the nursing profession and likely affected both physicians (Schlitzkus et al., 2014) and allied health

professionals as well. Unfortunately, several studies conflated horizontal violence, which described peers engaged in hostility toward one another, with hostile behavior exhibited between superiors and subordinates, which if applied to the same two-dimensional axis implied vertical violence (Borkowski, 2016). The concept of interprofessional workplace conflict in hospitals was likely more than two-dimensional, with systemic factors affecting not only nurses but also allied health professionals in both the horizontal and vertical axes. Before this was explored, it was necessary to first define and disambiguate the terms used by several pieces of literature related to horizontal violence and bullying (Ceravolo et al., 2012; Goff, 2018; Schlitzkus et al, 2014).

Like the ambiguous phrase "interpersonal conflict," horizontal violence was confusing to analyze as the definition of the phenomenon across literature was not consistent. The phrase "horizontal violence" was also referred to as "lateral violence" (Ceravolo et al., 2012) in addition to being associated with aggressive behavior noted as "bullying" (Goff, 2018; Schlitzkus et al., 2014) in the workplace environment. These inconsistencies demonstrated not only a lack of a universally agreed upon definition, but also the utilization of a potentially hyperbolic, poorly stated term. The use of the word violence with a modifier placed before it likely originated from authors who studied Johann Galtung's (1969) seminal work describing structural violence in comparison to overt acts of violence. However, the usage of these terms "horizontal/lateral violence" implied that aggressive speech and covert actions such as professional sabotage were the equivalent of actual violence perpetuated against nurses (Berquist et al., 2017). To the layperson, this must be confusing, and it could be used to erroneously overemphasize certain events to fulfil a sensationalist agenda, as violence elicits a negative connotation.

This is not to trivialize the events described within this literature (Ceravolo et al., 2012; Goff, 2018), but merely to point out the subjective nature of interpreting the intentions of others in a high stress hospital environment. Individuals could hypothetically misinterpret receiving orders in an assertive tone as being yelled at or talked down to by health care professionals. Other individuals may even interpret receiving orders and requests as "bullying" given said requests may cross professional boundaries as required by policies implemented by the hospital system, i.e., nurses given orders by physicians to ensure allied health professionals perform a test within a given time frame. Given the research investigating horizontal violence and bullying collected data through self-reported surveys (Ceravolo et al., 2012; Schlitzkus et al., 2014) or through second-hand accounts such as interviews (Berquist et al, 2017; Goff, 2018), it is impossible to determine the actual intent of the described events. What was implied, or assumed via conjecture, was that the reactions to these aggressive behaviors described by research subjects were negative, and therefore a cause for concern.

Overt acts of violence were not the focus of this dissertation; however, literature suggested overt violence in hospitals perpetrated by patients against hospital workers as well as overt violence involving hospital employees were serious concerns needing to be addressed (Kelly et al, 2014). The act of "bullying" mentioned in previous literature did not fit into the definition of overt violence (Galtung, 1969) but did correspond with definitions of "horizontal violence" as described in multiple studies (Ceravolo et al., 2012; Goff, 2018; Schlitzkus et al., 2014). It remained unclear if bullying and horizontal violence were the same as the interpretations of these behaviors were subjective and/or biased.

Allied Health and Conflict Antecedents. Having explored the literature and noting the numerous antecedents to conflict in the hospital setting, what were the effects—if any—of conflict antecedents on allied health professionals? Unfortunately, the literature pertaining to this question was sparse, as allied health was mentioned only in a peripheral or ancillary context to nurses and physicians in previously discussed literature (Almost et al., 2016; Kim et al., 2017). This was the primary reason allied health professionals were targeted by this dissertation due to their enigmatic role in hospital conflict as well as their marginalization in current literature.

The first piece of relevant literature was a cross-sectional survey examining burnout in physical therapists (PTs) working in rural areas in the United States. Using the Maslach Burnout Inventory, Berry and Hosford (2015) found "low to moderate rates of burnout" in 113 physical therapists reporting from rural settings. An interesting finding from the study was men reported significantly higher levels of "depersonalization" than their female counterparts ($p = .002$), a finding apparently consistent across health professions, which the authors posited as related to gender role stereotypes that women are more "caring and sensitive" (Berry & Hosford, 2015, pp. 6-8). While not a significant finding in their study, nearly 40% of respondents still indicated moderate to high levels of "emotional exhaustion" which was troubling (Berry & Hosford, 2015). The correlation between job burnout and emotional exhaustion in the health care setting was discussed in the previous section (Jones et al., 2013), and should not be underestimated in its relevance to interprofessional conflict. Their overall conclusion was that rural areas demonstrated lower levels of burnout than more densely populated areas; however, they also suggested a potential reason could be that physical therapists developed "work

communities" with other health care professionals (Berry & Hosford, 2015, p. 8). In other words, a strong interprofessional network could mitigate instances of burnout; and, relative to this dissertation, potentially avoid interprofessional conflict in the hospital setting. Additionally, the rural work settings could also be related to increased job autonomy, demonstrating that physical therapists who have more control over their working environments reported lower levels of burnout (Berry & Hosford, 2015). Having more control over a hospital work environment is discussed in further detail in the next literature review section specifically addressing professional boundaries and hierarchies.

Another piece of literature examined conflict through the lens of medical imaging, one of the many allied health professions of interest to this dissertation. Patton (2018) examined workplace conflict by interviewing 13 medical imaging technologists based across the United States. Communication issues were the primary reason, or "contributor," to conflicts indicated by respondents, with "uncivil communication" and "failure to communicate" being specific examples (Patton, 2018, pp. 26-27). An additional communication issue mentioned in this study was the necessity to keep medical imaging professionals well-informed during process changes, such as hospital mergers, or changes in work schedules (Patton, 2018). According to Patton's (2018) findings, withholding such communication, or not being truthful about circumstances related to workplace consolidation, potentially led to work-related stress, and increased mistrust towards management. These findings could be crucial in establishing a link between interprofessional conflict and patient care outcomes if more data were collected.

Granted, Patton's (2018) small sample size should not be indicative of all medical imaging professionals, nor should it be used to assert a wider, systemic problem. A

notable finding from this literature was the theme regarding “civil and collaborative” communication, and how these are “expectations” directly pertaining to professional standards established for “medical imaging professionals” (Patton, 2018, p. 27). Patton used the Code of Ethics from the American Registry of Radiologic Technologists to emphasize her point that: “’The [medical imaging] technologist acts in a professional manner, responds to patient needs, and support colleagues and associates in providing quality patient care’” (The American Registry of Radiologic Technologists, 2021; Patton, 2018, p. 27). Despite the study’s limitations, one hypothesis could be made based Patton’s (2018) conclusions: That health care workers across medical disciplines who chose not to uphold their own professional standards are likely contributing to localized incidents of interprofessional conflict. Further exploration of this subject matter was explored in the professional boundaries and hierarchies section.

This concludes the section exploring conflict antecedents in the context of hospitals and allied health professionals. The following section explored professional boundaries and hierarchies existing within hospital environments and how they potentially related to interprofessional conflict.

Professional Boundaries and Hierarchies

Professional boundaries and hierarchies were important thematic constructs in the context of exploring interprofessional workplace conflict in hospitals. A simple metaphor describes boundaries shared between professionals: A plumber doesn’t tell a carpenter how to do their job and vice versa. When plumbers and carpenters work together to build a house, their combined efforts are supervised by builders and architects, ensuring their work is part of a group effort with established goals. Upon completion of the house, the

work is inspected and is either judged satisfactory or deficient, concluding the project as it was envisioned. Despite the simplicity of this metaphor, issues could have occurred that created conflict between those professionals, undermining the entire project.

A similar situation applied to multidisciplinary health care teams often led by physicians pursuing specific health outcomes for patients. Like the metaphor, there is potential for interprofessional conflict if professional boundaries are crossed, if roles aren't clearly understood, or if individuals on the health care team become embroiled in various power dynamics related to professional hierarchies (Braithwaite et al., 2016; Janss et al., 2012). What were those hierarchies, and did the authors of multiple pieces of literature pertinent to this dissertation use the same definitions of that which exemplifies a professional hierarchy? Moreover, are all these professional hierarchies in health care based on who holds power over others, as one piece of literature suggested (Janss et al., 2012)? Professional boundaries were described by Andrew Abbott (1988) as a crossing of one professional's roles into the roles of another professional; in the context of health care, how did this influence interprofessional conflict?

Professional Boundaries. In the organizational context, a boundary is an invisible delineation dividing individuals, departments, and divisions based upon expertise or specialization (Abbott, 1988). While literal walls and barriers may exist within an organization to separate work areas for individuals and groups, the realm of professional boundaries exists primarily as a social construct. These boundaries form and exist for a variety of reasons: As metrics outlining job duties, emphasis of a professional scope of practice, or as a barrier to entry into an exclusive group possessing specialized knowledge (Abbott, 1988). Professional boundaries are invisible barriers in the systemic

context influencing interconnections between elements within the system (Meadows, 2008); however, these barriers may be known despite being invisible in the form of social taboo or unspoken rules.

Hierarchies. Professional boundaries also delineated those in leadership roles from their subordinates, creating a professional hierarchy in groups based on experience and/or competence (Zlatev et al., 2016). Hierarchy was not easily defined, though frequently debated, and studied in the fields of psychology, sociology, anthropology, and conflict resolution. In his research related to inequality, Walter Scheidel noted that humanity's great ape cousins, specifically gorillas and chimpanzees, were "intensely hierarchical" (2018, p. 25) in their social interactions. These hierarchical observations were also noted by primatologist Frans de Waal who posited that the presence of these hierarchies in chimpanzees and bonobos "eliminates the need for further conflict" suggesting apes preferred an order of hierarchy (2005, p. 61). Complex interactions between apes were based on social dominance, often related to mate selection and finite resource allocation within a small community whereby "alpha" males and females emerged to dominate the group (Scheidel, 2018; de Waal, 2005). De Waal (2005) noted that groups of chimpanzees and bonobos were thrown into chaos without a clear understanding of the social order, as in understanding who was "in charge" and who could be depended upon as fair, reliable, and trustworthy. The similarity to human interactions in social groups should not be noted as coincidental and dismissing these observations as anthropomorphizing may not be wise if we wish to approach understanding hierarchy formation scientifically.

While this obviously does not explain modern organizational hierarchy, it suggested two related ideas: Humans, like our ape cousins, are also hierarchical in social settings, and that humanity's more advanced social structures are based upon a similar desire for fair, reciprocal social interactions (Scheidel, 2018; de Waal, 2005). Like apes, humanity must compete for finite resources and status without resorting to actions that could lead to our extinction (de Waal, 2005); ergo, a delicate balance between competition and cooperation is required to facilitate the propagation of the species. Unfortunately, humans demonstrate a tendency to dominate other humans by exerting power at the individual or organizational level to achieve their goals, leading to unavoidable interpersonal conflict/s (Coser, 1956; Pruitt & Kim, 2004). This seemed to be an unavoidable truth in human social interaction; however, we are the only species capable of developing complex systems to not only avoid conflict but resolve it. The evidence of these systems resides in our governments, laws, religions, and shared social values which undoubtedly evolved to mitigate the chaos caused by incessant conflict. One of the pertinent questions to consider is if these systems—which were clearly designed to resolve conflict and bring order to chaos—are compatible with smaller organizational systems, such as businesses in capitalist societies? This dissertation does not answer that question, but it examined if a specific type of organizational system—the hospital—presented evidence of social hierarchy comparable to our natural inclinations as homo sapiens, or perhaps suggests a different systemic, hierarchical agreement.

It was important to examine the purpose of the hospital system to recognize if the system was a potential facilitator of conflict (Meadows, 2008). For example, what if professional hierarchies noted within the hospital system were based upon rigid

structures, such as legal constraints imposed by the hospital system, or through medical licensing requirements that most health care professionals are required to obtain for employment instead of power imbalances? Additionally, what if those professional hierarchies in hospitals were agreed upon social contracts related to competence, as in a group of people ceding responsibility to another group (Abbott, 1988)? Indeed, medical professionals are all subject to authority figures who occupy different job titles that create boundaries and hierarchies; sometimes there is an overlap of these positions, and who wields the decision-making "power" may not be clearly understood, thus leading to interprofessional conflict (Braithwaite et al., 2016; Janss et al., 2012). The purpose of a hospital system matters in this context, and it is important that a bridge is built connecting conflict analysis and systems theory for the sake of examining interprofessional conflict in hospitals. This bridge seems related to a phenomenon called "task conflict" (de Wit et al., 2012; Jehn et al, 2010; Todorova et al., 2014).

Task and Process Conflict. Task conflict was originally defined by Karen Jehn as "The disagreements among group members about the content of the tasks being performed, including differences in viewpoints, ideas, and opinions" (1995, p. 258). This definition of task conflict was abbreviated by a meta-analysis exploring the "paradoxical nature" of intragroup conflict as when group members "disagree about the content and outcomes of the task being performed" (de Wit et al., 2012, p. 360). The same study also noted "process conflicts are disagreements among group members about the logistics of task accomplishment, such as delegation of tasks and responsibilities" (de Wit et al., 2012, p. 360). While task and process conflict are similar, they are not the same as "relationship conflict" (de Wit et al, 2012) which is commonly associated with

interpersonal conflicts. Interpersonal conflicts are categorically conflict antecedents, such as personality differences and/or conflict resolution style differences between individuals, which were discussed in the previously.

The first article detailing issues with task conflict was written by Jehn et al., (2010), who posited that the perception of conflict occurring within groups played an instrumental role in "outcomes." Instead of focusing on what they described as "mean level conflict," the focus was on "group conflict asymmetry" which was described as "a group level construct that refers to the degree to which a group's members differ in their perception of how much conflict there is in the group" (Jehn et al., 2010, p. 596). They also explored "individual conflict asymmetry" as a "direction of effect" whereby individual members of the group perceived more—or less—conflict (Jehn et al., 2010). In other words, it is not the amount of conflict reported as present, but the individual differences in perception of conflict occurring within the group that played a role in moderating intragroup conflict. If one member of a group perceived conflict as constantly present while the rest did not, there was a likelihood this biased their performance of tasks within that group. Hypothetically, this individual could bias the group and bring down morale through their perception of negativity and conflict, leading to reduced task performance of the entire group. Indeed, the idiom "misery loves company" might hold some degree of truth regarding intragroup conflict.

Jehn et al., tested their hypothesis using a sample of 51 work groups, controlled for size, formed from 167 employees representing investment banks and engineering firms (2010, pp. 601-602). Subjects performed "logic tasks" (Jehn et al., 2010) in their groups and completed a survey upon conclusion to collect data on the perception of group

conflict. Based upon their findings, the authors discovered that participants in the work groups did not perceive conflict in the same manner; in fact, their findings supported their hypothesis that "when a group's members perceive different levels of conflict, demonstrating group conflict asymmetry, performance and creativity in that group are decreased" (Jehn et al., 2010, pp. 607-608). The authors also concluded that individual group members who perceived no conflict while also displaying positive attitudes would demonstrate enhanced performance (Jehn et al., 2010, p. 608). These conclusions suggested perception had a profound impact on reality, and while this study explored intragroup conflict between professionals, there may be a similar effect on interprofessional task conflict as well.

A meta-analysis of intragroup conflict conducted by de Wit et al., (2012) noted three distinct types of conflict: Relationship, task, and process conflict. The disambiguation of these terms was vital to understanding the types of conflict affecting individuals working in groups. As the name implied, relationship conflict involved personal issues specific to the ego of the individual embroiled in conflict; this involved divergent moral views or personality differences (de Wit et al., 2012, pp. 360-362). It was also suggested by other literature that relationship conflict was based upon power and the ability of group members to "control" other group members (Janss et al., 2012, pp. 839-840). Task and process conflict were similar in how individuals dealt with accomplishing an assigned goal or activity; the difference between them involved how the task was carried out versus agreement towards achieving an outcome. With task conflict, group members would disagree about desired outcomes while process conflict would involve conflict about the delegation of responsibilities towards accomplishing an agreed upon

outcome (de Wit et al., 2012, p. 360). Task conflict steered the direction of the ship, as a rudder, while process conflict decided who hoisted the sails, raised the anchor, and who sat in the crow's nest. Overall, the researchers felt intragroup conflict was "paradoxical," (de Wit et al., 2012) for older research on intragroup conflict suggested that it was more likely than not harmful towards group productivity, and their meta-analysis suggested some degree of conflict was helpful. This seemed contradictory at the surface level.

What the researchers discovered in their meta-analysis of intragroup conflict was the presence of "moderating variables" or "moderators" that led to a "positive" or "negative" influence on "proximal" and "distal" outcomes (de Wit et al., 2012). These theoretical moderators (de Wit et al., 2012, pp. 365-366) were characterized as either "group contextual" (conflict type, task type, cultural context, or organizational level) or "methodological" (level of intragroup conflict, subjects involved, scale of conflict, setting, group performance measurement, group performance operationalization, and publication state). Proximal outcomes involved "group cohesion," which was further divided into "emergent states" and "group viability," while distal outcomes represented overall task performance, also further divided into "effectiveness," "productivity," and "innovation" (de Wit et al., 2012, pp. 361-362). The authors concluded:

> Task conflict is more positively related to team performance when task conflict and relationship conflict are weakly correlated, when the conflict occurs among top management teams rather than teams at lower levels of organizational hierarchy, and when performance is operationalized in terms of financial performance or decision quality (rather than overall performance). (de Wit et al., 2012, p. 384)

In summary, task conflict could be regarded as good, if certain moderating conditions were met by design or through circumstance. Could these findings apply to intergroup and interprofessional conflict as well, if similar systemic moderators were applied?

There were two takeaways from this meta-analysis that were relevant to this dissertation. First, task and process conflict were both relative to the system in which the conflict was taking place. Despite a focus on intragroup conflict, if a systemic factor played a significant role in moderating conflict as the authors suggested (de Wit et al., 2012), would this influence intergroup and interprofessional conflict as well? Second, the researchers concluded there were no associations between group outcomes and intragroup conflict pertaining to the moderating variable of "cultural context" (de Wit et al., 2012, p. 373). Cultural context was defined by the authors as responses to conflict based on "power distance, uncertainty avoidance, individualism versus collectivism, long-term versus short-term orientation, and masculinity versus femininity" (de Wit et al., 2012, p. 364). This was surprising and did not support the previous work investigating culture by Jehn et al., (2010); also, related to literature that explored conflict antecedents, it seemed to contradict literature suggesting perceived differences in power played a significant role in conflict (Apesoa-Varano, 2013; Janss et al., 2012). If personal factors, based on a broader definition of culture, did not play a significant role in moderating the conflict, then perhaps a systemic factor did instead? Systemic factors could be more easily manipulated to influence task outcomes than manipulating an individual's perception of conflict, or their personal values which are not likely subject to compromise.

The framing of conflict as a positive factor in any work environment appeared to be contradictory, but a study by Todorova et al., (2014) suggested that task conflict could be positive. Using the same definition of task conflict as noted by Jehn (1995), Todorova et al., tested their hypotheses about task conflict, drawing upon "affective events theory" to determine if conflict had a positive effect on task performance. They found that the intensity of conflict, as well as the context of the conflict, played a significant role in determining if intragroup conflict demonstrated an "energizing" effect on individuals (Todorova et al., 2014). It should be noted that conflict intensity and the context of the conflict were several of the "moderators" described in the meta-analysis by de Wit et al, (2012) that influenced the "distal outcomes" of task conflict. Mild task conflict was noted as beneficial in how it enhanced job satisfaction and elicited more positive emotions, but only when it was perceived as a sort of "novel" growth opportunity (Todorova et al, 2014, p. 461); interestingly, this had "no effect on positive emotions" when employees shared the same professional background. On the other hand, the authors concluded "that the information acquired from task conflict engendered more positive active emotions when the conflict occurred between employees from different functional areas," (Todorova et al, 2014, p. 461) suggesting interprofessional conflict, rather than intraprofessional conflict, was more energizing. Did this suggest that a sort of healthy competition between functional areas was more beneficial to the organization rather than healthy competition amongst professionals in the same functional area? Either way, the organizational system would be responsible for facilitating and perpetuating this phenomenon, and the reaction to this as either "mild" or "extreme" task conflict would depend on the individuals within those groups.

Task conflict was described by three significant pieces of literature exploring intragroup conflict (de Wit et al., 2012; Jehn et al., 2010; Todorova et al., 2014) as relevant to this dissertation under the context of professional boundaries and hierarchies in several ways. While these three studies explored intragroup conflict in a general organizational context, the application of their findings to hospitals and interprofessional conflict vis a vis allied health professionals may yield a correlation. Intragroup conflict could be equivalent to intraprofessional conflict if applied to a hospital setting, as most health care professionals appeared to work primarily with their peers based upon the literature. Individuals with similar professional backgrounds working together in a group to accomplish a task will likely not encounter issues with professional boundaries but may engage in conflict over interpersonal and/or intraprofessional hierarchy, such as status and/or rank. If the individuals in the groups were all from different professional backgrounds, this could enable professional boundary conflicts in addition to hierarchical conflict.

Now, we must imagine what this conflict would look like if there were multiple teams of multi-disciplinary professionals working with—or against—similar teams to accomplish daily tasks under the most stressful circumstances imaginable. Hospitals facilitate these circumstances through serving their purpose as a system: Health care delivery (Borkowski, 2016). Hospitals utilize multidisciplinary teams that rely on diversity of knowledge, experience, and expertise to carry out said care delivery to patients (Bar-Yam, 2004). It is the elements and interconnections within the hospital system that likely create interprofessional conflict and intragroup/intraprofessional conflict through the outcomes of task—or even process—conflict.

Role Ambiguity and Scope of Practice. As encountered in the previous section exploring conflict antecedents, there was an issue with the terms being used and defined by different pieces of literature. The terms "role ambiguity," (Janss et al., 2012; Portoghese et al., 2017), "role boundary," (Apesoa-Varano, 2013; Brown et al., 2011), "scope of practice," (Brown et al., 2011, Eager et al., 2010), "professional boundaries," (Collins, 2012; Huby et al., 2014), and "jurisdiction," (Oh, 2014) appeared to be interchangeable in describing the same phenomenon: When health care professionals were confused about the extent of their job duties as well as when their job duties conflicted with other health care professionals. Disambiguation of these terms was covered in greater detail in this section. It was also necessary to relate how each of these described phenomena related to interprofessional conflict and the hospital system. Most of the literature obtained for this literature review that fell under the professional boundaries and hierarchies theme had conceptual overlap related to job duties which was not the same as "task conflict" (de Wit et al., 2012; Jehn 1995). Job duties, roles, responsibilities, functions, and expectations were all vernacular utilized to describe the same phenomenon: Boundaries imposed by the hospital system and individual professions.

Every health care professional, as an element within the hospital system, needed to understand their unique role and what tasks they are expected to perform. The literature revealed that health care is dependent on both highly educated as well as highly skilled multidisciplinary teams working together under high stress working conditions (Braithwaite et al., 2016; Janss et al., 2012). Therefore, it was necessary to address how role boundaries and scope of practice issues, as systemic factors, potentially created or

exacerbated conflict between health care professionals working under those conditions. Was this phenomenon unique to health care professionals and hospitals, or only to a specific sample of professionals, i.e., nurses and physicians? Given the lack of literature specifically addressing conflict involving allied health professionals and their lived experiences this gap was worthy of investigation.

In the literature review conducted by Almost et al. (2016), one phrase describing a particular conflict antecedent seemed alarming: “Role ambiguity.” As a conflict antecedent, role ambiguity suggested hospital staff were confused about their job duties and professional roles within the hospital, leading to “emotional exhaustion” (Portoghese et al., 2017). Was role ambiguity a result of working within the complexity of the medical field, or was this another example of Andrew Abbot’s (1988) description of professional hierarchy enforcement? Both of these assumptions were plausible. According to Portoghese et al (2017), the lack of support given to nurses directly influenced role ambiguity, suggesting a professional hierarchy held influence as management as well as nurses in supervisory roles did not offer the level of support that was requested by subordinates. This resulted in “role stress” where subordinate nurses were confused about their job roles as they overlapped with other nurses (Portoghese et al., 2017). Why did this happen and what was enabling this phenomenon?

According to a phenomenological study by Brown et al., (2011) the professional boundaries and hierarchies imposed upon hospital staff are due to “professional standards,” hospital policies, and legal barriers. Brown et al., (2011) bridged the gap between conflict antecedents and the theme of professional boundaries and hierarchies by exploring conflict involving interprofessional primary health care teams in Canada. In the

primary care setting, health care professionals working in teams providing care to patients appeared to experience conflict in a similar manner to their peers working in tertiary care settings. The authors uncovered three themes from conducting 121 interviews from primary care workers in both rural and urban environments: "Sources of team conflict; barriers to conflict resolution; and strategies for conflict resolution" (Brown et al., 2011, p. 6). Of the sources of conflict identified, "role boundary issues, scope of practice, and accountability" were specifically mentioned by interviewees (Brown et al., 2011, p. 6). Role boundary issues and scope of practice issues were similarly ascribed to situations where health care professionals were either unaware of the boundaries to their roles in the hospital setting, or their job duties overlapped with other professionals (Collins, 2012; Nicotera & Clinkscales, 2010; Oh, 2014; Portoghese et al., 2017). In other words, interviewees were confused as to the roles played by others on their health care teams, often questioning who was in charge and who should be performing tasks.

Scope of practice was another issue raised by interviewees who mentioned that new professionals introduced to the team environment were often viewed as "threats to established scopes of practice" (Brown et al., 2011, p. 6). This seemed particularly applicable to newer professions such as nurse practitioners (NPs) and physician assistants (PAs), the latter being considered allied health professionals in the larger health care context (ASAHP, 2018). Both the role boundary and scope of practice conflict sources were directly tied into accountability in primary health care teams. The assumption that physicians were primarily accountable was questioned by interviewees who suggested a

more egalitarian approach was necessary, so all staff are held equally accountable for success as well as failure (Brown et al., 2011).

In conclusion, Brown et al. (2011) were amazed that despite years of literature researching conflict in health care that it remained prevalent. The authors suggested that health care professionals in lower status positions were more vulnerable to the effects of team conflict, as their concerns and feelings of frustration about their work environment could be dismissed by those with power, or those in higher status professions (Brown et al., 2011). It was noteworthy to include the authors placed nurses in a higher status category, suggesting they were not as vulnerable to the effects of team conflict due to increased levels of "professionalism" and the achievement of "equality in the team environment" (Brown et al., 2011, pp. 8-9). This was a questionable assertion to make and was contradicted by several pieces of literature exploring conflict antecedents which suggested nurses were lower in status than physicians (Almost et al., 2016; Kim et al., 2017). If their assertion were true, the rampant interpersonal conflict described by nurses would have been resolved by now, as their higher status enabled a barrier to team conflict vulnerability. The evolution of nursing into a recognized, higher status profession did not dampen or negate conflict; on the contrary, it may have created new conflicts that were associated with the negative effects of professionalism (Abbott, 1988).

Scope of Practice. The mention of professional standards in the context of health care suggested an organized outline for behaviors and actions directing hospital staff. Several pieces of literature in addition to Brown et al. (2011) used the phrase "scope of practice" (Eagar et al., 2010) when referring to professional standards. What did "scope of practice" mean, and did it universally apply to all health care professionals? According

to the American Nurses Association (2021), scope of practice "describes the services that a qualified health professional is deemed competent to perform and permitted to undertake – in keeping with the terms of their professional license." Unfortunately, this definition is vague and outsiders to the nursing profession would not understand which services this definition was referring to in the clinical context. Only those directly involved in the nursing field would be able to judge competence as well as which skills criteria were worthy of granting professional licensure, a phenomenon commonly known as "professionalism" (Abbott, 1988; Schon, 1983). This gatekeeping phenomenon was not an uncommon practice in health care (Abbott, 1988), as it also demonstrated the presence of a professional hierarchy: Those at the top of the hierarchy due to experience or superior skill could determine who was worthy of becoming a nurse.

In Australia, authors Eager et al., (2010) explored how changes in scope of practice affected communication involving enrolled nurses (ENs) and registered nurses (RNs). Most intraprofessional conflict reported by previously explored literature involving nurses in the hospital setting was related to communication issues (Almost et al., 2016; Kim et al., 2017). Eager et al. p. 91) discovered through focus groups that as roles changed or shifted within the hospital environment due to "fiscal constraints," enrolled nurses developed a "professional conundrum" in how they carried out their duties. According to the focus group respondents, registered nurses took on more supervisory roles due to changes in the hospital system, yet at times did not fulfil those new professional obligations, creating role confusion in some of the enrolled nurses (Eagar et al., 2010). Enrolled nurses sometimes administered medications to patients without the supervision required by registered nurses via hospital policy (Eagar et al.,

2010, pp. 91-92); this revelation is not only evidence of professional negligence but may also be in violation of the law.

While the authors were concerned about intragroup conflict between nurses, there was an implication that changes to scope of practice could have a systemic domino effect (Eagar et al., 2010). Nurses, physicians, and allied health professionals do not work in a vacuum, and changes made to the job duties in one health care profession could lead to professional boundary crossing influencing other professions. These changes highlight the delicate nature of interconnections between elements within a system (Meadows, 2008); the imbalance or disruption of these interconnections could create interprofessional conflict as health care professionals react to what they perceive as encroachment, or as undermining the responsibilities associated with their profession.

The scope of practice related to physicians was difficult to define as no universally adopted standard appeared to exist. While the Hippocratic oath (Britannica, 2022) exists as an ethical code for the administration of care by physicians, the implementation of it within a hospital system may not align with these moral obligations. Organizations such as the American Board of Internal Medicine (ABIM, 2021) dictate the professional obligations physicians follow in practicing medicine; however, there may be issues concerning a phenomenon called “dual agency” (Tilburt, 2014) which will be addressed later. One organization representing many American physicians, the American Medical Association (2021), has made concerted efforts to stymie attempts at the expansion of scope of practice for other health care professionals, such as nurse practitioners (NPs). The professional duties of physicians performing direct patient care serve as not only professional obligations, but also as boundaries through which only the

competent and worthy might cross (American Medical Association, 2021). Additionally, due to licensure required to practice medicine, this is also a legal matter; students, nurses, and allied health professionals are not legally allowed to diagnose or treat patients in the same manner as physicians. This is evidence of a professional hierarchy related to power as well as competence that physicians do not want others to cross (Abbott, 1988), and organizations such as the American Medical Association (2021) will undergo legal challenges to prevent their scope of practice being threatened. It is also possible that compensation to physicians for services rendered is also a serious concern; the addition of other professionals filling roles traditionally held by physicians would take money away from those physicians.

In the United States, the term most used to describe professional boundaries pertaining to physicians is "jurisdiction" which is then contextually applied as "jurisdictional boundaries" (Oh, 2014). An ethnographic case study conducted by Hyeyoung Oh (2014) involving internal medicine physicians at a teaching hospital in the United States revealed intraprofessional conflict was prevalent when doctors "consulted" with other doctors concerning patient care. Two explanations were offered as to why this intraprofessional conflict existed: "Ignoring shared jurisdictions and refusing jurisdictions" (Oh, 2014, pp. 590-591). On medical teams in hospitals, the internal medicine physician serves as the individual primarily responsible for the care of the patient (Oh, 2014); they will consult with specialists for expert advice, order proper diagnostic testing, or facilitate treatment options such as surgery. In this regard, internal medicine physicians share jurisdiction with other physicians by design of the hospital system, but only if consultations are requested. Consultations, which are common

practice, are considered the internal medicine physician subordinating themselves to a more specialized physician. At this point Oh (2014) made a comparison to Abbott's (1988) description of "jurisdictional settlements: subordination and division of labour." Referring to Abbott's observation, Oh stated that "practice divisions become ambiguous as physicians experience an overlap of skills" which leads to physicians developing a sense of "superiority" over other physicians due to specialization of knowledge. Instead of viewing consultations as a collaborative effort, physicians tended to view them as a sign of weakness or incompetence, particularly if the physician was less experienced (Oh, 2014). The necessity of expert labor and knowledge in the medial field requires consultations, particularly in teaching hospitals across the United States (Oh, 2014); unfortunately, the side effect of this process is a jurisdictional battle over who has the final authority over treatment plans.

Oh (2014) concluded that it was the hospital environment itself that facilitated and enabled this intraprofessional conflict via disruptions in communication between not only physicians but other hospital personnel. Oh (also posited that improvements in the flow of communication were a potential solution to this problem. This suggested that interconnections present in the hospital system played a significant role in enabling or resolving conflict between elements within that system. Conflict occurring within the medical profession is regarded as intraprofessional conflict; however, the "jurisdictional conflicts" (Oh, 2014) between physicians would likely spill over and affect teams of nurses and allied health professionals relying on these physicians for leadership. In this context, the intraprofessional conflict morphed into interprofessional conflict as the conflict spiraled and metastasized into the larger system.

In Germany, the encroachment of other professionals into the physician's scope of practice was called "task shifting" (Jedro, et al., 2020). This phrase is used to describe the process of using "Qualified Medical Practice Assistants," or MPA for short, to fill in for physician scarcity in Germany and to maintain "quality of care" delivered (Jedro, et al., 2020, p. 583). Over 6000 respondents to a telephone survey indicated 67.2% would be willing to accept MPAs delivering medical treatment over physicians for minor ailments; this percentage decreased to 51.8% when chronic conditions were concerned (Jedro, et al., 2020, pp. 584-586). In a close margin, most respondents had no issues with the task shifting practice, though the authors (Jedro, et al., 2020, pp. 586-587) suggested participant demographics and German citizenship played a factor in patient preferences. This suggested that there may be more concern from physicians regarding task shifting and professional boundaries being crossed than patients; thus, interprofessional conflict may be more prevalent behind the scenes at the systemic level, beyond the knowledge of patients. According to Andrew Abbott (1988), this "gatekeeping" behavior is indicative of professionalism as the recognized professions attempt to conceal knowledge and behind the scenes behaviors from public scrutiny. Despite the potential consequences of conflict related to task shifting, and the potential lowering of patient care standards, patients would remain oblivious to these changes.

As for allied health professionals (ASAHP, 2018), scope of practice was individually defined by each of the forty-plus professions. For the sake of brevity and relevance to the research conducted for this dissertation, medical imaging professionals consisted of both radiologic technologists and diagnostic medical sonographers were used to demonstrate scope of practice. These medical imaging professionals belonged to

credentialing organizations such as ARDMS (2022), CCI (2022), and ARRT (2022) that represented their professional interests and awarded licensure if competency requirements were met. Each organization was run by elected peers who worked closely with physicians usually occupying positions on the governing boards of these organizations. There are laws, by-laws, codes, mandates, and/or rules dictating how each organization was run and how each professional belonging to that organization should behave/act in accordance with agreed-upon professional standards (ARDMS, 2022; CCI, 2022; ARRT, 2022). Each organization mirrored scope of practice and legalese from existing organizations representing nurses (American Nurses Association, 2021) and physicians (American Medical Association, 2021), including an emphasis on the necessity of maintaining licensure, acceptable professional behavior/s, and expected job duties. In other words, these medical imaging organizations likely emulated existing professional organizations and socially constructed a system of professionalism that could be deeply flawed, hierarchical, and prone to the same boundary issues encountered in the fields of nursing and medicine (Abbott, 1988). Their systems of professional governance related to scope of practice could lead to direct conflict with other professionals, who may have updated their professional standards and thus changing their roles and responsibilities without communicating these changes with hospital management. If this assumption were correct, the onus would fall under hospital administration to learn of these changes and to educate those other professionals as to what changes were made to scope of practice or task responsibilities. This could represent a flaw in the system, a failure of a vital interconnection between elements potentially leading to interprofessional conflict.

Professional Boundaries. Closely related to scope of practice, professional boundaries exist to delineate job roles and define expectations relative to job performance vis a vis rules. Boundaries encompassed the rules that health care professionals are obligated to follow pertaining to delivering patient care. One of the recurring themes in the literature were instances of nurses (Apesoa-Varano, 2013; Collins, 2012; Nicotera & Clinkscales, 2010), physicians (Oh, 2014), and other health care professionals bending or breaking rules to get their work done—a clear crossing of imposed, systemic boundaries.

One hypothesis as to why nurses were involved in boundary crossing was a phenomenon called "structurational [sic] divergence" by Nicotera and Clinkscales (2010, p. 32), defined "wherein the intersection of incompatible rules systems manifests as unresolved conflict that sets off a negative spiral of communication." They further explained that the phenomenon "immobilizes the individual as he or she is unable to locate, in her or her repository of skills, actions that satisfy both (or more) interpenetrating structures" (Nicotera & Clinkscales, 2010, p. 23). In other words, nurses could become trapped by conflict and stuck within a loop, like an error embedded in computer code. The potential reasoning why this happened was the positioning of nurses "at the nexus of multiple divergent rules structures" (Nicotera & Clinkscales, 2010, pp. 47-48) that was likely attributed to potentially contradictory hierarchical relationships. Each nurse served a specific role often as direct patient caregivers, but this was complicated if they were subordinate or superior in rank to other nurses (Nicotera & Clinkscales, 2010); additionally, some nurses are far more attached to their roles and tasks than other nurses. Hypothetically, if a staff nurse asked their nurse manager for assistance in completing a routine task, such as helping a patient use the bathroom, the

nurse manager may not feel it was their responsibility to assist their subordinate, as the task was beneath their higher status role. These tasks, if not clearly delineated as to who must carry them out and when assistance was necessary, could create role confusion as well as resentment when a coworker with the same skillset refuses to help carry out a task.

Another significant issue uncovered by Nicotera and Clinkscales (2010) was the undermining of authority on nursing units that contributed to "structurational [sic] divergence." For example, one nursing unit director reported that subordinate nurses often expressed complaints to higher authority figures, essentially jumping the "chain of command," thus undermining her authority (Nicotera & Clinkscales, 2010, pp. 39-40). This behavior was allegedly encouraged by higher level management rather than corrected as inappropriate (Nicotera & Clinkscales, 2010); this was demoralizing to the unit director as it facilitated a culture of distrust while it also enabled a breakdown of role boundaries. Without consistent support from higher level management, middle managers likely felt abandoned by a system that rewarded chaos instead of order.

The key takeaway from the study by Nicotera and Clinkscales (2010) was the deterioration and inevitable failure of communication on the nursing unit that led to an unchecked interpersonal conflict spiral; this in turn led to professional boundary crossing and rule breaking which the authors posited occurred at the systemic level. This phenomenon was also called "turbulence" by Collins (2012, p. 20) as she described the regular "chaos" nursing units experienced; this paradoxically would drive rule bending behavior as well as be the result of it.

In exploring rule bending behavior by nurses, Collins (2012) discovered that performing basic job functions as a nurse often required some degree of rule bending. Collins conceptualized rule bending behaviors as either "personal" or "environmental" in terms of what instigated them; most nurse respondents agreed that both conceptualizations impacted rule bending (2012, p. 18). The environmental rule bending behaviors involved one or more systemic issues, such as the availability of medications, but also included communication issues with other professionals, such as clarifying orders given by physicians and coordinating care delivery with ancillary staff (Collins, 2012, pp. 20-22). As mentioned previously, allied health professionals were regarded as ancillary staff in hospitals, so any communication delay--or breakdown—would constitute a flaw in the interconnections of the hospital system.

Professional encroachment was not limited to the clinical realm, but also involved cases of management dictating patient care delivery. An interesting example of such professional boundaries being crossed was noted within "respiratory services" offered by primary care organizations (PCOs) in the United Kingdom (Huby, et al., 2014). It should be noted that respiratory services described by the authors involved respiratory therapists, one of the allied health professions (ASAHP, 2018) of interest to this dissertation; however, respiratory therapy in the United Kingdom is regarded as a medical specialty—not an independently recognized profession like in the United States—filled by nurses, physicians, occupational therapists, and physiotherapists (ACPRC, 2021). Regardless of this realization, the phenomenon described by Huby et al. (2014) involved the crossing of jurisdictional boundaries, the same territorial issues Abbott (1988) described in his essay on professionalism. In this study, Huby et al. (2014) discovered professional boundaries

were being crossed due to drastic changes to care delivery, resulting from "cost containment" measures implemented by reforms made to the National Health Services (NHS) in the U.K. The cost cutting measures and attempts to improve the efficiency of respiratory care delivery led to professional boundary encroachments as managers of these organizations took on a more "business-oriented" approach toward monitoring financial performance (Huby, et al., 2014, p. 407). In some cases, clinicians took on the role of managers in a hybrid job role which expanded their existing duties, granting more control over care delivery and the duties of their peers; these changes did not take into consideration how much "social capital" (Huby, et al., 2014) was spent in developing and keeping healthy relationships.

In summary, the findings by Huby et al. (2014) suggested that major reforms to a nationalized health care system could have a tremendous impact on creating or exacerbating interprofessional conflict via jurisdictional encroachment. Huby et al. (2014) also suggested this crossing of the professional boundary between management and clinicians may disregard existing social systems that formed due to good working relationships; therefore, if changes are implemented to an existing system for the sake of monetary efficiency, attention should be paid to how these changes cost the organization priceless social capital. Granted, there is a major difference between the hospital systems in the U.K. and the United States as one is nationalized, and the other is not: Does size matter in terms of social capital? There is also the consideration of the scale of the system in question as a nationalized health system is obviously larger than a single hospital system, and larger systems simply have more elements and interconnections to consider. Changes made that alter the purpose of a system could have the most dramatic impact on

the entire system (Meadows, 2008). Is the purpose of the hospital system to help patients, to make money, or to function in the most efficient manner possible?

Based upon this literature, and a review of professional organizations representing nurses, physicians, and allied health professionals, both role ambiguity and scope of practice were likely related to interprofessional conflict as teams of individuals could express confusion about the limits of their job duties. Furthermore, it seemed interprofessional conflict could manifest when rigid professional boundaries were crossed either deliberately or unwittingly, as suggested by several pieces of literature (Braithwaite et al., 2016; Brown et al., 2011; Janss et al, 2012).

Power and Hierarchy. According to conflict theory, most conflict is attributed to disproportional power dynamics between two entities (Pruitt & Kim, 2004). If this conflict occurred between two or more individuals, it was usually known by the vernacular interpersonal—or social—conflict. Revisiting the work of Lewis Coser (1956) on social conflict, individuals possessing power/control over other individuals could instigate feelings of resentment, defiance, or even acts of violence in response towards those exercising their power. Social conflict may also be the result of a power vacuum as individuals within a group compete for power and legitimacy in controlling the entire group (Hocker & Wilmot, 2014). In such cases, individuals will create a system of domination based upon power over others as suggested by Weber (Lemert, 2013, pp. 88-90). However, does this adequately explain the formation of hierarchies as simply an expression of dominance and power?

Hierarchies appear to be a natural response to chaos and disorder, and one could argue humanity is more prone to cooperation than violence (Coser, 1956), though

historically the evidence of violent conflict/s and oppression suggests otherwise. These explanations as to how and why humans form hierarchies are a contentious issue as some scholars (Peterson, 2018) have posited hierarchy is based upon "competence" instead of power or dominance. This concept holds merit given that dominance hierarchies were evident in both our closest ape cousins chimpanzees and bonobos as they competed for mates and food (de Waal, 2005). While humans also compete for mates and food, it seems erroneous to apply the same dominance hierarchy traits observed in small groups of apes to a more complex system, such as a hospital with hundreds or more variables. This is not to suggest the dominance hierarchy is not present in humans working within a hospital; there may be multiple hierarchies overlapping with a dominance hierarchy, negotiated by ability, availability, and legal constraints.

Evidence has also suggested that humans form dominance hierarchies in social settings by "default" as there is a need for not only leadership, but a necessity for fairness in resource allocation (de Waal, 2005; Scheidel, 2018; Zafeiris & Vicsek, 2018). If humans were only concerned about power and dominating other humans through violence, this suggested that human social evolution was nothing short of a miracle, as humans probably would have gone extinct thousands of years ago from engaging in constant violent conflict/s. As it turned out, humans have gained far more from cooperation than from overt violence (Scheidel, 2018), though the structures/institutions of modern society still demonstrate some evidence of ancient inequities and social injustice (Coser, 1956). Both our proclivity to engage in conflict as well as our innate tendency to avoid it suggests hierarchy formation and maintenance is innate and occurs naturally in humans as it does in both chimpanzees and bonobos (de Waal, 2005, pp. 59-

61). Hierarchies, whether we like them or not, may be a necessary evil for all complex systems.

When Frans de Waal stated, “The nature of hierarchies is culturally variable” (2005, p. 73), he probably had not considered a hospital system and its unique culture. Hospitals are complex systems comprised of multiple subsystems all functioning in accordance with one purpose: Providing patient care. To achieve this purpose, hospitals must adhere to a culture where failure or incompetence within the system potentially leads to patient death; thus, decisiveness and efficiency are culturally rewarded within this system. Organizations adhering to rigid hierarchies discouraging democratic decisions were noted as being more capable of taking quick, decisive actions when lives were at stake (de Waal, 2005). Specific to the literature collected for this dissertation, the relationship between power and hierarchy formation is a potential issue related to interprofessional conflict in hospitals. Does this symbiotic relationship between power and hierarchy in the hospital system impact its overall purpose and does it impact the interconnections between elements within the hospital system? Most of the literature explored this phenomenon in nurses and physicians demonstrating—again—a major blind spot in data collection as allied health professionals were mentioned peripherally.

In hospitals around the world nurses were regarded as lower on the professional status hierarchy than physicians despite vastly outnumbering them and holding many administrative and supervisory roles in hospital systems. Unfortunately, this lower professional status may be the remnant of outdated gender roles and biases (McLean, 2017) as well as the evolution of medicine into a recognized profession before nursing was also officially recognized (Abbott, 1988). McLean (2017) conducted an

interpretative phenomenological study describing what it was like for nurses attending medical school to become physicians. The nurses transitioning into physicians held expectations they would bring a unique perspective to medicine, such as increased compassion for patients; they were, however, disappointed to discover a series of intrinsic and extrinsic barriers to this role transition (McLean, 2017). As they transcended the professional boundaries, they were perceived as outsiders by physicians and "traitors" or "deserters" (McLean, 2017) by fellow nurses which surprised the interviewees. The use of such hyperbolic language suggested far more than some interprofessional rivalry present between nurses; in fact, it suggested the presence of deep-seated hierarchy that none should dare transcend. Why was this barrier between the roles served by nurses and doctors so impenetrable, and why were nurses considered lower on the medical hierarchy?

The contentious issue that McLean (2017) discovered was the idea that individuals within the hospital system could "customize" or change their established professional identity. This idea of changing careers or professional advancement was apparently frowned upon by a hierarchical hospital culture that viewed nurses as "lesser" than doctors. Not only did the transition from nurse to doctor threaten the identity of fellow nurses, but it also challenged the identity of doctors whose roles were more exclusive and higher status in the professional hierarchy (McLean, 2017). Exclusion of outsiders and the tendency to create dominance hierarchies are unfortunate traits of professionalism (Abbott, 1988). According to McLean's (pp. 686-687) conclusion, "professional identity" was important to the interviewees in one hospital in Australia, but this sentiment was likely shared by other hospital systems given the nursing profession,

as well as the medical profession in general, extended beyond the walls of one hospital in one country.

McLean's (2017) conclusion resembled an older analysis conducted in Australia by McNeil et al., (2013) that explored why interprofessional practice (IPP) sometimes hindered team performance rather than improve it. Throughout the health care industry, interprofessional practice (IPP) and interprofessional education (IPE) have become buzzwords signaling a desire to bring medical professionals together across disciplines to improve patient care. IPP and IPE not only targeted physicians, but also nurses (Miller & Kontos, 2013) and allied health professionals, encouraging them to form multidisciplinary teams to learn from each other and facilitate a more collegial, patient-centered environment. As McNeil et al,, noted in their review of pertinent literature, IPP was sometimes perceived as a threat to professional identity as it revealed "inequities" in "compensation and autonomy" (2013, p. 302). Those perceived inequities led to interprofessional tension and were closely related to existing professional hierarchies reinforced by the hospital environment (McNeil et al, 2013). Their conclusion supported the theory that professionalism, as described by Abbott (1988), existed as a form of dominance or superiority of one profession over another.

Professional identity was one of the keys to understanding how and why medical dominance was prevalent within health care teams. But what if professional identity was closely related to the professional title one possessed in the hospital? Does a title make a health care professional better or worse at their jobs, and does it afford more privilege and prestige than others? According to Borthwick et al., (2015), professional titles carried "symbolic power" and even instigated "symbolic violence" against those who would

usurp titles that carried prestige. Observing and analyzing the debate in the United Kingdom pertaining to the use of the title "podiatric surgeon" by podiatrists, the authors utilized theory posited by Pierre Bourdieu that explored "symbolic power and capital, and the exercise of symbolic violence" (Borthwick et al, 2015, pp. 311-312). According to author's interpretation of Bourdieu, professional title and professional task are two distinct concepts, and the ability to name a profession served to create power through exclusivity and prestige (Borthwick et al., 2015). The dispute pertaining to podiatrists was whether they were allowed to use a title—podiatric surgeon—despite not being regarded as surgeons by the traditional definition of the term. Surgeon implied a higher level of prestige, an exclusive arena that delineated status in the field of medicine, with those able to perform surgery noted as higher status roles. Thus, when surgeons felt their prestigious roles were challenged by those deemed unworthy, conflict ensued as the professional title—and by extension their identity—was challenged. Challenges to professional identity, as well as challenges to personal identity, are worth further exploration in the realm of social science given the responses may correlate strongly to conflict. For instance, the use of the term "symbolic violence" by Bourdieu is interesting here, as violence implied the use of power to coerce or dominate, much like the term "structural violence" Johan Galtung (1969) described. Unlike structural violence which uses the power of the State to impose oppressive policies against a specific population, "symbolic violence" would use professional titles to impose a boundary or hierarchy to subordinate one group over another group. This interpretation of the vernacular is relative to conflict theory and might not describe situational nuance or an agreed upon hierarchical order.

The next piece of relevant literature related to this thematic construct placed nurses near (or at) the bottom of the hospital hierarchy. A phenomenological study conducted in the Western United States by Ester Carolina Apesoa-Varano (2013) explored interprofessional conflict in hospitals via a "negotiated order' perspective. In her findings, Apesoa-Varano found that "boundary work" within the hospital between health care professionals exists in a fluid, or "flexible," paradoxical state (2013). This state was considered paradoxical because boundaries between health care professionals enforced existing conflict-ridden hierarchical structures (Apesoa-Varano, 2013); but, these boundaries were also necessary for carrying out day-to-day patient care that may be overlooked by the system. In other words, while the hospital system and health care professionals have clear roles to carry out, it may be necessary to blur those roles and make exceptions to provide effective patient care. For example, a physician may be capable of starting an IV or offering to give a patient an extra pillow, but this is usually not a part of their job duties as they primarily lead the health care team by diagnosing the patient and ordering treatments. A physician choosing to complete either of those tasks would cross a boundary into tasks typically completed by a nurse, or nurse's aide, doing so in pursuit of the most efficient patient care. It is likely in this hypothetical scenario the physician would perform neither task, either by choice, or by time constraints which could also hypothetically create conflict. Thus, crossing the professional boundary could create interprofessional conflict while not crossing said boundary could also create interprofessional conflict: A situational paradox.

The "negotiated order perspective" utilized by Apesoa-Varano is referencing "Negotiated Order theory" noted by Strauss (1964) which is utilized by sociologists to

explore conflict that develops within organizations. Negotiated Order theory noted that constant change occurring both within and outside of organizations, a "negotiated" order of interaction was formulated to accomplish tasks via cooperation (Strauss, 1964; Wagner, 1996). The means of accomplishing a negotiated order vary, but the results are an avoidance of conflict and the organizational chaos that usually followed. While the concept of negotiation relies on power dynamics to achieve a desirable goal (Hocker & Wilmot, 2014, p. 136), it may not be accurate to assert that all interprofessional relationships in hospitals are based upon power. Apesoa-Varano draws the following conclusion, based upon observations and interviews with hospital staff: "While boundary work is an individual act, it is collectively enforced and sanctioned; it ought not to be misinterpreted as a 'personal' style or issue between two or more practitioners" (Apesoa-Varano, 2013, p. 343). If boundary work is based on the actions of the individual, it is confusing to assume it is not a "style," given how it could be "collectively enforced" (Apesoa-Varano, 2013, p. 343) by other hospital staff. The description of this phenomenon is both confusing and contradictory.

Apesoa-Varano made several conclusions based upon her observations: First, that "boundary work" could be equated as "floor politics" that operated under "permeable jurisdictional boundaries" (Apesoa-Varano, 2013, p. 344). In other words, her observations were considered typical for the hospital and not exceptional. She further suggested her interpretation of "boundary work" is "hegemonic" within the hospital setting, as it disrupted the traditional "status hierarchies," transforming the hospital environment towards a more "egalitarian" work setting (Apesoa-Varano, 2013, p. 344). Her use of the term "hegemonic" was interesting, as it suggested "boundary work" was

politically dominant (Apesoa-Varano, 2013); if this were accurate, then "boundary work" was another iteration of power and control over others. One could assert this is like replacing one problematic system with another, as Jeffrey Braithwaite and Westbrook (2005) suggested in their survey of clinical directorate structures. Unfortunately, measures to shift to a more egalitarian approach to patient care are met with mixed attitudes from doctors, nurses, and allied health professionals, with physicians exhibiting the most negative attitude/s towards more egalitarian decision making (Braithwaite & Westbrook, 2005).

A second conclusion was how "boundary work" related to what Apesoa-Varano (2013, pp. 344-345) called the "ideology of caring" and how a contradictory mission might be taking place within hospital staff interactions. Caring for patients, which is the primary mission claimed by health care providers, may be a secondary concern when compared to accomplishing work-related tasks. The insinuation here is that the attempts of "boundary work" as a hegemon challenging the existing professional hierarchies and power structures was not an actual attempt to "change" the system, but rather a means to an end to complete assigned tasks efficiently, with satisfactory patient care a desired outcome for maintaining employment. She concluded: "In this light, boundary work 'gets the caring stuff done' but without challenging how caring has become marginalized and discredited when status is conferred within the hospital" (Apesoa-Varano, 2013, p. 345). While a cynical conclusion, she suggested the hospital system may suffer from a crisis of purpose which echoed similar conclusions made in other pieces of literature (Moyo et al., 2016). This potential crisis was explored further in the next thematic section exploring value conundrums.

The Negotiated Order theory (Strauss, 1964) was also mentioned in a study exploring medical dominance in health care settings by Nugus et al., (2010). The authors revealed "competitive power" and "collaborative power" were exercised across all health care settings as a part of the negotiated order of services (Nugus et al., 2010). Competitive power represented a perception of domination in the hospital environment, which was "not unidirectional or static" (Nugus et al., 2010, p. 901) and involved doctors, nurses, and allied health professionals. Nurses and allied health professionals reported they sometimes felt "subjugated" by each other while doctors reported feelings of subjugation by hospital administrators and management (Nugus et al., 2010). While obviously a hyperbolic term, the implication of "subjugation" implied a lack of agency in a complex environment full of professional boundaries, likely systemically enforced and perpetuated.

Collaborative power, on the other hand, was described as six distinct characteristics demonstrated by participants: "Appropriate role distinctiveness," "appropriate role interchangeability," "snowballed topics," "dynamic sequencing of cases," "facilitative information-sharing," and "facilitative tool-sharing" (Nugus et al., 2010, p. 902). Each of these categories reflected a desire to utilize clear communication to promote the most effective patient care possible, setting aside ego to maximize equality in the expression of concerns pertaining to care delivery, and the promotion of accountability of individuals to the team. Collaborative power was the rejection of the medical dominance hierarchy, as demonstrated via competitive power, reflecting a desire for egalitarianism in health care decision-making.

An interesting conclusion made by the authors was how collaborative power was exercised more in community-based health care environments than in hospitals (Nugus et al., 2010). While the respondents indicated a universal fondness for collaborative working environments, the "competence" involved with working interprofessionally via collaborative power was more widespread outside of the hospital environment (Nugus et al., 2010, pp. 901-902). This suggested the hospital environment itself may uphold a medical dominance hierarchy, likely associated with interprofessional boundary enforcement, or a rigidly enforced social order.

Revisiting the study by Apesoa-Varano (2013), who suggested role boundaries were enforced by the hospital environment, the findings by Nugus et al., described the dominance behavior by physicians as a "cultural and institutional sanction to manage," (2010, p. 908) suggesting an environmental expectation they would take the lead in patient care. They further concluded:

> A reason that doctors determine, and, in some circumstances, constrain, the input of clinicians in other roles into patient care is because doctors are socialized, in tertiary education and at work, through legal, organisational [sic] and cultural structures, to see themselves as key decision-makers about patient care and the patient pathway through a health service. (Nugus et al., 2010, p. 908)

If physicians were trained to think and act in such a manner, what actions—if any—could undo this style of thinking which perpetuates competitive power and medical dominance hierarchies? Moreover, how much influence did the cultural environment have on the development and enforcement of hierarchies within hospitals (Schein & Schein, 2017)? One could even assert the expectations that physicians always take the

lead places too much responsibility upon them, creating a more stressful environment leading to interpersonal conflict/s.

Jeffrey Braithwaite, who had conducted extensive research on the topics of organizational hierarchies, social structures, and "clinical tribalism" co-authored a paper (2016) which tested the proclivity of health professionals to form hierarchies in ad-hoc teams working in a controlled, multidisciplinary environment. They discovered that when taken out of the clinical environment hierarchical behaviors were not prevalent and there were *no* differences found between the groups of professionals in hierarchy formation (Braithwaite et al., 2016). Based upon these findings, Braithwaite et al. (2016) posited the "culture" of the clinical environment affected hierarchical development more than the individual characteristics of the health care workers, or the sociological implications associated with groups. They concluded: "Our data support the proposition that individual or group member characteristics are not the source of professional differences and cannot be used to predict subsequent poor cross-professional term orientation" (Braithwaite et al., 2016, p. 9). This was a profound assertion given other literature suggested conflict between health care professionals was driven by personal factors or power imbalances between groups (Apesoa-Varano, 2013). Furthermore, it implied the hospital system played a significant role in potentially fomenting conflict between different health care professionals.

Another finding of interest from Braithwaite et al. (2016) utilized multiple scales to assess the personality factors associated with doctors, nurses, and allied health professionals. Their results found that allied health professionals were more "agreeable" in terms of their personality characteristics, "$F(3, 124)=0.19$, $p=0.021$" (Braithwaite et

al., 2016). While the authors did not go into detail discussing this finding, the implication suggested that allied health professionals are, by the agreeableness definition in the "Big Five" personality traits (Goldberg, 1993; Tupes & Christal, 1961), "more trusting, compassionate, and respectful towards others" (Braithwaite et al., 2016). While this finding suggested allied health professionals likely avoided conflict due to personality preference, what role, if any, did their duties play in interprofessional conflict? Moreover, were allied health professionals the nexus through which collaborative efforts were successfully applied in acute care hospitals?

The power dynamics within ad hoc medical teams were also explored by Janns et al., (2012) who reviewed literature exploring the influence of conflict on team performance. They concluded: "…the ad hoc characteristics of medical action teams may complicate the issues of power and conflict that already exist as a result of multidisciplinary, highly interdependent, and unpredictable and urgent tasks these teams undertake" (Janss et al., 2012, p. 844). In other words, individuals bring their own personal biases to the team, further complicating an already extraordinarily complex environment in caring for patients. This also implied that team members did not share the same personal motivating factors, directly contributing to perceived differences in power. An additional finding of interest suggested team members may exercise reluctance to "speak up" (Janss et al., 2012, p. 844) due to perceived differences in power when needing help or clarification, further complicating the coordination of patient care. The authors suggested a series of solutions to combat this phenomenon, including the use of "checklists," "debriefings," and team building exercises prior to engaging in ad hoc activity (Janss et al., 2012, pp. 845-846). While these suggestions are worthy of

consideration and prepare teams for shared tasks, they may not address differences in values or other personal motivating factors that would still detract from overall team performance.

Collaboration. Pivoting from the section exploring the contentious nature of power and hierarchies, collaboration revealed a more hopeful perspective pertaining to workplace conflict in hospitals. Collaboration is a sub theme within professional boundaries and hierarchies describing the phenomenon where not only individuals within the same profession worked together to accomplish a task or goal, but also individuals representing different professions; for this literature review examining interprofessional conflict, collaboration represented the latter. The recurring vernacular used in multiple pieces of literature, such as: “Interprofessional collaboration” (Begun et al, 2011), “collaborative care” (DeJesse & Zelman, 2013; Orchard et al., 2017), and “interprofessional practice/education,” (Begun et al., 2011; DeJesse & Zelman, 2013) indicated collaborative efforts were employed to facilitate mutual understanding and a more egalitarian working environment. While most of the literature focused on collaboration between nurses and physicians, attention was paid to allied health professionals and how it affected their environment.

If a hospital system were functioning optimally, evidence of interpersonal and interprofessional conflict were likely hidden from systemic review (Borkowski, 2016; Meadows, 2008; Rogers et al., 2013). Conflict became discernible when work was disrupted like the tip of an iceberg (Meadows, 2008). Workplace conflict was signaled when human factors contributed to conflict antecedents, professional boundaries were poorly defined, and workplace hierarchies were rigidly enforced. The collaborative

efforts between health care professionals in different areas of expertise are key interconnections within the hospital system; the human elements must coordinate, cooperate, and participate in fulfilling their job duties. This section explored the literature for evidence of successful collaboration between health care professionals as well as potential issues that led to conflict specific to allied health professionals. As mentioned in other sections of this literature review, the content exploring allied health professionals was not as abundant as material related to physicians and nurses, again supporting the suspicion that allied health may be marginalized within peer-reviewed literature.

In a study exploring the delicate relationship between nutritionists and mental health providers, DeJesse and Zelman (2013) interviewed 22 individuals who described conflict that occurred in these specific collaborations with treating eating disorders. There were several "themes" the authors uncovered that contributed to interprofessional conflict: "Encroachment" (an overlap of services between providers), "putting the patient in the middle" (an inappropriate use of the patient or their family members to convey vital information), "lack of experience in eating disorders" (incompetence or ignorance of the other professional's expertise), "clashing treatment strategy," and "lack of communication" (DeJesse & Zelman, 2013, pp. 190-194). While each of these themes undoubtedly contributed to interprofessional conflict, the real issue underlying each theme was problems with communication. It was not the "lack of communication" that created the most issues (DeJesse & Zelman, 2013), but the miscommunication between these allied health professionals that was the likely conflict antecedent. This miscommunication was likely caused by a desire of allied health professionals to be "team-focused" and "accommodating" (DeJesse & Zelman, 2013, p. 200) as they feared

the consequences of losing a professional relationship, which sometimes was the result of interprofessional conflict. Based upon feedback from interviewees, DeJesse & Zelman (2013) noted the initial consultation between nutritionists and mental health providers should establish communication expectations as well as a clear "plan" for addressing patient care.

Based upon the findings of DeJesse & Zelman (2013), a potential issue specific to allied health professionals emerged in their reported tendency to be more "accommodating" in their approach to collaborative care. The emphasis on building teamwork in hospitals, and the inclination of allied health professionals to be more accommodating also described by the study by Braithwaite et al. (2016), suggests that systemic efforts to promote collaborative care could backfire in terms of reducing interprofessional conflict. In the realm of conflict resolution specific to negotiation tactics, accommodation was defined when the concern for the other's needs exceeded their own needs, compelling an individual to acquiesce, or even capitulate to demands (Hocker & Wilmot, 2014, pp. 163-165). Accommodation is not a preferred negotiation tactic whereas the idea of collaboration, as hospitals would desire, indicates a desire for both parties to work together in achieving a common goal (Hocker & Wilmot, 2014, pp. 165-166); In that preferred outcome, both parties get what they want in the outcome and avoid acquiescence. Efforts to intervene in conflict management at the systemic or administrative level may need to address different communication styles as well as personality differences in allied health professionals, as detected in the "Big Five" personality assessment (Goldberg, 1993; Tupes & Christal, 1961) if their vision for collaboration were to be achieved.

Negotiation as a conflict resolution tool is specifically addressed in a case study by Otero et al., (2008) who addressed specific conflict related to cardiovascular imaging utilization. While the conflict in this paper involved radiologists versus cardiologists who are both highly specialized physicians, they relied on allied health professionals in cardiovascular imaging—specifically computed tomography (CT) performed by radiology technologists—to diagnose cardiac conditions (Otero et al,, 2008). Due to advancements in cardiac CT imaging (Otero et al., 2008), cardiologists entered a "turf" war with radiologists pertaining to who could read/interpret the studies. The radiologists felt they were more qualified to read the studies and handle any incidental findings unrelated to the heart; on the other hand, the cardiologists felt they were better suited to interpret any images related to the heart and streamlining the patient's care (Otero et al., 2008, pp. 835-836). By employing negotiation tactics, the authors were able to make several conclusions based on their intervention: To avoid territorial behavior and competition between radiologists and cardiologists, it was best to intervene early in any conflict, emphasizing open dialogue and common goals when utilizing CT technology (Otero et al., 2008). This study was relevant in how this jurisdictional dispute between cardiologists and radiologists placed radiologic technologists in the middle of a turf war. Utilization of cardiac CT directly influenced their jobs as they likely felt they were serving two different leaders, testing their loyalty, and placing them in precarious positions with patients. In a patient-centered hospital system that valued collaboration between elements in that system, potential conflict between physicians would likely trickle down and affect allied health professionals who could not avoid said conflict.

Healthcare administrators also played an important role in the coordination of patient care, though most literature discovered during the review process did not emphasize their roles. An article by Begun et al., (2011) addressed the concern that healthcare administrators were excluded from interprofessional teams, as it seemed to them counterproductive to seek systemic changes without their input. While physicians were regarded as the leaders of interprofessional clinical care teams (Apesoa-Varano, 2013; Brown et al., 2011; Nugus et al., 2010), the actual leaders within the hospital system were the administrators who hold power over staffing and logistics (Borkowski, 2016). Administrators could assume the role of change agents as well as facilitators of interprofessional care and education if they were properly included in collaborative care process. Like allied health professionals, hospital administrators are also vital elements in the system, but they hold more power influencing the purpose and interconnections within the system (Meadows, 2008).

Due to ongoing professionalization efforts and the rise of Magnet (ANCC, 2022) status hospitals, nurses are increasingly taking on leadership roles within hospitals. While this does present a potential issue related to dual agency (Abrams, 1986), a nurse in a management position could fulfil a collaborative role in patient care. According to a paper by Orchard et al., (2017, p. 22), nurse leaders were seeking to return to a coordinating role in patient care by assuming "dual capacities." By assuming leadership roles, a collaborative working environment that challenges the more traditional top-down management styles could be implemented by nurses (Orchard et al., 2017). The potential outcome of this duality would be increased productivity and the standardization of care which would benefit the hospital system (Orchard et al., 2017, pp. 22-23). It should be

noted that this is a key example of professionalism taking effect as described by Abbot (1988) where those possessing expertise decide to take control of a profession and enforce a system only they understand. While this obviously benefits the nursing profession, it may have unintended consequences for other professionals working in the hospital as their roles diminish and professional boundaries are crossed.

This section explored the thematic construct of professional boundaries and hierarchies present within the hospital system addressing the sub-themes of task/process conflict, role ambiguity, scope of practice, power, hierarchies, and collaboration. A basic meta-analysis of the literature reviewed in this section uncovered a larger ideological battle between authoritarianism versus egalitarianism. Nurses desired a more egalitarian work environment (Orchard et al., 2017), which seemed to directly contradict the authoritarian, top-down nature of the hospital system itself with its rigid management policies and procedures. The existing hospital paradigm assumed that without the leadership of physicians and hospital management chaos would ensue, patients would not be cared for properly, and the system would collapse.

But what if management and physicians influenced conflict more than nurses or allied health professionals? What if they perpetuated conflict by rigidly adhering to policies and procedures that made the job duties of subordinates more difficult? Nurses and allied health professionals were open to the idea of a more egalitarian work environment (Apesoa-Varano, 2013); physicians and management would likely oppose this paradigm shift as it challenged their authority and the professionalism hierarchy (Abbott, 1988). Perhaps a solution is to break through those barriers to change—those

illusory boundaries and hierarchies—that keep systemic hospital conflict fed in perpetuity, to resolve interprofessional workplace conflict?

Value Conundrums

The third and final thematic construct of this literature review examined interprofessional conflict related to differences in ethical and moral values. Broadly speaking, this implied not only differences in personal values between individuals in different professions contributing to interprofessional conflict, but also potential systemic value discrepancies. Several pieces of literature in the previous sections suggested conflict in hospitals was related to the ethical and moral challenges faced by hospital staff as well as the personal values of employees that may be challenged by their work environment (Apesoa-Varano, 2013). These issues represented value conundrums, presented as both internal as well as existential crises experienced by hospital staff at some point during their careers. While the formation of the values exhibited by the employees was not initially of interest—as they represented intrapersonal conflict—the actions taken by employees against other employees based upon their values likely played a role in interprofessional conflict.

At the systemic level, health care professionals are elements within the system that are likely aligned with a basic sense of altruism that drew them into the medical field; if some of these individuals did not share this altruistic calling, this could disrupt the interconnections within the system (Meadows, 2008). When the decay of these interconnections approaches a critical mass, then the purpose of the system is disrupted, resulting in system failure. Unlike the section exploring professional boundaries and hierarchies which represented external elements and interconnections to conflict within

the hospital system, value conundrums represented the internal, less visible elements within the same system: The iceberg you do not see (Meadows, 2008). Another way to describe this thematic construct is the conflict created by a duality of values and the potential contradictions faced when patient care is weighed against the cost of providing said care (Abrams, 1986). The health care industry claims to be patient-centered and dedicated to healing, with many professionals choosing their career paths based upon this altruistic mission (Moyo et al., 2016). However, what if the health care system—specifically hospitals—presented a different goal that directly conflicted with their stated purpose (Schueler & Stulberg, 2020)?

This section of the literature review examined these conundrums and applied them to both systems theory (Meadows, 2008) and the theory of professions (Abbott, 1988). Allied health professionals were the target of this literature review, but most literature discovered was centered on nurses and physicians. Three sub-themes emerged from the collected literature: Ethical and moral crisis, legal implications, and value/ethics problems for allied health professionals.

Ethical and Moral Crisis. The first subconstruct within value conundrums explored several pieces of literature focused on health care workers experiencing distress related to moral dilemmas. The most common vernacular used by the authors of the literature collected for review included “moral distress” (Epstein & Hamric, 2009; Haghighinezhad et al., 2019; Morley, 2016; Nyholm, 2016; Whitehead et al., 2014) and “ethical conflict” (Gaudine et al., 2011; Gaudine & Thorne, 2012). What did these terms mean, and how did they relate in the context of health care?

According to Merriam-Webster, ethics are “the principles of conduct governing an individual or a group,” which is the pluralization of ethic, defined as “a set of moral principles: a theory or system of moral values” (Ethics, 2022). The adjective moral, employed as a modifier to the noun values, is defined “of or relating to principles of right and wrong in behavior: ETHICAL” (Moral, 2022) implying an internal system operating within individuals determines right from wrong actions; thus, one could argue “moral value/s” is a redundant statement. Both definitions imply a system of determining right—or correct—actions within a person as well as action/s within a socially constructed system. Using these definitions and expanding upon them to the healthcare context, morality implied the values held by an individual whereas ethics represented the values held by the hospital or institution where care was performed. What were some of these individual moral values and did they translate into a shared institutional ethical framework?

A systemic literature review conducted by Moyo et al., (2016) identified 128 professional and personal values of healthcare professionals and reframed them into a single model based on the theoretical framework of Dr. Shalom H. Schwartz (1992). Synthesizing the 128 values obtained from literature into Schwartz’s (1992) framework, the authors (Moyo et al., 2016) compiled 11 values: Altruism, authority, capability, critical-thinking, equality, intellectual stimulation, morality, pleasure, professionalism, safety, and spirituality. The three most prominent values noted were equality, capability, and altruism (Moyo et al., 2016, p. 277); two of these values, equality and altruism, centered on “respect for everyone’s worth” and “selfless consideration of others’ welfare.” The authors asserted that the public usually associated altruism with health care

workers while also assuming those providing care were capable of doing so at a measurable level of competence; they also noted the literature emphasized altruism and equality over capability (Moyo et al., 2016). It was interesting that morality was not one of the three most prominent values, but equality and altruism were included in that triad. Perhaps there was an issue with not using a universal definition of morality in the literature, or perhaps the other definitions of values were unclear? Identifying and understanding the values held by healthcare professionals now leads to an exploration of the effects when moral and ethical crisis occur.

The first piece of literature that explored "moral distress" applied a longitudinal "crescendo" effect that seemed to undermine the moral integrity of healthcare professionals over time (Epstein & Hamric, 2009). Conceptually, the "crescendo effect" described the relationship between moral distress and moral "residue," describing how acute events of moral distress could accumulate over time and develop a new "baseline" (2009, pp. 3-5) for handling future moral distress. For example, clinicians treating neonates would witness death and avoidable suffering of their patients on a regular basis; if they did not emotionally resolve these distressing events or address the external/systemic factor that led to them, all those negative emotions would build up and exacerbate the next response to distress. Repeated events that caused moral distress that were not resolved were key to developing moral residue, setting new tolerance baselines whereby clinicians would react more strongly to future events (Epstein & Hamric, 2009). The authors provided general examples of moral distress that seemed systemic (Meadows, 2008) in nature related to interconnections between elements: Poor communication, "powerlessness," lack of support structures, and failures to collaborate

professionally (Epstein & Hamric, 2009, pp. 9-10). Over time, the crescendo effect led to clinicians engaging in several behaviors, such as “conscientious objection” when clinicians expressed dissent over treatment options for patients, “numbing” whereby clinicians emotionally shut down, and “burnout” as professionals expressed job dissatisfaction to the point of wanting to leave the profession (Epstein & Hamric, 2009, pp. 8-9).

The most alarming finding from this study was the correlation between nurses with longer careers expressing the most moral distress as well as a phenomenon called “compassion fatigue” (Epstein & Hamric, 2009). Based on their observations (Epstein & Hamric, 2009), compassion fatigue represented a cumulative result to the crescendo effect, reducing a nurse’s capacity to perform patient care at their best. At what point do healthcare professionals determine their limitations to providing patient care when they could present a risk to patient care and safety? If they were unable to care anymore due to the crescendo effect caused by moral distress, while also suspecting the hospital played a significant role in causing their distress, why did they continue working? Is this not a moral and ethical crisis that the public should address? Moreover, how many other health care professions experienced compassion fatigue without recognizing the potential danger it posed to patients as well as to other professionals?

According to a descriptive, comparative design study by Whitehead, et al., (2014) moral distress among healthcare professionals was prevalent across all professional groups, including eighty-six allied health professionals who completed their survey. Using a moral distress scale, the authors (Whitehead et al., 2014) found that nurses and other professionals involved in direct patient care indicated statistically significant higher

moral distress than physicians ($p = .001$) as well as those who were involved in indirect patient care ($p < .001$); they also noted a higher prevalence of moral distress when caring for adults compared to children as well as patients in intensive care units (ICUs) across all surveyed professions. The biggest causes of moral distress across all professional groups were: "Watching care suffer due to lack of continuity," "Following family's wishes for life support when not in best interest of patient," and "Witnessing diminished care due to poor communication" with allied health professionals involved in both direct and indirect care indicating the latter being the most distressing (Whitehead et al., 2014, pp. 120-121). Using instruments testing the ethical climate (HECS-S) and moral distress (MDS-R), the authors (Whitehead et al., 2014, p. 121) found a negative correlation between the mean scores ($r = -0.516$, $p < .0001$) suggesting lower moral distress was associated with a higher perceived ethical environment. Did these findings suggest perception *is* reality, or could other factors at the systemic level play a role in moderating the perception of an ethical environment?

It was also noted that allied health professionals in indirect care roles reported lower moral distress than their peers involved in direct patient roles; the authors (Whitehead et al., 2014, p. 122) hypothesized this was due to a lower level of "professional responsibility" related to not being "primary decision makers." This resonated with other literature that placed physicians as the team leaders most responsible for patient outcomes and nurses as the instruments carrying out the physician's direct orders (Apesoa-Varano, 2013; Brown et al., 2011; Nugus et al., 2010). While the authors (Whitehead et al., 2014) claimed their survey (N = 754) was the largest to address moral distress in health care professionals to date, their adjusted response rate was low (22%),

and the demographic sample overwhelmingly consisted of middle-aged female (81%) nurses (67%). An expanded survey across multiple hospitals with thousands of responses could reveal more accurate data from which to draw stronger conclusions. It would also be helpful to specifically target allied health professionals (ASAHP, 2018) rather than place them in a larger category of "other professionals" which marginalized 1/3 of the average hospital's workforce.

A descriptive-correlational study conducted in Iran by Haghighinezhad et al., (2019) involving 248 intensive care nurses revealed an interesting relationship between moral distress and "organizational justice." The authors defined the phrase organizational justice as "perception of organization's fair procedures and effects" by hospital staff that could affect their performance and attitudes (Haghighinezhad et al., 2019, p. 461). A statistically significant inverse correlation was found between organizational justice and moral distress ($p = 0.024$, $r = -0.137$) suggesting that increased perception of organizational justice leads to decreased moral distress in ICU nurses (Haghighinezhad et al., 2019, p. 464). This finding was like the "negative association between moral distress levels and healthier ethical climates" by Whitehead et al., (2014, p. 123), who implied the perception of a more ethical workplace were associated with lower moral distress scores. If this association was correct, then hospital management plays a pivotal role in maintaining an ethical system for handling the most distressing patient care.

Haghighinezhad et al., suggested that nurse managers could facilitate "organizational justice" by upholding what they called "distributive justice" and "interactional justice" relating to fairness involving professional relationships and fairness in resource allocation (2019, p. 467). If nurses perceived they were being treated

unfairly and if resources were inadequately allocated, both types of justice were not achieved leading to increased moral distress. The authors suggested both management and hospital administration could play a greater role in regulating moral distress by providing systemic-level resources needed for nurses and other professionals to do their jobs effectively (Haghighinezhad et al., 2019). The use of modifiers before the word justice seemed unusual in this piece of literature as there was confusion whether certain laws or cultural norms in Iran were being violated. Using the phrase "organizational justice" (Haghighinezhad et al., 2019) felt not only hyperbolic but also disingenuous in describing flaws within the hospital socioeconomic system. Justice implies purpose and injustice implies intent; sometimes there are errors within a system that need to be addressed before invoking a legal term.

Reducing moral distress to avoid hospital staff burning out and developing compassion fatigue may require additional staff on healthcare teams and the use of a systemic means to intervene during ethical dilemmas. The studies by Epstein & Hamric (2009) and Whitehead et al., (2014) noted that nurses and other hospital staff may not be adequately trained to handle moral distress or potential communication breakdowns while providing care. Did these incidents involving moral and ethical conflict potentially occur due to a fear of confrontation? An experimental study by Robb et al., (2015) explored if there was a difference in "speaking up behavior" between virtual and real humans when encountering conflict. Their experiment tested 48 nurses if there was increased or decreased difficulty when communicating with a human surgeon versus a "virtual" surgeon when advocating for patient safety prior to starting surgery; using a chi-square test, they discovered no significant differences in the employment of influence tactics (*p*

= 0.398) or in the number of attempts (p = 0.292) to influence the real and virtual surgeons (Robb, et al., 2015). However, only 20% of participants stopped the surgeons from proceeding, and 40 to 45% of participants offered "no objections," (Robb, et al., 2015, p. 15) demonstrating a deference to hierarchical standing based on the competence of the surgeons. This study suggested that nurses were aware of other healthcare professionals engaging in medical errors or in moral conflict but would still choose not to intervene due to a systemic hierarchy which placed doctors at the top. Therefore, it may not be any fear of confrontation on the part of the nurse on a personal level, but a fear of confronting the established hierarchy. If this were true, then training healthcare professionals to be more assertive in situations involving moral and ethical decisions would only address *part* of the systemic issue.

The use of nurse ethicists was suggested by Morley (2016) as a potential solution to reducing moral distress at three levels: Individual, team, and organization. A nurse ethicist could "bridge the gap" between these three levels within the hospital system, ensuring that organizational and individual ethical standards were being met (Morley, 2016, p. 160). Morley (2016) explored how hospitals in the USA used nurse ethicists because of a 1992 Joint Commission mandate to reduce moral distress and how hospitals in the United Kingdom could benefit from adopting a similar program. Unfortunately, the only evidence provided by Morley (2016) supporting the use of nurse ethicists was anecdotal and based upon observations with no quantitative data supporting nurse ethicist efficacy was provided; this may have been due to privacy concerns related to the sensitive nature of health care ethics cases. Morley (2016) concluded that additional investigation was warranted to adopt the use of nurse ethicists by UK hospitals, implying

the benefits of adopting such a program from the USA could only benefit hospital systems.

Ethical conflict, as explored in two studies exploring Canadian hospitals (Gaudine et al., 2011; Gaudine & Thorne, 2012), was defined as situations wherein the values of healthcare professionals directly conflicted with the values of the hospital through which they were employed. The moral distress and crises discussed in previous pieces of literature focused on situational conflict usually intra-or interprofessional in nature; ethical conflict in this context involved healthcare professionals versus the larger system. According to Gaudine et al., (2011), the primary source of ethical conflict involved a lack of respect demonstrated towards the recipients and providers of care. However, they identified five "themes" of ethical conflict all falling under the larger "lack of respect" theme: Insufficient resources, disagreement with hospital policies, hospital administration ignoring problems, lack of organizational transparency, and lack of respect for professionals (Gaudine et al., 2011, pp. 758-762). Additional ethical conflicts included an unwillingness by the hospital to invest in professional development for nurses and physicians expressing concerns about how hospitals did not emphasize preventative care (Gaudine et al., 2011, p. 763).

The ethical conflict nurses experienced in hospitals was "multidimensional" according to a longitudinal follow-up study following 410 nurses at four Canadian hospitals (Gaudine & Thorne, 2012). According to Gaudine & Thorne (2012), ethical conflict experienced by nurses was associated with instances of turnover, stress, absenteeism, and commitment to working at the hospitals. Using a regression analysis, ethical conflict was related to three constructed aspects: "Value of nurses," "staffing

policy values," and "patient care values" with stress associated with all three (Gaudine & Thorne, 2012). Nurse turnover was associated with "patient care values," and "turnover intention" was associated with "staffing policy values" suggesting a value discrepancy between nurses and their employers led to a desire to work elsewhere (Gaudine & Thorne, 2012). Absenteeism was predicted by "patient care values," suggesting that differences between the personal values of nurses and the values of the hospital will lead to increased work absences (Gaudine & Thorne, 2012, pp. 732-733). These findings suggested that the values and priorities of a hospital system may not match the values of individual employees or a group of professionals such as nurses. An incongruence of moral and ethical values could lead to valuable employees not wishing to work for a hospital, potentially leading to a cycle of stress, burnout, and inevitably to a decline in patient care due to understaffing. Would allied health professionals also experience similar incongruent values?

Legal Implications. It was hard to differentiate ethical standards in healthcare from legal standards. While individual professionals in healthcare may hold different values, emphasizing morality over others (Gaudine & Thorne, 2012; Moyo et al., 2016), the larger ethical framework of the health care system is codified by the legal system. The legal system seeks justice and fairness, though the definitions of both have varied in accordance with societal norms that could have been interpreted historically as unjust (Klarman, 2004). Nevertheless, it is the duty of society to create and maintain laws to maintain order, justice, fairness, and to prohibit undesirable behaviors; laws governing healthcare are no different.

Given the litigious nature of our Western culture (Berezow, 2019), ethical and moral conundrums that are not satisfactorily resolved may lead to expensive, time-consuming legal consequences. These consequences are primarily detrimental to insurance companies and hospitals (Berezow, 2019), but physicians and other health care professionals may also be targeted by lawsuits resulting from ethical breaches, such as "negligence, malpractice, and breach of confidentiality" (Matthews & Matthews, 2015, pp. 173-174). According to some literature, the common denominator connecting legal implications and ethical/moral conundrums is a failure for health care professionals to communicate (Berlin, 2010). As previously mentioned in this literature review, communication in any health care system represented the interconnections between elements in the system (Meadows, 2008). The dissonance between elements likely created interprofessional conflict which if not resolved could lead to ethical/moral conundrums, then potentially leading to legal issues such as medical malpractice.

According to Dr. Leonard Berlin, the most common causes of medical malpractice lawsuits were "failure to diagnose" followed closely by "failure to communicate results of radiologic examinations" by physicians (2010, p. 18). Eighty percent of medical malpractice lawsuits involved "communication problems" as a "causative factor" leading to those legal actions (Berlin, 2010, p. 18). Were these communication problems a result of failed interconnections within the system, and if so, were physicians the only professionals at fault? Communication errors between the physicians ordering radiologic examinations and the radiologists interpreting said examinations were regarded as a serious problem (Berlin, 2010), representing intraprofessional as well as interprofessional conflicts, but it was unclear what role allied

health professionals, such as radiologic technologists (RTs) (ASAHP, 2018), played in that communication system. In radiology, medical imaging procedures are predominantly delegated to RTs who perform the CT, MRI, X-ray, and ultrasound examinations while the interpretation of these exams were the primary responsibility for radiologists (ARRT, 2021; ASRT, 2021). How much responsibility did radiologic technologists have to ensure imaging test results were effectively communicated to all physicians involved in a patient's care? If there was a communication breakdown, did the onus fall on the allied health professional to resolve it for the sake of the patient, or was there a systemic barrier in place preventing such a failsafe?

The role of the physician has evolved based upon the adoption of professionalism (Abbott, 1988) and ethical standards designed to protect patients (Mehlman, 2015). The common assumption is that physicians serve their patients and this loyalty—based on concepts such as the Hippocratic oath (Britannica, T. Editors of Encyclopaedia, 2023)—are absolute via the deontological lens. However, this evolution along with the modernization of health care providers often leads to conflict pertaining to whom the physicians serve: The patients, the hospital, or other entities such as insurance companies or pharmaceutical companies (Abrams, 1986). The vernacular describing this conflict is called "dual agency" (Abrams, 1986; Tilburt, 2014) or "divided loyalty" (Mehlman, 2015) implying that physicians were agents serving two entities whose interests may not be compatible. This represented a potential ethical breach, given the assumption that the ultimate interests being served were only the patients. However, with insurance companies and hospitals added to the calculus, financial interests may steer physicians in a different direction, violating their greater interest in protecting patients (Tilburt, 2014).

While patients are legally protected from unethical decisions and unfortunate outcomes that were the fault of the hospital, the public may be unaware that this system, with its many interconnections, may promote or even exacerbate ethical dilemmas. In other words, ethical dilemmas may be more common than not in hospital systems and may be evidence of "normalizations of deviance" (Vaughan, 1997). The phrase "normalization of deviance" (Vaughan, 1997) was coined in the aftermath of the space shuttle Challenger disaster, where a series of breaches in safety protocols directly contributed to the catastrophe; it is now used to describe systemic failure.

Mehlman (2015) delved into the legal implications associated with the field of medicine, exploring if the legal system could somehow "save" health care. One of the issues Mehlman observed was "deprofessionalizing [sic] medicine," implying that self-interests demonstrated by physicians may contradict their "professional duty of loyalty to their patients" (Mehlman, 2015, pp. 123-124). Money was the most obvious self-interest that could influence physician behavior and given at least half of all physicians were employed by hospitals, "divided loyalty" (Mehlman, 2015, pp. 126-127) was a major concern as they balanced concern for their patients against the financial concerns of the hospital. This could establish several serious ethical concerns, such as the rationing of care or the violation of patient confidentiality to maintain hospital compliance with public health initiatives (Mehlman, 2015). In those situations, physicians would not be advocating for their patients, but would be complying with their employer and the hospital system whose purpose was to make money.

Mehlman (2015) concluded that despite the necessity of loyalty to a patient "…the law has abrogated its responsibility for helping ensure that physicians properly

discharge this duty" (Melhman, 2015, p. 157). To maintain this conceptually sacred relationship between physician and patient, Mehlman opined that the legal system represented the best hope for success. Success would be presumably measured by the maintenance of professionalism and ethical standards, enforced by the legal system. However, this prediction for success could also backfire, and the legal system could further empower financial interests aligned against both physician and patient. Mehlman p. 157) feared that medicine was devolving from a profession into a "a mere trade" since the "market" was essentially running the health care system now. It was unlikely this phenomenon was limited to medicine, and allied health professionals likely held a key to understanding if this trend was systemic or limited in scope.

Value/Ethics Problems for Allied Health. The dilemma faced by allied health professionals is being stuck between nurses and physicians in terms of professional hierarchy. Allied health professionals may take orders and directions from physicians and nurses but may also provide direction and feedback in return, sometimes placing them in ethically precarious situations. As previous literature noted, physicians are not only the "team leaders" in hospital care teams, but also legally responsible for patient outcomes (Apesoa-Varano, 2013; Brown et al., 2011); nurses on the other hand are primarily responsible for direct patient care and carrying out physician orders, such as administering medication and coordinating diagnostic imaging. Allied health professionals can be bystanders to interprofessional conflict between nurses and physicians, or may be directly involved, depending on circumstances. Given the lack of literature pertaining to each of the over forty allied health professions and their lived experiences with interprofessional workplace conflict (ASAHP, 2018), specific

values/ethics conundrums were hard to ascertain without exhaustive research and input. Much of what was covered here was based on conjecture, and it may be necessary to conduct extensive research at the qualitative level to gain insight into specific values/ethics conflicts. Were there specific ethical problems encountered by allied health professionals that directly challenged their value structures? Did the concept of "dual agency" (Abrams, 1986) apply to allied health professionals, or was that exclusive to physicians?

According to the American Registry of Radiologic Technologists, the primary concern of medical imaging professionals is patient safety (ARRT, 2021; Stogiannos, 2019), because several imaging modalities: X-ray, computed tomography (CT), positron emitting tomography (PET), and interventional radiology (IR) involve ionizing radiation to obtain diagnostic medical images. Large doses of radiation are harmful and potentially fatal, so it is imperative that patient exposure is limited. Even the modalities that do not use ionizing radiation—magnetic resonance imaging (MRI) and ultrasound—present potential danger to patients (Stogiannos, 2019). Knowing these risks, an ethical concern faced by these professionals is "medical necessity," as in, does the benefit outweigh the risk of exposure (ARRT, 2021, p. 1)? This concern is aligned with medical ethics which promotes beneficence and nonmaleficence (Matthews & Matthews, 2015).

In the field of ultrasound, controversy exists pertaining to a phenomenon known as "keepsake ultrasounds" (Scholz, 2011) whereby expecting mothers purchase ultrasound images of their unborn children for sentimental value. While advertised to the public as "non-invasive" and "harmless," ultrasound can cause harm to patients depending on power output related to the high frequency of the sound waves used by the

ultrasound machine. Ultrasound creates heat and leads to microbubbles forming inside the body because of cavitation, with fetal tissue being the most susceptible to harm by ultrasound via hyperthermal injury (Scholz, 2011). Legally, ultrasound cannot be diagnostically performed without a physician's order, and yet keepsake ultrasound businesses will perform an ultrasound to acquire images of fetuses for entertainment purposes (Scholz, 2011). The exposure and risk to the patient is no different, and it is the medical consensus that keepsake ultrasounds are unethical (ASRT, 2021; ARRT, 2021) and to be discouraged per the Food and Drug Administration (FDA, 2020).

Another concern centered around "incidental findings" and how they are reported to physicians (Stogiannos, 2019). While it was explicitly stated (ARRT, 2021) that RTs do not diagnose medical conditions—and doing so is regarded as illegal as well as unethical—it was implicitly understood that they are capable of recognizing pathology and are faced with ethical dilemmas (Ells & Thombs, 2014) when discovering them incidentally. Incidental findings are not why medical imaging tests are ordered and "may be anticipated (known to be potentially associated with the test) or unanticipated (not typically associated)" (Ells & Thombs, 2014, p. 655). To manage any incidental findings, it was suggested that a plan must exist to either disclose or not these findings to maintain ethical principles associated with both physicians and medical imaging professionals (Ells & Thombs, 2014). While it was suggested physicians face this decision to disclose incidental findings, those conducting the medical imaging procedures could highlight or ignore incidental findings as a judgement call, or by following hospital/departmental policy, thus creating interprofessional conflict as well as potential harm to patients. Without knowing specific instances researched at the qualitative level, this is conjecture.

Revisiting the study conducted by Patton that addressed issues associated with communication involving medical imaging professionals, she briefly mentioned that communication was a part of professional ethical standards established by the American Registry of Radiologic Technologists (Patton, 2018). According to the "standards of ethics" (ARRT, 2021) medical imaging professionals must adhere to, it was important that radiologic technologists engage in professional behaviors consistent in a "collaborative" environment. In other words, any deliberate failures to communicate or acts of uncivil behavior towards colleagues should be regarded as unprofessional and addressed immediately. Intentional communication errors such as deliberately withholding patient information or acting in an uncivil manner towards other professionals were regarded as unethical behaviors based upon this code. Did this suggest medical imaging professionals who engaged in these behaviors are at risk of losing their medical licenses as well as their jobs? Previous literature that suggested communication errors were pervasive did not indicate whether allied health professionals were held accountable, or if their roles served as a check against physician errors (Berlin, 2010). Further research into this potential breach and failure in systemic interconnections may yield substantial insights into improving communication flows and patient outcomes.

Summary

Literature exploring interprofessional conflict was thematically constructed into three major categories: Conflict antecedents, professional boundaries and hierarchies, and moral conundrums. In each theme, literature was scoured for evidence of any relationship between interprofessional conflict and potential systemic flaws in accordance with complex systems theory (Meadows, 2008). The system of professions (Abbott, 1988) was

employed as an extension of complex systems theory to explore the nature of interprofessional conflict, assisting in obtaining an understanding of professional experiences. Additionally, the phenomenon of interprofessional conflict required careful definition, necessitating an exhaustive review of literature to describe the lived experiences of allied health professionals. Most of the literature focused on conflict involving nurses and physicians, with the lived experiences of allied health professionals either absent or marginalized. This led to the next chapter of this dissertation describing the methodology used to explore the phenomenon of interprofessional conflict by focusing on a specific group of allied health professionals conducting medical imaging.

Chapter 3: Research Method

The purpose of this phenomenological study was to explore interprofessional workplace conflict from the perspective of medical imaging professionals working in acute care hospitals located in the United States of America. Conflict was prevalent in hospitals, primarily affecting nurses and physicians while potentially playing a role influencing patient outcomes (Almost et al., 2016; Kim et al., 2017). Upon identifying gaps in the literature and the need for future research in specific areas related to conflict, several concerns were raised. The first concern was the lack of representation in sampling of allied health professionals, who comprised a significant portion of the hospital workforce (ASAHP, 2018). Despite the population of allied health professionals working in hospitals, few studies collected and shared the lived experiences of most allied health professionals pertaining to interprofessional conflict.

Another concern was the definition of conflict which was inconsistent across multiple research studies, conflating interpersonal conflict, intraprofessional conflict, and interdepartmental conflict as being the same phenomenon (Almost et al., 2016). In the previous chapter, it was necessary to define interprofessional conflict as a unique phenomenon and establish what it entailed given it presented potential systemic ramifications (Meadows, 2008). The sample was narrowed to medical imaging professionals who still represented at least eight of the over forty allied health professions (ASAHP, 2018) and had a wide range of interaction with other medical professionals.

Research Question

The following research question guided this phenomenological study:

RQ1:

In what form does interprofessional conflict present from the perspective of medical imaging professionals?

Literature reviewed in Chapter 2 suggested that both interpersonal and interprofessional conflicts were prevalent in acute care hospitals in the United States (Almost et al., 2016; Kim et al., 2017); while most literature focused on sample populations of nurses and physicians, conflict was evident in professional interactions involving routine patient care. The purpose of this phenomenological study was to elicit positive social change at the organizational level through the use of dispute systems designed for conflict resolution. Furthermore, the lived experiences of medical imaging professionals, as part of the larger allied health demographic added to the existing literature and data addressing the ongoing problem with conflict in hospitals. If any conflict resolution model is to be successfully employed within a hospital system, every element and interconnection should be accounted for and equally represented.

Research Methodology and Design

The research methodology selected for this study was qualitative. Qualitative research is used to understand how people make sense of their lived experiences (Teherani et al., 2015). The research methodology is dependent on the goal and purpose of the research (Saldana, 2021). In this study, I explored the phenomenon of interprofessional workplace conflict among medical imaging professionals. The use of qualitative methodology allowed me to collect data that includes information-rich views

of study participants (Yin, 2018). Choosing qualitative over quantitative research methodology was a difficult decision as the original focus of this research based on the literature review was a systems analysis; this method was too broad and would require access to data that were likely impossible to obtain, such as employee incident reports related to conflict. While the incidence of interprofessional conflict involving allied health professionals is a concern, it was necessary to narrow the focus of the research to a smaller sample population to understand their lived experience. Collecting quantitative data via anonymous surveys or other instruments would overlook individual experiences and continue a trend of marginalization of allied health professionals reflected in the reviewed literature.

Several alternative research designs were considered for this study, namely, ethnography, case study, and discourse analysis were all considered before phenomenology was chosen (Willis, 2007). Ethnography was considered due to the examination of allied health professionals as a population of interest involved in workplace interprofessional conflict; however, given there are at least forty unique allied health professions (ASAHP, 2018), the amount of time and resources needed to conduct that study was not feasible. For a complete examination of a hospital system, a case study was also considered as it would allow a thorough analysis of interprofessional conflict from a macro lens consistent with systems theory analysis (Meadows, 2008). Unfortunately, gaining full access to any hospital to conduct such a thorough study would not be feasible due to privacy law and potential IRB concerns. Discourse analysis was also considered due to the availability of blogs, podcasts, and social media groups discussing experiences of workplace conflict. While this was a promising choice, there

were concerns with the validity of the information, privacy, obtaining consent from those who shared their experiences, and obtaining a large enough sample. Sharing experiences related to hospital conflict publicly could be regarded as unethical behavior by participants and legally questionable if patients were mentioned.

Given the nature of the research question and its pursuit of exploring the lived experiences of medical imaging professionals, phenomenology was the chosen research design. Interview questions were developed from thematic insights uncovered during the literature review process, based on existing gaps in the literature and the exclusion of in-depth perspective from most allied health professionals. Those themes described in the previous chapter included potential antecedents to conflict experienced by health care professionals, professional boundaries and hierarchies influencing conflict, and potential ethical/moral conundrums experienced on the job.

Reflexive Statement

The nature of phenomenological research required me to render a reflexive statement establishing my current biases as well as my professional background relative to the research participants (Cooper, 2014). Also, it was important for me to reflect on my own professional experience in relation to others involved in this research process in real time, fulfilling the role of "reflective practitioner" (Schon, 1983) as well as that of a student. This reflection was done in accordance with the interpretive hermeneutic research approach (Willis, 2007), identifying my strengths, weaknesses, and biases relative to the conflict phenomenon.

For nine and a half years I worked as a registered vascular sonographer in a level 1 trauma center in Reading, PA performing non-invasive vascular ultrasound. I have been

a medical imaging professional since 2005 and in 2014 I became an assistant professor of cardiovascular sonography at Nova Southeastern University; I still maintain my registered vascular technologist (RVT) credential through the American Registry for Diagnostic Medical Sonographers (ARDMS, 2022) and am eligible to work in any hospital in the world that employs licensed, dedicated vascular sonographers. The title registered vascular technologist is unique in the ultrasound profession, for our sisters and brothers who perform ultrasounds are officially titled as sonographers, not technologists.

Technologist was a carryover term from the time when ultrasound fell under the umbrella of radiology, whereby all medical imaging professionals were officially titled technologists. Technologist is currently used to describe vascular sonographers because they perform more than just ultrasounds in their job duties; the use of Doppler equipment is also used to perform physiologic testing on patients, examining the arteries in the extremities or within the brain. This created a great deal of conflict and confusion in my profession because the term Doppler has been used interchangeably with the term duplex when referring to ultrasound exams. A duplex ultrasound exam uses both Doppler and 2D ultrasound to acquire diagnostic medical images using sound waves; a Doppler does not utilize 2D ultrasound and is used exclusively to evaluate arteries and veins within a patient. Many physicians during my time in the hospital confused these two exams, leading to lengthy delays in performing exams due to ordering the wrong tests on patients. At my previous employer sonographers were evaluated based on their productivity, and in an eight hour shift we were expected to perform eight examinations to justify our continued necessity as productive, full-time hospital staff. In addition to this regular-occurring stressful experience, nurses and physicians did not like to be corrected

or educated regarding the difference between the two exams, which was a part of my job description and responsibilities as a sonographer. This created unnecessary tension and earned our department a reputation for being arrogant and adversarial for simply not complying with every test order we were given. However, it was my responsibility to ensure patients were getting the proper tests performed for the correct reasons as a part of my professional expectations per the ARDMS® (2022) and the Society for Vascular Ultrasound (2022) professionalism standards.

During my time performing non-invasive vascular examinations, I enjoyed interacting with my patients and enjoyed the unique challenges that scanning patients entailed. However, over time the day-to-day activities took a heavy physical and mental toll on me. The magic I felt when I was a new sonographer faded, and I felt as if I were working on an assembly line; I was just a cog in the machine, replaceable as an employee, and far less important to the hospital than the patients who became customers. My experience was echoed in my coworkers and peers working at other hospitals, and we usually expressed our lamentations outside the hospital to only each other as nobody else could understand what we were going through. Therefore, I feel I am perfectly suited to interview medical imaging professionals as I think I can empathize with their experiences and draw a clearer picture of the interprofessional conflict phenomenon. I am concerned for the health and safety of medical imaging professionals and their well-deserved recognition as a vital part of the larger hospital system. Additionally, this bias translates into a pervasive concern for patient care which I will never apologize for my advocacy thereof as we are all potential patients, demanding equal treatment.

Sampling

A purposeful sample was selected after obtaining Institutional Review Board (IRB) approval (see Appendix B). Given there were over forty distinct allied health professions (ASAHP, 2018) in the United States and the limitations placed on writing this dissertation concerning time, finances, and access barriers to data from hospitals, medical imaging professionals were identified as the targeted sample population. For an ideal phenomenological perspective, at least one individual representing each of those forty professions would need to be interviewed; this was not feasible. The primary reason for choosing this sample population was my own experience working within this population and my current level of professional expertise. I empathized better with this sample and was able to ask relevant questions related to medical imaging that delved deeper into their lived experiences.

Small sample sizes associated with phenomenological studies presented an opportunity for interviewees to reflect upon their lived experiences as they answered questions (Cooper, 2014). Given the small sample sizes needed to reach data saturation in phenomenological studies, at least nine participants were sought for inclusion to cover each individual medical imaging modality, but no more than fifteen were required (Cooper, 2014, p. 79; Creswell, 2013) for the sake of data collection time constraints. The purposeful sample, medical imaging professionals, were a fraction of the wider allied health professions sample and included: Radiologic technologists, diagnostic medial sonographers, echocardiographers, cardiovascular sonographers, and vascular technologists (ARDMS, 2022; ARRT, 2021; CCI, 2022). It must be reiterated that radiologic technologists (RTs) perform X-Ray, CT, MRI, PET, interventional, and

nuclear medicine examinations as exclusive specialties or as a part of multiple modality expertise noted in their professions (ARRT, 2021).

Sample Recruitment

Formal recruitment of participants was conducted through professional connections as well as social media. Direct professional connections, specifically coworkers, or individuals familiar with me personally were excluded from participation to avoid bias and ethical violations; professional connections were only used to help advertise and recruit participants willing to share their lived experiences. The primary social media applications used to recruit participants were radiology and ultrasound Facebook groups whose moderators approved my solicitation of potential participants. If a moderator of a Facebook group did not approve, no posts were made to respect their wishes. A secondary social media application used was LinkedIn where a general solicitation post was made on my own profile and encouraged by my connections to share with any who might be interested in participating. No financial rewards were offered for participation in this research.

The inclusion criteria for potential interviewees were: 1) Willingness and availability to participate, 2) be medical imaging professionals currently or previously working in an acute care hospital, and 3) currently—or previously—experienced conflict with other health care professionals. Recruitment materials are found in Appendix D,

Potential interviewees were encouraged to contact me through my Nova Southeastern University (NSU) student email address, rmoody@mynsu.nova.edu. On a first-come, first-served basis, I set up interview times with eligible subjects based upon their availability as my current profession affords scheduling flexibility for professional

development and research activities. If an interviewee was in the Tampa Bay region of Florida and wished to participate in the interview face-to-face, I scheduled the interview to take place on the NSU Tampa Bay Regional Campus in Clearwater, Florida where the infrastructure allowed for a professional, safe environment to meet. Interviewees who were not in the Tampa Bay region were scheduled to meet with me through Zoom. Formal consent was obtained before scheduling the interview to be sure the interviewee felt comfortable and did not feel compelled to participate.

Data Collection

Semi-structured interviews were recorded using two methods, based upon face-to-face interaction or remote interaction. Out of respect for the participant's time as health care professionals, one hour was allotted per interview for scheduling purposes. If participants revealed they had more to share and were willing to continue, interview sessions were extended by up to one hour. Due to the risks associated with the SARS-CoV-2 (Covid 19) pandemic and the lasting effects of limited human interaction, the use of virtual meeting software Zoom videoconferencing was utilized for participant comfort and convenience. Zoom also allowed for easier audio transcription of the interviews conducted and was the primary method of recording interviews; however, for analysis of the transcripts, Raven's Eye (Raven's Eye, 2022) software was used. For face-to-face interviews, which were preferable to virtual interviews, audio recording was conducted using either a Zoom PodTrak P4 or a Sony ICD-PX470 digital voice recorder. Audio transcription of recorded face-to-face interviews was performed digitally using either Raven's Eye software (Raven's Eye, 2022) or Zoom. Each audio transcription was

checked for errors and corrected if necessary due to known voice software recognition inaccuracies.

Consent to participate in the research study was obtained prior to the interview but was also reiterated at the beginning of each interview to inform participants that the interview would be recorded and used for research purposes. Interview transcripts were later anonymized and coded for data analysis; only I knew the identities of participants. If the interviewee felt uncomfortable answering a specific question, it was skipped at their request. Also, if at any time during the interview process the interviewee felt uncomfortable, the session was terminated and their inclusion in the study ended. To compensate for the loss in the sample, alternate interviewees were solicited for inclusion, adhering to inclusion criteria and consent. Respecting the agency of interviewees, participants were able to officially revoke their participation to me in writing at any time up to the scheduling of the final dissertation defense; at such time their data would be included but removed afterwards during the final copy-editing process before official publication.

Interview Questions

Phenomenological research often utilizes unstructured interviews allowing interviewees to describe their lived experience in vivid, intimate detail (Willis, 2007); but, for this dissertation, a semi-structured interview format was followed. This format was chosen for two reasons: To ensure the reproducibility of the study according to scientific discipline, and to remain on topic while conducting interviewees. Additional questions based on a more fluid, unstructured interview format was utilized as needed, as well as active listening that prompted further information about the perceptions and

experiences of the participants; additional questions were transcribed and noted as not part of the original structured interview. Interview questions are found in Appendix A.

Thirteen questions were used for data collecting during the semi-structured interviews; the first four questions posed were for the purpose of gathering demographic information about the participants, such as their profession and work experience. All remaining questions intended for the participants to share their lived experiences in dealing with conflict in their work environment, based upon themes uncovered during the literature review process. Questions five through eight and eleven delved into the lived experience of the interviewee, inquiring about their feelings and perceptions relative to conflict. Questions nine and ten addressed conflicts that the interviewee had witnessed happening to others and how this related to their roles as medical imaging professionals. Question twelve was an open-ended hypothetical that invited the interviewee to make any change as a hypothetical hospital CEO; this question was posed to uncover any systemic issues related to conflict that the interviewee experienced. The final question asked the interviewee if there were any further issues they would like to discuss or share that were not addressed or emphasized previously.

Active listening was also employed to delve further into interviewee responses, such as: “that was really interesting, could you please elaborate on that?” If interviewees gave particularly emotional responses, this style of questioning was also used to perform a deeper dive into their lived experiences. In addition to active listening, additional probing questions were also utilized to gather further information should interviewees respond with yes/no responses or if the previous question requested additional clarity.

Due to the intentional fluidity of the phenomenological interview process, deviation from the interview structure was noted in the transcripts for official documentation.

Two mock interviews were conducted to test interview questions for viability and how interviewees would respond to being asked open-ended questions. The feedback from these mock interviews was used to determine if certain questions elicited responses that revealed the lived experiences of the interviewees; if the questions failed in this task, they were omitted. This was also done to gain further experience in asking open-ended interview questions, and to ensure that my choices for recording equipment were adequate for the task at hand. None of the data collected during mock interviews was used for data analysis and none was uploaded to Raven's Eye.

Data Analysis

To explore the lived experience of these professionals, interpretive phenomenological analysis (IPA) was employed for this dissertation which required semi-structured interviews with participants to glean in-depth, vivid insights into experiences with interprofessional conflict (Cooper, 2014). The interpretive approach utilized hermeneutic validation to achieve "verstehen," meaning "understanding" in German, (Willis, 2007, pp. 100-108) of the interprofessional conflict experience. Analysis of the collected experiences was reflexive on the part of the researcher, allowing for a deeper connection with the expressed narrative. Audio transcriptions of interviews, or the raw audio files captured in Mp3 format, were uploaded to Raven's Eye (Raven's Eye, 2022) for analysis. Raven's Eye offered a unique approach called "quantitative phenomenology" (Raven's Eye, 2022) to analyze information regarded as qualitative in nature, such as interviews or customer feedback. Any audio uploaded to Raven's Eye was

transcribed through a “partnership with IBM’s Watson” which offered “natural language analysis” (Raven's Eye, 2022). The Raven’s Eye software was able to use algorithms and pattern recognition to identify words and themes uncovered during interviews and organize them for easier referential access (Raven's Eye, 2022). However, personal analysis of the data and review of the transcripts was also done in a more traditional manner to discern trends, themes, and emotionally relevant responses that software was unable to detect. While Raven’s Eye offered a fascinating approach to phenomenological analysis, I used the software to help transcribe and recognize potential patterns in the lived experience of interviewees, as interpretive phenomenology (Cooper, 2014) modeled. There is no substitute for eyeballing data or revisiting the audio recordings of participants to gain “intimacy” with their experiences (Cooper, 2014).

Data was analyzed based upon an Interpretative Phenomenological Analysis model described by Dr. Robin Cooper: Reading and re-reading, initial noting, developing emergent themes, searching for connections across emergent themes, moving to the next case, and searching for patterns across cases (2014, pp. 82-84). Once audio transcriptions were completed and double checked for accuracy, the interviews were revisited no fewer than two times to extrapolate key points pertaining to the lived experiences of interviewees (Cooper, 2014). It was during this time that initial noting took place; This unique vernacular applies to interpretive phenomenology where comments pertaining to concepts, language, and descriptors are noted (Cooper, 2014, p. 82). Upon completion of initial noting, specific themes were developed as well as recognized repeated patterns using “the hermeneutic circle” (Cooper, 2014, p. 83; Willis, 2007, pp. 104-107). Meaning was derived from participant’s lived experience as I interpreted their unique

interpretations of interprofessional conflict. By conducting interviews with multiple participants sharing their unique experiences, I was able to search for connections and patterns pertaining to specific themes. Every individual I interviewed was a unique case and a unique opportunity for deeper understanding that in isolation would never have been revealed.

IRB Approval

Upon approval from my dissertation chair and committee, IRB approval was obtained through Nova Southeastern University for interviewing human subjects. It was during this time I renewed my existing IRB training certification as a student. The formal IRB approval letter can be viewed in Appendix B and the form used to obtain informed consent from participants is in Appendix C.

Summary

This chapter summarized the methodology and research design employed to answer the research question of the study. A qualitative research methodology with an interpretive phenomenological design was used to explore the lived experience of medical imaging professionals relative to interprofessional conflict. This chapter explained the steps taken for data collection and analysis as well as detailed the IRB approval process for this study. The next chapter presents the results of this study.

Chapter 4: Results

Semi-structured interviews were conducted over the course of two months collecting the lived experiences of ten medical imaging professionals. Demographic information pertaining to the ten subjects was noted in Table 1 which showed the profession, years of experience working in that profession, hospital size, and the sex of the interviewees. These medical imaging professionals were coded by the capital letter *S* representing subject and numerically according to the temporal order in which they were scheduled to be interviewed to protect their identities. Use of the vernacular "subjects," "interviewees," and "participants" all indicated those who participated in the interview process after giving informed consent. Information shared about their employers, the names of individuals in their anecdotes, professional organizations to which they belonged, and/or specific geographic locations (such as cities, states, or counties) were redacted in the interview transcripts to ensure the privacy of individuals and indicated by use of brackets in the text.

Five individuals were recruited via Facebook groups dedicated to medical imaging professionals and five were recruited by word-of-mouth referrals from professional colleagues. Attempts made at "snowball sampling" were reportedly unsuccessful. Concerns were raised by several interview candidates who bowed out of participation due to concerns over privacy; these individuals indicated a fear of both potential job loss and license revocation. Seven potential interviewees expressed interest to me before declining to participate; three additional individuals did not meet inclusion criteria for participation in the study. A modified, written means of participation was offered to these individuals who could either email me anonymously or mail their

responses to my home address (see Appendix E); this was utilized by several subjects (S8, S9, and S10) who consented to participate after reviewing the revised recruitment material (see Appendix E).

After obtaining signed IRB consent (see Appendix C) sent to me digitally, hour long Zoom sessions were scheduled and recorded with those participants who felt comfortable being recorded (S1 through S7). These recorded sessions were then transcribed using either Zoom or Raven's Eye (2022), edited for accuracy, and coded in preparation for interpretive phenomenological analysis. No face-to-face interviews were conducted despite having planned for them during the IRB process. The three individuals who declined Zoom interviews answered the interview questions via written format (see Appendix E) and submitted them via email along with their signed IRB consent forms.

Raven's Eye (2022) was used in a minimal capacity for analysis, as it was only able to determine the percentage of word usage in each interview transcript; this was not helpful in determining deeper understanding of the lived experiences of participants as the words identified as most used in the "corpus" were out of context . Only the first interview (S1) was transcribed using Raven's Eye (2022) as the monthly subscription to the service allowed for ninety minutes of transcription time and her interview took over an hour; additional minutes required extra purchase beyond the monthly subscription and therefore was not utilized. Raven's Eye (2022) was supposed to be able to conduct language analysis demonstrating the over usage of specific words which allowed the focus of analysis to shift as needed to identify potential themes and concepts that were not initially evident upon transcript review. Using an artificial intelligence algorithm, Raven's Eye (2022) also constructed "revelatory statements" from the interview

narratives that it felt were more relevant than others; this yielded mixed results as some of these statements were incomprehensible. Unfortunately, I was not able to gain any insights from using this software and I was greatly disappointed. The data from Raven's Eye was not included in the results section as I gained no benefit from using the software and it did not help me identify any experiential themes or gain any significant meaning from the interviews.

Data was themed phenomenologically based on the explanatory examples provided by Saldaña (2021, pp. 267-273) to determine what was interprofessional conflict and what interprofessional conflict meant to the interviewees. Additional guidance for conducting interpretive phenomenological analysis incorporated *Essentials of Interpretive Phenomenological Analysis* (Smith & Nizza, 2022). Review of the transcripts included: Listening to the MP3 audio files, re-reading the interview transcripts, color coding important statements, color coding strong emotions, inserting digital notes next to interesting statements, creating tables that compared subject responses, and noting the reflective statements made by the subjects. Microsoft Word and Excel (see Appendix F) were used for both analysis and coding out of convenience. During the interviews I took extensive notes using Rocketbook Fusion and included personal reflections on what was shared. Demographic data was organized into Table 1, and several pie graphs (see Figures 1, 2, and 3) were created to help visualize several responses during interview questions for quick reference.

Interprofessional conflict manifested in multiple experiential themes and sub-themes (Smith & Nizza, 2022, pp. 58-60) that emerged from interpretive phenomenological review of subject interviews: Territoriality, professional abuse,

systemic disruptions, and demoralization. Each experiential theme was explored in detail, guided by the words of the interviewees towards phenomenological interpretation; additional descriptions and insights into what the interviewees were describing were added to facilitate understanding of medical jargon, familiar trends in relation to existing literature on conflict in health care, and theoretical implications. Greater theoretical implications and points of emphasis were introduced throughout this chapter but were explored further in Chapter 5 to avoid minimizing the lived experiences of interviewees. Most of the interviewees were able to reflect on their lived experiences, providing their own interpretations of their experiences due to their extensive work experience or having received some training in conflict resolution (see Figure 2). For the most part, the semi-structured interview format allowed for a conversational tone that allowed the interviewees to provide vivid anecdotes that truly conveyed their personalities and emotions.

Territoriality

Territoriality referred to several interprofessional conflicts described by interviewees including the crossing of spatial boundaries described by S5, departmental responsibility boundary disputes described by S6, or professional role boundary confusion described by S1, S4 and S7. This theme was closely related to the boundaries and hierarchies theme discussed in Chapter 2 and was named based on S5 using the word "territory" to humorously describe her experiences with NICU [neonatal intensive care unit] nurses: "You NICU nurses, man! You go in and take care of that patient, you make sure you pee a ring around them so nobody else touches your territory!" While S5 was poking fun at specific behaviors exhibited by NICU nurses and how protective they were

of their neonates, a deeper interpretation of this territorial behavior could infer professionals were guarding their domains from outside encroachment (Abbott, 1988). What was perceived as warnings to tread carefully in the NICU domain could also be interpreted as outsiders were also not welcome; this made for an adversarial, stressful work environment. The experiences shared by S5 demonstrated an example of direct territoriality wherein hospital workspace was invaded by individuals; experiences shared by S1, S4, S6, and S7 were indirect as they involved invisible boundaries that were difficult to delineate.

Most interviewees indicated they understood their job roles and responsibilities (see Figure 1); all of them indicated they felt the roles and responsibilities of other health care professionals were clearly defined (see Appendix F). These findings were interesting given the territorial disputes described by the sample and how interprofessional conflict seemed related to role and responsibility confusion that existed between the parties. It was as if a metaphoric accountability cloak existed when health care professionals from different backgrounds worked together in ad hoc situations common to hospital environments. A system was in place that established roles and responsibilities including a standard of care applicable to patients to which all health care professionals adhered. So why did territorial conflict happen in the examples shared by the sample? Throughout this theme, I considered if interviewees were mistaken about their assessments about understanding their own job duties as well as the duties of other professionals.

NICU nurses demonstrated territorial behavior when echocardiographers set foot in their domains and interacted with their neonatal patients via portable exams as described by S5. Portables, or bedside studies as they are known in medical imaging,

were the most direct example of interprofessional conflict that occurred in the anecdotes provided by S5, a cardiac sonographer with 38 years of experience scanning adult and pediatric echo. She described her experiences in going portable and how sometimes she was delayed by nurses:

> Nurses I've found, NICU nurses are a unique breed. Most of them are extremely protective of the babies, and I can understand that, so some of them can get really just down like rude about some things. You know, you call them, 'yes, you can come do the patient,' and you show up, and what I find sometimes, especially on the adult side, is they're doing vitals and stuff, 'Oh, I gotta [sic] get this done!' I always want to go, 'did I make a phone call to remind you that you need to take care of your patient?' I never said that, but I thought that a lot of times. Because all of a sudden they're in the room doing things with the patient, I've got to stand there for another ten minutes waiting for them to finish before I can get in and take care of the patient. That's the most issues with the nursing staff that I've run into.

She also suggested a difference in generational attitudes between echocardiographers such as herself with over thirty-eight years of experience versus newer echocardiographers fresh out of school when they went portable:

> The younger generation doesn't, hasn't caught on that that's their territory, you're a visitor in it, you need to respect what the nurse is doing, and kind of acquiesce to them. So, I've heard the younger folks all, 'I can't believe this nurse, they got so mad at me!' I said, 'well, it is their territory.' You gotta [sic]…it's a give and take relationship, but I think it's very important. If you show them some respect that

> ‘yeah, I know this is your area, I’m an interloper in it, and I’m, I just need to get this test done,’ they're usually a little bit kinder to you and are more willing to help you out and be there as opposed to the young ones who go, ‘well, I was here first!’ It's like, eh [sic], it doesn't quite work well all the time.

The conflicts regarding territoriality described by S5 centered around patient scheduling for portable studies. Inpatient care was very structured, and to those not in health care it appeared like watching a well-rehearsed play; however, unlike our favorite dramas, every hour and every day could yield different results, some of them tragic and unexpected. Due to the structured care patients received at bedside, interprofessional conflict occurred when echocardiographers went portable without informing the nurses of their intentions to carry out the orders for imaging. This inserted chaos into a structured care regimen and was often the fault of younger, impatient echocardiographers:

> Some people don't call all the time, they just show up, and then it, and then there's a bit of a conflict because they, it's their own fault because they didn't call. But, if they, some people get a little huffy about it, because ‘oh, I need to get this done and it's time for us to leave.’ It's like, ‘well you should call and then you would have known that patient was not available at that time.’

Like a maintenance technician showing up unannounced to your home for repair work, this sudden appearance by echocardiographers was likely an unpleasant surprise for busy nurses, provoking irritation. Most of the interprofessional conflicts described by S5 were instigated by her colleagues who were at fault for not respecting the territory of nurses and lacking flexibility:

> Any of the new techs I find always have an issue with nursing because some of them don't know yet that you're just a visitor to that patient. The nurse is ultimately responsible, and if the nurse doesn't want, or needs to do something with that patient at that moment, they, if it's critical, they need to have first dibs. So, I've seen some conflicts with some of the younger generation, or just starting out in their careers, you know, well, 'I'm here, I'm not budging.' Or, and the nurse is just trying to do something, and, 'well, we need all the lights out.' And there's 'well I can't work with the lights out, I gotta [sic] draw blood, I'm starting an IV.'

Relevant to her shared experience here, sonographers needed to work in dark rooms to see the 2D images on their screens without glare from overhead lights. Many sonographers feel that having a dark room is a critical factor in their job performance in distinguishing finer anatomical details; this may be changing with improved technology and brighter LED monitors installed on ultrasound machines that eliminate glare and increase resolution. However, as a rule, sonographers scan patients in the dark as standard practice. Obviously, nurses were unable to perform intricate tasks, such as starting IVs, in dark rooms setting the stage for interprofessional conflict with sonographers.

My first interview involved a female vascular sonographer, coded S1, with 17 years of experience working in a large urban hospital system in the midwestern U.S. who also mentioned generational issues with newer sonographers:

> It particularly happens more often with either old and bitter nurses, or very new grads and I call it 'new grad-it is' like I'm sure you've seen it. The people come out of school and they're just pumped full of energy and enthusiasm and they literally think they know everything about it. And then after a few years you're

> they're like 'oh well you know there's a whole lot I'm always gonna [sic] learn' but that what the rate at that beginning, there like 'I'm registered! I'm the king!' And not everybody does it, but there is a certain select population, and I call it new grad-itis, and that sometimes causes a conflict, particularly between nurses.

The attitude of new graduates and entry level sonographers warranted further investigation if they entered the hospital environment like S1 described. This felt like a recipe for interprofessional conflict at minimum and potential disaster if new graduates decided to ignore nurses and physicians.

General sonographers, who were included in the purposeful sample of medical imaging professionals, were engaged in interprofessional and interpersonal conflict with vascular sonographers over "call" as described by S1 while the volume and quality of studies performed by general ultrasound department compared to a vascular department was described by S6. S1 described an incident of interprofessional conflict that turned into interpersonal conflict with other medical imaging professionals over the issue of "taking call." Taking call, or being on call, is the job expectation of many medical imaging professionals who are expected to staff a hospital in emergency cases twenty-four hours a day, seven days a week. Most medical imaging professionals are expected to perform their duties at a moment's notice, like physicians and nurses do, fulfilling critical patient care needs. However, not all individuals can be on call due to their personal situations, or job descriptions, as described by S1:

> And on my first day there, the ultrasound department came over with their call schedule and said, 'oh hey, you know we have this call schedule, do you want to be on it?' And I was like 'no I'm really sorry, that's the whole reason I left my

> other job to come here is because I can't take call. I have my children can't leave them.' And they, like part of it, I don't think that they basically understood my life situation. Like, they didn't understand because most people's husbands are home and so if you work in healthcare, and you take call, then your spouse is there to take care of your kids. Well, that's not everybody's reality. Like my husband can leave for three days at a time, and you know you can't leave a two-year-old and a one-year-old home alone, you know? That's not how it works. So, it's mostly, so then that girl, she got very upset with me and she just took it upon herself that I was lazy, and proceeded to spread that communication throughout the departments, that I was lazy, I refused to take part of their call, I was too good for them. And I said that's not it, you know?

She further reflected on her experience, comparing her current job with her previous job where this incident occurred and concluded it was jealously over her not taking call that led to interprofessional conflict becoming personal:

> And it, and so before I left that hospital everything was cleared up because then they realized that it was, it was more of a jealousy thing, the girl who started all this was jealous because she wanted the job that, like I had. I mean this is part of the reason why we have people working for so long right for our hospital is because our lab does not take call, we don't work weekends, and we don't work holidays, which is very unheard of in in a hospital setting in the medical field.

Taking call sounded like a rite of passage or expectation for most, if not all medical imaging professionals. Those who did not participate in call were "othered" by those who did, demonstrating in-group preference over an out-group (Coser, 1956). The

perception that individuals who did not take call were somehow more privileged or special led to feelings of resentment, as S1 reflected: “It’s been an issue with the general department takes [sic] call and they think that the vascular lab doesn’t do anything.” Her reflection regarding jealousy was a poignant reminder to her that not all medical imaging professionals saw themselves as being on the same team and that some even regarded themselves as better than others.

Unfortunately, the misunderstandings between general sonography and vascular sonography were also mentioned by S6, a female vascular sonographer with 22 years of experience working in a large hospital in the eastern United States. She had been a lab supervisor for eight years and in a unique position to observe the interprofessional conflict between general and vascular from a managerial perspective:

> So many years back, our hospital, prior before it joined the larger group, there was not a dedicated vascular lab for the hospital and it was formed because they decided to bring on a vascular surgeon who then said he needed to have a dedicated vascular lab, not to do vascular ultrasound in general ultrasound. So that's like the background of how kind of all started. But basically, as our department grew there became a lot of contention between our department and the general sonography departments, mostly because they were still doing vascular studies, and there was essentially a fight over who is the most appropriate to get the volume and it included, you know, a disagreement between the vascular technologists and the general sonographers in radiology and cardiology and vascular surgery.

While the issue described was related to the "volume" of studies, meaning which department generated the most revenue for the hospital, S6 further described the conflict as one centered on the "quality" of the studies being performed between the two departments:

> So, we were having to repeat some of their studies and our findings were different than theirs (laughs) and it created some contentious relationships between our techs and the general sonographers that they were not nice to each other, let's just put it that way.

I asked S6 to elaborate on what she shared and how it affected the interprofessional relationship between general sonographers and vascular sonographers:

> So, the general sonographers, which I have a good relationship with them, and I always have. That they were performing studies that, in my opinion, they were not adequately trained to do. I feel like they're training to do vascular studies with a like a telephone situation where one person learned it, and then they passed it on, and information was lost every time somebody else was trained. And so, the discrepancies were, for example they would call a monophasic waveform triphasic, and there was an instance where they were imaging pulsatile veins and calling them arteries.

If general sonographers were mistaking veins for arteries this was an issue related to education and their experience in recognizing 2D anatomy while also being able to use Doppler to properly identify blood vessels (Pellerito & Polak, 2020). She then offered a grim example of how such mistakes could affect patient care:

> Yes, there were instances where we would find acute thrombus that they had been, that had been missed. There was an instance where a gentleman had gone into the emergency room a few times for leg pain and now, this is not all on general sonographers, this is also on the ordering provider. They kept ordering DVT studies when his problem was not venous, it was arterial, and he ended up losing his leg because of it.

Upon hearing this statement, it became clear that the interprofessional issues between the general ultrasound and vascular department had an unfortunate impact on patient care that was likely not properly addressed. The interdepartmental conflict between general ultrasound and vascular related to the volume of studies and the quality of those studies was a serious care issue to which patients were likely oblivious. S6 was not oblivious to these issues and made her frustration known:

> It was frustrating because it felt like nobody was listening to us. At that particular time, our medical director, I don't think wanted to deal with the issue, and so it felt like it was between just the techs versus techs. Radiology wanted to hold on to their reading volume, of course, whereas we, I felt like the vascular techs were like, 'this is, this is wrong! They shouldn't be doing this, like people are getting hurt!' It was very frustrating between the technologists and our department.

S6 explained that those issues were resolved with a change in management, and she reflected on the conflict as being the result of poor communication and a false rivalry between the two departments:

> We were fortunate enough that we, that person left our hospital, and we got a new one who did listen to us, and every time I brought a new, or our group brought a

> new quality issue, he took it to the QM [quality management] meetings. And eventually, the health care higher ups decided to listen to us, that there was definitely a quality issue. And I think, between the techs and the sonographers, it was more of a, the sonographers were taking offense, and we, our department, could have handled it better, as not saying, 'well, you know, you suck!' You're at your jobs because they don't. They were not trained properly, and I think that if the, even if the two department heads, not even the physicians, with the two department, the two head technologists could talk to each other in a more constructive manner, it probably could have been dealt with a little bit easier too.

How many facilities struggled with the same issues as S6, and how many patients were unaware of these types of conflicts which could impact their safety? Were other departments engaged in these interprofessional conflicts aware of the systemic impact related to patient safety and did they take action/s to change it as S6 did, or were they aware of the issues but powerless to stop them? The awareness of such a situation was known as "professional dissonance" and referred to a crisis usually experienced by primary care physicians whose personal values were not aligned with the values of their employer/institution (Agarwal et al., 2020). Professional dissonance is discussed further in Chapter 5.

Patient safety was also mentioned by S4, a radiology technologist with ten years of experience specializing in both CT [computed tomography] and PET [positron emission tomography] scans performed at multiple facilities:

> I would say commonly one of the main conflicts that we have is just like incorrect orders. So, doctors will put in orders, for instance, with a CT scan with contrast.

> Well, there are certain criteria that a patient has to meet to qualify to have the contrast, kidney function, allergies, and whatnot, and there are protocols set in place, especially since we are an outpatient facility, that have to be followed, and a lot of doctors don't like to follow like, for instance, an allergy patient. We don't have a code team readily available. We have a code cart, but we don't have that hospital access, so we have to kind of really be careful on how we perform scans if the patient is allergic to iodine, and some doctors don't want to follow those rules, even though they're set in place for a reason.

Given S4 worked at multiple facilities performing PET/CT scans in a mobile trailer, the importance of having emergency plans and contingencies in place was critical for patient safety. If none of the resources were available to deal with an allergic reaction, she and her coworkers would have to rely on calling 911 and engaging emergency services to get the care the patient urgently needed. I asked her how often these types of conflicts happen, and her response was concerning:

> I would say not like on a weekly basis, but yeah, and difference in protocols, so, for instance, on the mobile unit, we don't do patients that are allergic because you're on a mobile unit, it's a very tight quarters, you know? Emergent situations are not conducive to the space, so we try not to do any allergy patients on a mobile unit. With that being said, there are sometimes that doctors feel like, 'well, it's not a very bad allergy, so you can do it.' No, we can't. So, it's going back and forth, we have to go up to upper management, upper management sometimes backs us, sometimes it's like 'well, the doctor says they want it done, and they are insistent.' So, then it's a matter of 'okay,' so you do what you're told to do.

Her response was confusing, as it made me consider several questions related to the larger hospital system and health care: Whom do medical imaging professionals serve? Are they serving the hospitals, physicians, or the patients who trust them with their medical care? Serving all three seemed extremely difficult to do, considering the goals of each may not be compatible ethically or financially. S4 referred to protocols as "SOPs" which she explained stood for standard operating procedures. In medical imaging, every modality must adhere to the "standard of care," a legal "benchmark" (Torrey, 2020) for conducting patient care that hospitals expect to be carried out as well as the organizations and States who issued medical imaging credentials/licenses (ARDMS, 2022; ARRT, 2022). While these protocols, standards of care, and SOPs existed to safeguard patients, they may not be followed by medical imaging professionals, the hospitals employing those professionals, or the physicians ordering the exams that kept the revenue flowing. How were medical imaging professionals expected to safeguard patient care and perform their jobs to the best of their abilities when physicians and hospitals delegate—or even cede—responsibility for actions that enable interprofessional conflict? S4 was frustrated with her situation, and I could tell her frustration was not just about her role and responsibilities in clarifying and fixing physician orders, she was truly concerned for the patients:

> It's definitely when you have a patient that you know is allergic, and you're going to inject them anyways, or for instance, another situation kidney function. When you know you, we have certain levels that your kidneys have to be functioning because contrast dye is filtered through your kidneys. So, when a doctor says,

> "oh, it's okay," but you know that that patient's kidney function is lower, you really have to evaluate how you're going to do this without hurting your patient. And yeah, following your job duties, like there's, I don't know, like, for instance, for certain scans, we give a certain amount of contrast. Well, if I know the patient has a decreased kidney function, I have to figure out a way to give them less, but still get a good scan.

She reflected that her interprofessional conflict with physicians was based on miscommunication: "But I feel like, if you are ordering a test that has to have certain criteria to be performed, like, for instance, the allergy, you should look at your patient's allergy before you order a test." Why would a physician not look up a patient's allergy before ordering a test? Was it a lack of time for the physician, or a lack of concern for the patient? This could also be related to professional dissonance as physicians felt they spent too much time performing administrative tasks (Agarwal et al., 2020).

S9, a traveling vascular sonographer with eleven years of experience in multiple hospitals briefly described her experience with physicians who asked for tests that patients ended up refusing to have performed:

> As a travel tech I [sic] been in conflict with doctors when the patient refused testing and the doctor told me the patient does not have the right to refuse testing. I do not do testing on patients that say 'no' and push my hand away.

I had needed her to clarify this written statement as it initially did not include the "not" portion causing me confusion. Her response:

> Yes. I meant the patient refused testing. I contacted the doctor, and he told me the patient does not have the right to refuse and I should call him so they can come

> down to give the patient pain meds. We have no time to wait for that. I was alone and I was not going to wait. I told him I will try later but I have other patients. Some doctors think we just sit around to do their patient. It was ridiculous. Patient care is important. We have to do what is right for the patient.

Patients have the right to refuse medical care per the patient bill of rights ratified into law under PPACA in 2010 (Centers for Medicare & Medicaid Services, 2023). Prior to that legislation, patients had the right to refuse care under the gamut of informed consent. S9 described her most common conflicts resulted from "the type of testing being ordered or if they just had testing and being [sic] advocate for the patient." While it was a part of the job responsibilities of vascular sonographers to check the orders for tests to make sure patients were getting the correct test performed for the correct reason (Society for Vascular Ultrasound, 2022), the frequency of this activity likely detracted from the time spent scanning patients. S9 described her actions using the phrase "advocate for the patient" implying she was speaking on behalf of her patient (Merriam-Webster, 2023), presumably defending their right to refuse exams (Centers for Medicare & Medicaid Services, 2023) and not to be exploited if the patient had already had the testing performed. Why was this necessary at all for a medical imaging professional to check both physician orders and their insistence on performing actions against the patient's wishes? Were physicians and nurses the primary advocates for patient rights and safety under their respective scopes of practice, and if not, what was happening within those groups of professionals where S9 would need to advocate for her patients instead of them?

As a traveling vascular sonographer, S9 compared her job duties and expectations to full-time staff: “Working full time you have a lot more stress to perform your job in a certain way. Your job performance can effect [sic] our job security. With travel you know it is short term and less stressful.” Did her statement imply the full-time staff she worked with spent more time than her advocating for patients? It was also not clear what she meant by “job performance” here as the metrics used to assess it were unknown; presumably, it meant that sonographers were assessed by how many tests they performed per day by hours worked in a shift. This environment likely penalized time not spent scanning patients, and so “patient advocacy” as S9 called it would not be viewed favorably by those observing the revenue stream. While S9 and her colleagues were engaging in professional behavior expected of vascular sonographers, management with no connection to patient care activities could view this differently, based on different priorities. Was this another example of professional dissonance (Agarwal et al., 2020)?

S7, a cardiac sonographer with twenty years of experience performing adult echocardiograms offered an interesting take on the interprofessional conflicts involving nurses and physicians:

> You know, you've got multiple doctors, one nurse, and you know you've got these multiple patients that the same nurses assigned to. And you've got orders being barked across the board for different patients, one nurse, and sometimes they mix things up. Then they're responsible for either calling, putting orders in on behalf of the doctor, you know verbal orders, these kind of things putting into the EMR which all their questions may arise and, say for example, they need an imaging test and determine ‘oh, well, you know, let's go either CT, MR, ultrasound.’ Is

> there hardware? Maybe the patient is unstable, or maybe they weigh too much, or we need contrast. And now the nurse has the, based on whatever that reason, reach back up the doctor, go back and forth, and you know this goes on for hours while they're giving meds, taking more phone calls, and patient's family questions, patient questions, you know? That's, that group I think is always under the gun for problems.

If his reflections were accurate, this suggested a metaphoric game of telephone taking place where orders and instructions got lost in translation over longer chains of communication. The variable in his statement that would impact medical imaging professionals such as himself was time, for it was likely wasted by nurses and physicians deciding which tests to order and what variables to consider, such as utilizing imaging contrast. This offered a possible explanation of how medical imaging exams could be erroneously ordered, and how issues such as patient allergies as well as other special concerns could be missed. Patient allergies and other safety issues were known by the nurses and physicians, but this volume of information both professions were required to juggle could be overwhelming. Too many patients and too few staff could have been a contributing factor here, but it was also likely another manifestation of professional dissonance (Agarwal et al., 2020). Combined with their stress of juggling multiple patients and tasks associated with delivering patient care, S7 felt that nurses were involved the most in interprofessional conflicts:

> Because they're, you know, from my opinion of it, they are typically pulled in multiple ways. You know, they're pulled at the patient's needs. They're pulled at the physician's request. They're pulled at the testing, imaging, etc. that's required,

> any of the ancillary services. So, I've seen them getting the most issues, and you know, variation of that for that reason, I think.

Juggling too many tasks was one issue, but what if the interprofessional conflict was related to individuals either not doing their jobs or doing their jobs so poorly that medical imaging professionals had to compensate for it? This was what S8 described to me based on her sixteen years performing both X-Rays and CT in multiple small hospitals:

> Others know what they are supposed to do, but some get lazy and some are just busy and assume I will do it. One I deal with every shift is nurses not dressing the patients. When the patient is brought back to their room, they are supposed to be instructed to change into a gown and remove all jewelry. They aren't. Most of the time I have to do it and wait for them to change, which delays patient care for them and everyone else on my list. Another one is crappy IV's. I inject contrast into these and I have found some nurses just half ass screw the extension onto the hub and then cover it with a Tegaderm. Well, I use a power injector and it will leak or blow the whole IV. Then I have to start a new IV. Again, delaying care for everyone.

Time was also important to S8 as well as to others I had interviewed, and in the realm of medical imaging procedures time limits existed for the sake of patient scheduling and presumably for billing of services rendered (Rice, 2021). I did not have the chance to ask S8 how much time was given to perform her exams, but her tone suggested frustration with both management and with her coworkers over their wasting of her time. For S8, time was a part of her territory, and when her tests were delayed, this

likely impacted her job performance in the eyes of management; in other words, she would be blamed for these delays that were not her fault. She expressed empathy towards managers, but only to a point:

> Managers are burned out, overworked, stressed and they take it out on us. Asking a question can be met with major snarkiness and attitude. Lazy coworkers irritate everyone and sometimes we hit our limits and have to say something. Incompetence is another one and with the short staffing, they just let everything go. Complaints have been made, and it does not matter. It's a body to fill a shift, and that is all they care about.

It was a disconcerting statement that suggested that managers in a hospital were more concerned with "a body to fill a shift" than their employee's competence to perform tasks. Was this trend widespread, and if so, did it suggest a larger issue with hospital staffing? The perception of needing "bodies to fill shifts" by dedicated employees was also likely demoralizing as management dehumanized their staff. Demoralization was explored in the fourth experiential theme as multiple interviewees described reactions to conflict consistent with a loss of spirit for working in the hospital.

The territoriality-related interprofessional conflicts described in this experiential theme presented directly via portable exams or indirectly via professional boundary crossings at the departmental and individual level. Interprofessional conflicts emerged from these scenarios which in turn wasted time, sowed role confusion, and jeopardized patient safety. This experiential theme was related to the professional boundaries and hierarchies theme constructed during the literature review conducted in Chapter 2; further discussion is found in Chapter 5.

Professional Abuse

Like territoriality, the theme of professional abuse had two meanings that were considered during interpretation of subject interviews. First, professional abuse referred to unprofessional behaviors that included both verbal and physical abuse exhibited by other professionals towards medical imaging professionals. Verbal abuse included both yelling and cursing/swearing directed towards S3 and S5 in several of their experiences. Physical abuse consistent with alleged assault and battery (Justia.com, 2022) were also described by both S3 and S5; for clarity, these incidents were described in their past, and neither interviewee were under any threat of physical danger. Literature exploring conflict in hospitals referred to the former behaviors as "bullying" or "horizontal violence" (Ceravolo et al., 2012; Goff, 2018; Schlitzkus et al., 2014) where it was prevalent in multiple samples of nurses and physicians; however, that vernacular was not used by any of the interviewees. Some of these unprofessional behaviors were also passive-aggressive in nature, such as the gossiping described under the territoriality theme by S1 as she was accused of being "lazy" for not being on call by a disgruntled colleague.

The second meaning behind professional abuse referred to physicians, nurses, management, and other medical imaging professionals abusing both their status and their work privileges to leverage outcomes beneficial to themselves, or for the supposed benefit of patients. I labeled this sub-theme inappropriate testing given how this type professional abuse involved using the system to compel medical imaging professionals into performing tests that they felt were inappropriately ordered. Like the territoriality theme, individuals who ordered the tests could have made erroneous assumptions about

the job duties of medical imaging professionals and assumed no responsibility for correcting their own mistakes. In essence, they ceded their professional responsibility to accurately order exams to medical imaging professionals who grew frustrated and resentful at having to constantly correct those errors taking up time. Interviewees were biased in their perspective of this phenomenon, but as anecdotal evidence demonstrated a pattern vis à vis inappropriate testing, an objective assessment of the situation was formulated. If the other professionals consistently ordered tests inappropriately, or deliberately failed to error correct when mistakes were pointed out to them, it was assumed their actions were purposeful instead of accidental. The intentions of those ordering the tests were impossible to determine but were not likely malicious in nature.

Unprofessional Behaviors

Unprofessional behaviors in hospitals were broadly defined in conflict antecedent literature in Chapter 2 and recognized as a ubiquitous problem resulting in job-related stress, employee turnover, and potential legal action/s. Conflict antecedent literature in Chapter 2 explored many types of unprofessional behaviors in hospitals, such as bullying and horizontal violence that were prevalent amongst nurses and physicians (Ceravolo et al., 2012; Goff, 2018; Schlitzkus et al., 2014). For the interpretation of my interviews, verbal abuse indicated cursing/swearing, yelling, and comments meant to denigrate or intimidate other professionals; violence adhered to the legal definitions of assault and battery (Justia.com, 2022). Verbal abuse and violence are unprofessional behaviors that should result in disciplinary action taken against the perpetrator, up to and including employment termination; physical acts of violence should also include legal consequences. As these interviews revealed, the lack of consistency in addressing

incidents of verbal abuse and violence by management enabled these behaviors to continue, leading interviewees such as S3 to express disbelief at how the behaviors were tolerated. The challenge in this experiential theme was finding the humanity in those individuals described as engaging in professional abuse and understanding the role of management in addressing these interprofessional conflicts.

Verbal Abuse and Violence. S3 shared multiple anecdotes describing cardiologists behaving unprofessionally during his 40 years of experience working as an interventional radiology tech performing heart catheterizations. Some of his responses described abusive behaviors, including violence exhibited towards radiology techs, nurses, and support staff:

> We had an EKG tech, a very small lady. And we had one of our cardiologists, who I guess they had a disagreement about something, I don't know what actually started that, but he literally grabbed her shoulders and shook her. *Physically* shook her. And so, we, I didn't know about it at the time, but she came over to us because we did work with them pretty often and she told us 'I'm leaving and going to another hospital because, well, so an occurrence happened.' So, we said, 'Well, what happened?' So, she told us that's what happened. And I was like 'you shouldn't leave! You should stand up for this and get this straightened out, don't, don't walk away! This is, no, do not do this!' She's like 'nope, I can't. I can't do it.' Well, the second occurrence was about a month and a half after that, that same, we had a procedure, and we had these big print outs. Well, the printout didn't come out how he wanted. I wasn't the one operating the computer, one of the other techs wasn't there that day. Well, the cardiologist came in and said, you

> know, he was screaming about his printout not right. And I'm a very direct person, and so I said, 'doctor,' by his name, 'so if you can't conduct yourself a little better, I can't help you because I don't know what you're asking for because you're just yelling.' So, he eventually calmed down that [sic] to tell me what he wanted this [sic]. And I said, 'okay, fine.' Well, he reached out to grab my shoulders and I said, 'don't do it!' He was, and he was had his hands literally about 4 or 5 inches from my shoulders and I said, 'you better put your hands down!' So, he stood there for a second, and I said, 'you're a cardiologist, you're a doctor, and I'm a technologist, that's cool. But if you touch me, it's man to man.' And he goes 'well, what will you do?' And at that point I mean, we were at such a, it was a high point. Honestly, I just said, 'I'll drop you flat on your ass.'

S3 was a compelling storyteller who took me on an emotional roller coaster with his lived experiences. From this description of this experience that happened in his remote past, I could tell from his tone of voice that the memory of this event still astounded him. Coming from a military background where conflict resolution was learned through frequent experiential training, S3 was amazed how doctors unabashedly disrespected their coworkers and bullied them into compliance. He described multiple cardiologists that he worked with who behaved unprofessionally, even describing how hospital management addressed their behaviors:

> But I will tell you something about that group of cardiologists. I think I was there about 2 years, and they did not get along, between all of them. The hospital administrator brought in a psychologist who specialized in interpersonal relationships between physicians and conflict resolution. He literally diagnosed

> them as a group as dysfunctional. I mean it was, it was the most bizarre thing ever, so from then you can imagine, I mean, there were so many, we would see cardiologists standing in the hallway screaming at each other.

S3 reflected on the behavior of the cardiologists: “You know honestly, I just feel like they were all very, very egocentric.” He also elaborated, “and, all of them were, you know, ‘I’m right and, no you can't tell me I’m wrong, because I know I’m right.’ So, there was a lot of ego, I would say, probably 95% of it was ego.” By “ego” I assumed he was not referring to the psychoanalytic definition, but the commonly used vernacular implying an inflated sense of self-worth and importance (Merriam-Webster, 2023). This example egotistical behavior of physicians was not isolated to what S3 described, but was also mentioned by S5 who offered the following insights:

> A lot of the conflicts I've experienced in the past, some of the doctors for what I found is, for the more mature doctors, they're usually pretty good about everything, and there's not a lot of conflict there. I feel personally I get a lot of respect from them because I've been around a long time, and they like what I do, and so they're usually very respectful. With some of the ones fresh out of fellowship who really don't know what they're doing, their minds haven't relaxed what I feel have relaxed too. Oh, okay, it's like I know something something because I've seen it 6 million times. They've only seen it a 1,000 times. So, they'll try and go ‘well, this is how you need to do the echo.’ Well, that's not what the protocol is, but it's the only way that doctor can see things, so they get kinda [sic] sniffy about things. But I've mostly found that with the younger ones, in the old days the surgeons could get real fussy and snippy and kind of egoish [sic]. What I

> found in the pediatric world, they're not as bad, they're more mellow than the adult world and they don't, they know that we're, they can't do what they do without us, so they're fairly respectful. I find in the adult world you run into a lot of them who just yell, scream, turn your nose up. It used to be a common thing in the old days, but I think, because of lawsuits and HR. The doctors have had to tone things down.

Ego likely played a role in many interpersonal conflicts in the hospital setting due to the presence of a power or status hierarchy placing physicians at or near the top of the decision-making process regarding patient care (Apesoa-Varano, 2013; Nugus et al., 2010). If this hierarchy was disrupted or called into question by individuals with comparable levels of experience, it probably led to egotistical behaviors that reinforced the hierarchy through dominance signaling (Abbott, 1988; de Waal, 2005) such that challenges to their decisions or professional authority were discouraged. In the hospital setting, this conflict driven by ego may be due to an earned status, specifically the credentials of MD or DO, as well as earning the license to practice medicine joining an exclusive group of professionals (Abbott, 1988). S5 made a poignant comment about allied health professionals that warranted inclusion here:

> Because people treated them like gods. And I think nowadays it, most of everybody in allied health is just as smart as they are. They just chose not to go to med school. So, I think everybody's recognizing that and knowing 'you're not God, you're just as fallible as everybody else.'

Gods were historically worshipped and obeyed; humanizing a deity by revealing a weakness took away its power and influence over those who worshipped it. If humans

were demonstrably equal to gods, there would be no further need for them. The younger physicians S5 mentioned demonstrating egotistical behavior suggested an attitude problem that developed during their training by educators, a learned arrogance reinforced by hospital cultures who reinforced their metaphoric divinity.

S3 made a keen observation during his narrative describing a cardiologist he called out for yelling incessantly during a procedure:

> She did finally stop when I called her name, and she looked at me, and I said, "we're doing the same thing here, we're here for the patient, so let's move on." And she was shocked that anybody said anything to her because I guess, prior to, most of these cardiologists would yell and scream, and through a fit, and everybody just go "Yessir, yessir, yessir, yes sir, yes ma'am" until they went away.

By ignoring this behavior and going along with it in passive acceptance, the yelling and cursing behaviors were reinforced; this conditioned the physicians to continue these unprofessional behaviors, like rewarding a child with candy after they threw a tantrum in a store. After all, there was nothing mortals could do when gods were angry but watch and accept it was somehow their fault. When I asked if there could be any other factors causing them to behave in such a manner, S3 offered:

> I think it still goes kind of around ego. But I think somewhere along the line they developed a process, if they yell and scream and threw a fit people would do stuff right away. Maybe they got a faster response. I mean you're not going to get as thorough of a response because nobody is going to do the extra, they're going to do the minimum to get you off their back basically. I think it's still, I think it

> depended, it was all around ego, and that's how they developed their methodology getting things done quickly.

When the cardiologists were called out by S3 for their unprofessional, abusive behaviors, they were stunned that any person had the audacity to speak to them in such a way, and yet were suddenly made aware of their actions and how they negatively affected those around them:

> I guess you could say they started respecting us for standing up for ourselves, so we had a much better relationship with them after that, but we would see their relation, their interaction with other people, and they usually weren't very nice.

It seemed that standing up to bullies and their behavior worked out for S3, but was he an outlier given his military background and assertive nature? S5 had almost the same number of years working in a clinical environment as S3, but her preferences in dealing with egotistical physicians was different: "But again, that out comes with experience of having worked around doctors like that for years, and just knowing, it's just easier to walk away from it." She had learned to walk away as her preferred response in dealing with conflicts with physicians, and I wondered if medical specialties, such as cardiology or surgery, presented a unique influence on interprofessional conflict, as in the more specialized the physician, the more likely they would engage in conflict?

S5 suggested environmental factors influenced the egos of physicians, such as the differences between treating adult patients and pediatric patients. Specialization may have been a common factor connecting what S3 and S5 described as the role expectations in some physicians expanded their egos in an unhealthy—potentially violent—manner.

S5 described a horrifying incident that occurred to her during an event where one of her pediatric patients coded:

> I even had, we were coding a baby one day, and baby basically was asystole, and the surgeon was extremely egotistical and rude to everybody. He would be yelling at the attendings in the ICU. I'm like, yeah, that's not how you make friends, but okay. And so they stop CPR, so the heart was just sitting there, it wasn't pumping. Resumed CPR and I took my hand off of it, maybe just to, it was a baby, there's no room for two people there, so I took my hand off the chest so they could continue CPR, and he says, 'I didn't *say* stop the echo!' And he grabbed my hand and put it back on the chest, (laughs) and I just stood there and looked at him, and of course you can't see anything, because the heart's bumping around, the whole chest is bouncing around, so the echo all you see is a little heart flipping in and out of the picture. And I looked at him, 'okay you, you can stop.' But my thought was, 'that's the first time you're gonna [sic] do that. Try that again, you're gonna [sic] lose your surgical hands!'

Why did two physicians in two separate anecdotes shared by S3 and S5 feel they were allowed to put their hands—or attempt to put their hands—on medical imaging professionals? If such behavior was unacceptable outside of the hospital and widely regarded as criminal considering the definitions of assault and battery (Justia.com, 2022), why was it perceived as acceptable? Did a magical field exist whereby crossing into the hospital granted physicians permission to commit assault and/or battery? Despite my efforts at interpreting these events, I'm only able to assert that these behaviors may go beyond "ego" (Merriam-Webster, 2023); these violent outbursts by physicians were

similar to the many cases of “road rage” that were documented in the U.S. (The Zebra, 2023). Was this environment-related stress? It may not be possible to understand these behaviors without extensive research into psychological profiles of individual physicians, so this is conjecture. Regardless of interpretation, these expressions of violence are not acceptable and should never be tolerated in the hospital environment, regardless of stressful events or the status of a physician.

Gossip. Gossip appeared in conflict antecedent literature under the wider phenomenon of bullying and horizontal violence, describing intraprofessional conflicts when nurses engaged in those passive-aggressive behaviors (Ceravolo et al., 2012; Goff, 2018; Schlitzkus et al., 2014). S2 described an interprofessional example of gossip when she described a younger group of vascular technologists talking behind the back of their department scheduler, an older clerical worker:

> What’s really interesting is the age differences. The generation, the gen z, you know, you name it, baby boomers, gen z, whatever. That’s a big conflict, I think, where you can have that interpersonal conflict because just this past week, we have a scheduler and she's, you know, scheduling patients all day, answering the phone. And a lot of our younger sonographers who are like in their 20s and 30s, boy, they really slam her. They give her no credit. And they just talk so bad about her. And it's not her. It's them. You know she's just doing her job. But this younger generation, you know, they really can say a lot and get away with it, and not be reprimanded or held accountable.

When I asked her to reflect on how that conflict between the younger sonographers and the scheduler made her feel, S2 replied: “I cringe.” It was not that she

was afraid of her coworkers, but rather expressing her disgust towards their behavior. S2 further reflected, “They're very professional in front of her, and they talk professional [sic] in front of her. I think it's just more of that they're in a different room. She's not there, and they're kind of like venting to each other” implying the separation of space created not only physical separation, but emotional detachment as well that dehumanized the scheduler. But why did they feel the need to vent amongst themselves? Given how S2 witnessed this behavior it was obviously not as private as intended, nor was it helpful in addressing why they felt the necessity to vent. According to S2 the closed-door gossip was about a perceived failure to communicate about their job duties/expectations:

> She will make a comment that, you know, they get mad at her because she added something on, or that she didn't get a hold of them, or there was an add on, and she didn't, you know, they come back down to the department, and she tells them there's a add on, and they're like, ‘Why didn't you tell me earlier? Where did some of the techs go?’ There are so many techs that some techs go bedside and do their studies bedside and they don't want to be told that there's more to do. They're going to be coming back down to the department, and they'll find out there's more to do. They already have their long list of patients to do. So, but, others will complain that ‘why didn't you tell me, I was already on that floor, you know?’ So, either way…it's just the nature of the beast, I guess.

The younger vascular sonographers took it personally when they found out from the scheduler that they had more work to do after they had completed their queues and became frustrated, projecting their emotions onto the scheduler. S2 described their behavior, “They’re in one big room, their tech office, talking about her. What, you know,

‘she does this, she does that’ and it’s kind of like she's the flavor of the month, you know?” If by flavor of the month she meant “scapegoat” (Cayley, 2019), her interpretation warranted further interpretation. Rather than roll with the unexpected changes associated with extra work, the younger vascular sonographers vented their frustration in a manner which over time became abusive in nature. They needed a villain to rally against and projected their feelings onto the scheduler who was conveniently available to unwittingly fit that role. Was the phenomenon of “scapegoating” (Cayley, 2019) the impetus for other interprofessional conflicts involving gossip and similar backbiting behaviors?

Gossip was also described by S1 involving one former coworker whom she identified as being jealous of her not being on call. According to S1, this individual’s proclivity for gossip had reached many ears and influenced how an entire department handled patient care:

> We do a lot of venous but then that’s part of the problem, they had to take over the venous work after our department closed for people who needed it done through the ER. So, they were asking me and I was teaching them how to, hints and tricks on how to do it and they were like, you know, and by this time my department had grown, I had two people work with me, and they were like ‘well, you guys never do the ER!’ Me and the others were like ‘yeah we do.’ ‘Well, [redacted name] said you guys refuse to do any of the ER patients.’ And I said ‘we do the ER patients when we’re here! She’ll call us all the time and someone will do it,’ but she was telling us that we just sat over in our department and did nothing and I finally just turned to the girl and said ‘listen, you work for the same

> company I do, I mean when I started it was just me, and now there's three of us who work here, do you really think that the hospital would pay two additional full time employees if the if the if I just sat here all day did not work?' And then like it kind of dawned on her.

This example demonstrated what happened when gossip was allowed to go unchecked and how a personal grievance could spiral into a toxic interprofessional conflict affecting patient care delivery. Patient care was potentially influenced by this conflict in how one department claimed another department refused to scan patients, setting a false precedent wherein some doctors may not have utilized available services for patient care. I wondered if any patients were harmed by that situation, and if other care was delayed due to such vindictive gossip described by S1? I also wondered if other false statements or erroneous assumptions made between departments led to incorrect orders for tests being placed, leading to expensive, inappropriate tests performed?

Inappropriate Testing

It was difficult to sub-categorize the theme of inappropriate testing as most of the experiences shared by interviewees overlapped in terms of the exams they were ordered to perform. The experiences described that constituted inappropriate testing involved an excessive number of tests being ordered as well as tests that were ordered incorrectly. Incorrectly ordered tests included when tests were erroneously ordered as stat, meaning the test was considered urgent when compared to routine tests. Several interviewees indicated that several of their tests had been ordered incorrectly as both the wrong type of exam needed to diagnose the patient as well as erroneously ordered as a stat exam. On top of those errors, interviewees were also called in to perform those erroneous studies,

often discovering these errors during off hours with no managerial support to immediately address the misuse of medical imaging services. In those situations, the professional expectations of those medical imaging professionals were unexpectedly expanded to include responsibilities that allegedly wasted their time as well as the patient's time.

Incorrect Orders. Multiple interviewees indicated they were not only performing an excessive number of medical imaging exams, but that many of those exams were ordered incorrectly. Incorrect orders wasted the time of medical imaging professionals who likely had to correct those errors before performing their duties hindering the testing of patients in urgent need; this was regarded as abusive to both the medical imaging professionals who felt other health care professionals, such as nurses, saw them as "button pushers" as S3 quipped, referring to an insult used against medical imaging professionals. S1 also described her perception of how sonographers were viewed by nurses:

> And a lot of it again is just a lack of education on the part of other health providers to know what other people do. Like, nursing typically thinks of us, that you know, we don't have an education. They've gone to school, I mean they think we can go to school in a year and we just set a probe down to take some pictures and that our job is easy.

It was impossible to ascertain if nurses and other health care professionals felt sonographers and other medical imaging professionals were uneducated; the perception that S1 felt as well as others suggested the lack of understanding between these professions created tension as previously discussed in the territoriality theme. Were

incorrect orders an indication that those ordering the exams felt superior to those performing the exams, or was this an erroneous assumption? It seemed like the ability to order medical imaging exams granted a temporary sense of power/control over their environment while elevating personal status on the hospital hierarchy.

Most interviewees had at least a decade of work experience (see Table 1) indicating their proficiency in their craft as well as the wisdom to understand the process of medical imaging. Their levels of experience led to frustration when they experienced incorrect orders regularly interrupting their duties, or workflow, if their job functions were labeled from a systems perspective. S5 described her experiences with incorrect echo orders, with obvious frustration:

> Some of the reasons they're doing an echo, it's like 'really?' Like today, there was one with severe anemia and they were tachycardic. Well, when you're severely anemic you're tachycardic because your body is trying to feed everything oxygen, and the body is going, 'I don't have enough oxygen over here!' So, the heart rate goes up to try and meet the body demands. And do I think that's a reason to do an echo? No, it's really not. Or, the patient has a fever, fevers cause tachycardia, they're all normal. I know they're going to be normal because they have no other symptoms, their EKG is normal, their chest X-ray's normal, they don't, you know, have other things going on with them. So, we all know it's going to be normal. That kind of bothers me because sometimes I think they're just doing stuff for money.

While medical imaging professionals are not legally allowed to diagnose patient conditions, they can recognize pathology and draw conclusions based upon what they had

visualized. Physicians relied on medical imaging professionals as their metaphoric eyes to assist them in making the correct diagnosis; while physicians took the credit for correct diagnoses, they also took the blame in terms of liability. However, without the skills of medical imaging professionals diagnosis would be next to impossible. This presented a legal conundrum in medical imaging as professionals are pushing for the ability to diagnose independently from physicians; this attempted evolution in professionalism (Abbott, 1988) is fiercely contested by those who hold the exclusive right to diagnose.

Inappropriate orders also included stat exams that were not truly stat. S5 gave a long description of such an event in her colorful storytelling ability:

> Some nurses have called and said, ‘what time you can be there?’ ‘Well, you’re tenth on my list.’ ‘Well, they want to discharge the patient.’ I go, ‘the other ten on the list want to be discharged today, too.’ So, those kind of things, and then they'll get a little snippy with you, I'm like, ‘well, your order came in the tenth, you’re last on the list, I'm so sorry about that.’ And you know, I usually I just kind of talk to them, say, ‘well, I’m doing what I can, let me see what I can do.’ I've got to figure out, you know, when you have 10 patients, and you're the only person there, and they all want to be discharged that day, you really do try to get everybody done, but sometimes the nurses get a little bent out of shape when you tell them that ‘well, you’re, it's going to be a few hours.’ I've had nurses sometimes, I've been in the middle of doing a study and the nurse will call, ‘this needs to be done right away!’ ‘Okay, is it stat?’ ‘No, this is routine, yes, but we need it now.’ ‘Okay, well, I’m going to finish the patient I'm doing, and then I’ll be there, it'll be about a half an hour.’ And then I get a call from the doctor, ‘we

> really need you here now!' 'Well, this patient have a change in symptoms?' 'No, we want you here now.' And I know very well that the nurse went to the doctor and said, 'here, you call them.' I said, 'so you're saying I need to stop what I'm doing with the patient I'm in with now and come there for a routine echo?' 'Yes!' 'Okay, I just wanted to get that straight.'

If I had read this without any context provided by S5, I would have assumed this was either a Monty Python skit or something from Saturday Night Live. Unfortunately, this was not as humorous as it sounded when understood in context, for when stats were improperly ordered, it took away time from patients who legitimately required urgent attention. According to S5, her experience described a nurse wanting to discharge a patient. In terms of medical necessity, this was a routine exam that if performed on the day of it being ordered would free up another hospital bed for another patient. In terms of the hospital revenue stream, this exam was probably a stat through the lens of the hospital census and a growing demand for an empty bed to be filled. Pressure was likely being put upon that nurse and physician to get that patient discharged as soon as possible; the means of getting that patient did not matter to management, and this created a moral conundrum that only S5 could see. Accidentally ordering a test as stat was one issue that could be quickly corrected. Deliberately ordering a test as a stat knowing it was not a stat was another issue entirely, and these routine acts of deception were tolerated because it made the system appear more efficient. I wondered how many patients ended up not getting exams that could have saved their lives because a patient for discharge was done before them?

Excessive Testing. The volume of medical imaging exams performed by a hospital was a point of contention between the general and vascular departments described by S6 under the territoriality theme, but what was at the root of that conflict? The interprofessional conflict over testing volume was related to how hospitals remained profitable and earned money through both outpatient and inpatient medical imaging, and in the current fee for service system of hospital billing, the more tests ordered and completed, the more profit for the hospital (Rice, 2021). The higher volume of surgeries and outpatient medical imaging exams being performed was noted as financially beneficial to the hospital system by S1: "Surgeries that's where hospitals make their money. Outpatient procedures make even, are even reimbursed at a higher rate and I think that's because of the, of all the new changes." The changes she was referring to involved insurance reimbursement rates (Lopez, et al., 2020) as well as the reimbursements offered by Medicare to physicians (Clemens & Gottlieb, 2017) and hospitals (Centers for Medicare & Medicaid Services, 2022). S1 explained the process to me, framing it as necessary for the hospital to function as a business relying on both revenue from surgeries and outpatients:

> In essence a hospital is a business, and the bottom line is they have to be at least solvent, you know what I mean? You can't operate a hospital in the red, so when a patient comes in and they're admitted and they provided care on the floor, well yeah, their insurance is paying a portion, but it's not how much it costs, you know? The building costs money, the electricity, the insurance, the taxes that cost money, so does the oxygen that they're receiving, and the food that they get, and the housekeeping. And the housekeeping, I mean housekeeping is a huge part of

> the hospital. We don't make money off of the housekeeping, we don't make money off of the kitchen, you know what I mean? Those are, those are the services that are provided because you need to provide them.

S5 and S8 saw this revenue process differently. S5 applied her lived experiences and used the term "quotas" in describing both the excessive testing she performed throughout her career as well as the appropriateness of the testing:

> There's a lot of times in all my years' experience, oh, the person has got bit by a dog and their hand's swollen, so we need an arterial and a venous. No, you don't. It's swollen because the dog bit them. You know, so that kind of stuff in ordering patterns that you know in the back of your mind it's, they're just trying to meet the quotas. So that, that can bother me sometimes, but they've asked to do it, so I'm just gonna [sic] do it because that's my job. But I know, in fact, you know, with some of them they're just trying to meet a quota. We gotta [sic] do so many procedures and make so much money, or else the upper echelon is going to come down on us. You know, I've seen that happen, especially in doctors' offices that are owned by the hospital.

What did she mean by "quotas" here, and did this imply some kind of pressure to perform a set number of exams to either maintain profitability or for some other reason? Her last sentence suggested a potential conflict of interest whereby physicians employed by the hospital could be under influence to order more exams to maintain their employment status. A physician who did not order exams did not make the hospital money; under that premise, would it be logical to assume the primary customer of the hospital was the physician and not the patient? Whose interests were being served here?

S8 felt strongly about this phenomenon: “I feel that every shift almost with the amount of needless imaging we do. Instead of what is best for the patient, we practice cover your ass medicine, we do what won’t get the doctor sued and it’s disgusting.” All three interviewees were describing the same perception that hospitals ordered too much medical imaging on patients but with different interpretations as to why this was happening: S1 felt it was a natural process, S5 viewed it as meeting quotas, and S8 judged the process as a defensive medical paradigm. If hospitals relied on medical imaging as well as other services such as surgeries to maintain their revenue stream, what happened when staffing was reduced, or if there were delays in care delivery due to communication errors such as incorrectly ordering tests? Would this increase the overall pressure medical imaging professionals felt to meet performance expectations and place unfair, if not outright abusive, schedules on them to scan as many patients as possible in the shortest amount of time?

S9, a traveling vascular sonographer with eleven years of experience working in multiple hospitals, viewed the excessive number of exams being performed as a contributing factor to making interprofessional conflict at her workplace worse: “I believe the availability of ultrasound testing and the amount we can do in a shift. I see a lot of burn out because it has become the quantity not quality sometimes.” I was not sure what she meant by “the availability of ultrasound testing” in her statement and assumed she meant convenience given ultrasound is considered non-invasive as a medical imaging exam (FDA, 2020). She repeated the same verbiage when describing the interprofessional conflict she experienced with the physicians who interpreted exams: “I think those that do the testing and those that interpret are in conflict. I also believe that sometimes

ultrasound does [sic] get the respect it deserved as being as important as other testing and that causes conflict on testing availability." She meant "does not get the respect" in that statement indicating that ultrasound was not viewed favorably by physicians as other imaging modalities. This was confusing to me because if ultrasound was neither respected nor favorable, why were so many ultrasounds being ordered? Did she mean the quantity of the ultrasounds being ordered indicated a lack of respect for ultrasound professionals whom they regarded as lesser health care professionals?

Her comment about quantity over quality was opposite to what S2 stated when I had expressed astonishment at the size of her vascular lab and how many exams they performed: "However, I want to really clearly say that it's about quality, not quantity. We're not telling the techs, you have to go do 15 patients a day. They're doing 6.8 patients a day." The emphasis of quality medical imaging over the quantity of medical exams mentioned by S2 was reassuring to hear, as it demonstrated a commitment to patient care and to those vascular sonographers performing difficult exams. However, this commitment to quality over quantity unfortunately manifested interprofessional conflict between her vascular lab and the general ultrasound department:

> There's also, I know it's not conflict, but I know sometimes the general sonographers, they don't want to do certain studies, like, if we we've seen the study in vascular. They don't want to scan the patient because we already saw the patient, and they think that we should scan the patient even though they're at the hospital 24 hours a day, and they think that they refuse to, you know, scan our patients if we've already seen them. They refuse to do liver Doppler studies. Their

image quality isn't as good as ours, but we really focus in on quality. We're kind of crazy about it.

This was also another case of territoriality demonstrated between the vascular lab and general ultrasound department over claiming patients, or based on her description, refusing to scan patients. Was this a reaction to having too many patients already, or a way to push work they did not want to do onto others? Performing too many studies was bad for sonographers and led to burnout according to S9, and S2 emphasized repeatedly that "quality" was more important than the number of studies performed, so it seemed they were both on the same page in terms of protecting sonographers from excessive quantity of ultrasounds. Burnout was an interesting word choice by S9, and it came up in other interviews often to describe the situations management and nurses faced. None of the interviewees applied the term to themselves despite describing feelings and behaviors that were consistent with the concept. This is further discussed in the demoralization experiential theme and in Chapter 5.

Inappropriate Call. Being on call was a job expectation shared by most of the interviewees when they performed after-hours medical imaging on patients requiring urgent care. According to S1, "The sonography field often has a very high turnover rate because the job is demanding and there is, and some people take an excessive amount of call, and the leadership is lacking." What constituted excessive call was cause for speculation and I presumed meant being called in to the hospital multiple times for spurious reasons. Her comment about leadership being "lacking" suggested the key to mitigating excessive or inappropriate call rested with management of the hospital. If management failed to address the issue of inappropriate call, it likely impacted those who

were responsible for being called in by adding stress. S1 described her feelings regarding call and I could tell she was frustrated from her years of experience dealing with it, using the word “abused” which inspired the experiential theme I employed:

> So, like if it’s a gall bladder and the patient, so the patient comes into the ER they’re having abdominal pain because they just ate and then they call someone in to come in and do that exam because the patient having stomach pain, and it’s really not, you know it’s really not an appropriate use of the test because that patient needs to be NPO’d to make sure you’re not going to get a false positive, but they do that or they’ll get called in for like they’ll have a CT and the CT will say that the patient has a cyst on their kidney and that they should follow up with ultrasound, meaning they should send the kids home because while it is an abnormal finding, it’s a benign abnormal finding. I mean that is something that you can follow up with the next week, the next day, the next month, whatever it is, it’s not something that needs, it’s not a stat, you know? I mean, there’s no torsion, there’s no dissection, there’s no miscarriage, there’s you know, I mean there’s nothing. So, in hospitals where they get abused in that way, there is far more jealousy of those people who don’t take the call because, I mean think about it, if you’re gonna [sic] be on call for twelve hours and they’re calling you in for stuff that isn’t really a true emergency and you’re not sleeping and you’re driving back and forth between your house and the hospital repeatedly for these things that aren’t necessary, I mean are they tests that are going to be done eventually? Yes, but are they tests that we need to be done at two in the morning when you have to be at work at eight? Probably not.

S5 described an experience of being on call with evidence of frustration in her tone of voice at having to deal with the following situation:

> I was on call not too long ago and it was six o clock at night, I'd already been there for ten hours, and there was a routine and it was ordered late in the afternoon, I said, oh and a patient that wasn't having any symptoms of anything. The ENT [ear, nose, and throat] had ordered an echo because the kid had big tonsils and was having obstructive sleep apnea. He was a spastic quad, way developmental delay, they weren't taking to the surgery right away, and I asked, 'can we do this first thing tomorrow morning?' And they're 'well, we need answers.' And I'm going, 'okay, is he going to surgery tonight? Is he having issues?' 'No.' 'Well, we can get you the answers, and you know, in the morning.' 'Well, the sooner we know, the better we know.' And I'm like, 'okay, that doesn't answer my question. Can we put it off until tomorrow, or do you need me here at seven o clock at night to do it?' 'Well, I'll let you talk to the doctor,' and the doctor immediately got on, and I said almost the same exact word she said, and I'm like thinking, are you guys sitting next to each other because this is real suspicious. So as a result, the cardiologist called, and I said, 'well, I'm doing the last echo.' And they're like, 'why are you still there? That can wait till tomorrow!' And I go 'the doctor said they wanted it today.' And the cardiologist is 'well, I'm not reading it today because it's a routine.' I went, 'you can read it next month, I don't care right now, I'm just gonna [sic] go get it done, and if they never get results that's fine with me because of the whole attitude.' And did the nurse come and help me as he was a spastic quad? So, it was kind of all over the place, so it

> was kind of difficult to get him done, and the nurse didn't come in and help me. I said, 'I need some help.' 'Oh, well, it's change of shift, I gotta [sic] go!' And I'm like, 'got it' (laughs)!

S5 was ordered to complete an exam that was not truly "stat" and despite her professional objections based on years of experience she was obligated by hospital policy to complete it without the nurse or ordering physician knowing the cardiologist who would interpret that echocardiogram would end up reading it the following day. Was this an example of a doctor and nurse trying to get around hospital policy by forcing S5 to do a test and give them "answers" even though they knew she couldn't diagnose? It was interesting how they made S5 do the test, but did not call the cardiologist for a consultation, suggesting they knew their actions were incorrect. Her description of how annoyed the cardiologist reacted when S5 informed him of an echo to interpret suggested a disconnect in hospital policy pertaining to ordering stat examinations as well as a failure to communicate.

The previous experience described by S5 touched upon how cardiologists were responsible for legally interpreting echocardiograms and rendering a diagnosis. S7, another echocardiographer, described his annoyance with being called in, particularly when he was expected to "wake up" a cardiologist to interpret the studies he performed:

> It was really annoying, because, you know, you're being called in the middle of the night, or you know, three o'clock in the morning, that never feels good when you go in, and you know they don't have their site prepared. And one of the problems we had, if you're going for a stat study, regardless of if it's a complete normal study for you to do your due diligence. Now you have got to be the bad

> guy, find someone who is on call, a cardiologist, to call them, and wake them up to let them know, 'hey, guess what happened to me? So now I have this study here that you need to read or acknowledge that I have called.' And you're, you know, some kind of trail to show you have informed that person, documentation wise, you know?

His description of turning into a "bad guy" was interesting in how he perceived his role under those circumstances; it also demonstrated an issue in the professional hierarchy as he was asking a physician to do work during their off hours. Presumably waking up a physician and explaining they had to come into the hospital did not go over well, particularly if the indications for why the test S7 performed were spurious. The physician in question could have become hostile towards S7, or even refused to do their job, creating more stress for S7 to deal with beyond his normal scope of practice. His concern with doing his "due diligence" suggested the protocol or SOP used by his employer likely held professional consequences should he fail to act under those circumstances. I wondered if another sonographer in this situation with less experience and an aversion to conflict would follow this protocol and risk being scolded by an angry physician.

S7 also described his experiences with being called in and expected to interpret critical findings on the spot when it was not appropriate:

> And it's usually based on discussion of, you know, one of the things we suffer with, more so with echo than *any* other ultrasound, particularly in the pediatric world, is they look to us for reporting. And, they wouldn't ask a vascular tech or anything really as much as they do us because usually the nature is a little bit

> more critical from a cardiac standpoint. So, you know we'd get called in and for example, a non-cardiac person, it could be another specialty, call you in, "hey, this patient is having hypotension, and it's got to be cardiac." You get there, they have not spoken to a cardiologist or anything, so when you get there, they're looking to you to give them the interpretation of the study. So, when you, you know, walk them back and have them adhere to guidelines, they, you know, that that creates problems. That was probably the most common thing I ran into. And that came from physicians and nurses.

This was disturbing as I had assumed doctors and nurses knew that medical imaging professionals were not legally allowed to interpret exams and that responsibility rested with the interpreting physicians, specifically radiologists (Cleveland Clinic, 2022), cardiologists (Cleveland Clinic, 2021), and vascular surgeons (Cleveland Clinic, 2022). Why did some physicians and nurses try to circumvent this hospital policy to get S7 to give them test results? The ethical implications of their attempted actions were startling and hopefully not widespread.

The issues related to being called inappropriately or arguing about the appropriateness of tests were not limited to physicians. S9 described interprofessional conflict that involved her being called in inappropriately by both Nurse Practitioners (NPs) and Physician Assistants (PAs):

> I have been in altercations with NP and PA on what type of tests to perform and also when I was on call and they call [sic] me in for varies [sic] testing and I explained to them we do not do those tests for on call. I also been called in for in patients and we were only supposed to be on call for the ER.

I hoped she was being hyperbolic when using “altercations” describing her interactions with those professionals; however, based on her previous narrative of how strongly she advocated for those patients who refused exams, it seemed plausible. Were these issues related to a lack of education in how to properly order examinations, or the roles of those medical imaging professionals who performed them? Or, was this an example of poor communication between health care professionals who seemed unable—or unwilling—to have discussions regarding patient care? These repeated actions, particularly after those ordering the tests were educated about properly using the call-in system, were interpreted as deliberately abusive towards those medical imaging professionals, particularly if attempts to correct those errors were either dismissed or delayed.

Professional abuse revealed by interviewees fit into several experiential sub-themes that were interpreted as relevant to interprofessional conflict. This experiential theme fits into the conflict antecedents theme covered extensively in chapter 2; further analysis of this was covered in Chapter 5. Each sub-theme was closely related to the others and often the feelings of frustration shared by interviewees overlapped in how they felt verbally abused, described attempted or actual physical abuse, and felt frustration over inappropriate testing. Inappropriate testing was broken into several sub-themes as it involved how interviewees experienced an excessive amount of testing, incorrect orders, and excessive call for spurious reasons. Professional abuse sounded like hyperbole here, but the effects on the interviewees, which included increased amounts of stress and their strong desires to quit their jobs were not hyperbolic. Hospitals that did not address these issues were sending a message to employees that their concerns were not a priority and

that they were replaceable “bodies to fill shifts” as S8 described. And this was interpreted as abusive towards the greatest asset hospitals possessed: their employees.

Systemic Disruptions

Several interviewees revealed interprofessional conflicts with widespread, systemic repercussions within their hospital environments. The use of the word systemic describing these disruptive actions coincided with a macro-level interpretation of events described by interviewees who observed the widespread effects on other hospital employees. The most obvious example of systemic disruption involved the computer systems known as EMR—an acronym for electronic medical records—to engage in any sort of patient interaction, from direct care to billing (Alder-Milstein, et al., 2017; Polner & Main, 2023). For an American tertiary care hospital, the EMR is now for all intents and purposes the system upon which all care depends; any disruptions to this system are potentially catastrophic. Two of the sub-themes interpreted from the interviews were disheartening, and it was apparent these conflicts led to frustration in interviewees such as S10 who felt like they were no longer “valued” or “respected” after years of service.

EMR

EMR is sometimes referred to as EHR meaning electronic health records; both acronyms represent the same digital means of processing, accessing, and storing patient medical records in hospitals (Polner & Main, 2023) . The EMR system is vital to modern hospital functionality affecting every level of patient care; physicians, nurses, and medical imaging professionals are all required to utilize the EMR to enter and carry out orders to conduct patient care in the majority, if not all, hospitals (Alder-Milstein et al., 2017). S7 described when EMR is first implemented, or upgraded from an older obsolete

version, it can create massive disruptions in the hospital workflow, causing frustration in the wake of widespread resistance to change.

> It's like going from you being in windows for 5 years, and now you have to use a Mac. Right? So, that type of thing there that creates, you know, the problem. User acceptance of the change, new clicks where to navigate to resources, to a system with getting orders in, medications, documentation, printing of things, review of, you know, new tabs. All these things. Usually, the entire user interface is different, it's not the same, so it's like a windows box or a mac box. That's the usual difference ,which is significant.

His analogy of the changes associated with adapting to a new EMR was relatable to individuals who understood the differences between an Android operating system on their phone versus the Apple iOS. The systems were different even though they performed the same functions, and not every user to either system liked the interface, hence his use of the phrase "user acceptance." My immediate follow-up question to S7 involved if he noticed any generational differences regarding these changes, assuming older individuals would experience more issues when adopting new EMR, to which he responded: "The younger generation accept the change very, you know, easily. The older generation have a ton of problems with it." He elaborated that the normal time frame of individuals adapting to the new EMR was taking longer for older individuals: "It is having the intended effect much later than it should. The hardship is usually within the first, you know, few months." Adapting to change is expected to be hard temporarily, so is the expectation that older individuals adapt as quickly as younger individuals to EMR a form of age discrimination that is not being addressed in hospitals? Do medical imaging

professionals even have a voice to express their concerns regarding these changes, particularly since their professions rely on the most advanced technology, or is this exclusively determined by management who may not be aware of potential issues until it is too late?

I revisited an interview where EMR came up in a subtle way when S5 described another issue when she first took her current position:

> So, I fortunately had a lot of years of experience in all this stuff, so I kind of knew what to do, but I felt that the onboarding process there was a little difficult because I couldn't get into the PACS system, I could get into the computer system. So, that kind of make things a little difficult. There are still things that pop up, they'll send an email out, and I'm going, 'well, nobody told me.'

The PACS system, or simply PACS, stands for picture archiving and communication system (Strickland, 2000), representing a sub-system integrated with the larger EMR that medical imaging professionals used to upload and access digital medical images. PACS replaced the need for hard copy images from medical imaging exams and the printed reports; by uploading images and those reports digitally, it made access to them easier while minimizing the requirement for finite storage space (Strickland, 2000). Finalized reports that were read by a physician using the PACS were then uploaded to the EMR and made accessible by any individual with access to the EMR; however, individuals who did not perform medical imaging were usually not able to access PACS given it allowed users to delete and alter images. Based on her experience, S5 had to learn how to use both the PACS and EMR systems without guidance from management, causing her frustration. Was it fair to expect that S5 would figure out these systems

without assistance, and was this an example of a potential disruption that may have affected patient care? What if her experience was shared by others who also experienced the same onboarding process? If that were the case, the communication between management and the IT department could generate interprofessional conflict via a poor interconnection within the system (Meadows, 2008).

Staffing Issues

One of the more disturbing revelations from several interviews was the mentioning of hospitals being "short-staffed" or having insufficient patient care ratios. This was mentioned in reference to nurses and the nursing profession by multiple interviewees who noticed issues with care delivery and hospital finances. S1 described how so many nurses were involved in conflict likely resulted from their nationwide shortage:

> I mean I think that nurses are under a lot of pressure, and you've seen it. The whole country is short of nurses. I mean every hospital is reporting major losses because they simply don't have the nurses to fill the capacities that they need to get things done. Like you can't have a surgery if you don't have a nurse to take care of them, you know? Pre op, post op, you know? Maybe the hospital stay, I mean if we have to cut the census, because there isn't enough staffing to go around, I mean, you don't give one nurse twenty patients just because there's only one nurse. You just, you can't have the patients, and that's causing, and not necessarily on the inpatient side because, as you know, or you might know, that no one, no hospital makes money off of in-patient visits, you know what I mean? You do that because it's necessary, but you're really making money off of the

> surgeries and the diagnostic testing and that type of thing. And if you don't have the pre op, or the operating room staff to schedule the surgeries you need, then you aren't making that money.

Her statement supported her previous explanation to me about the volume of tests performed by her hospital and how the typical American hospital generated revenue. What I did not initially consider was how a nursing shortage would have a cascading effect on other hospital services, including medical imaging. Nursing, allied health, and physicians were intertwined in a delicate balance performing duties that kept the hospitals financially sound based on both of her statements. Disruptions such as a reduction in staffing could have systemic consequences that likely affected patient care detrimentally. As much as I had hoped this was not the case for these interviewees, their experiences suggested otherwise, as S5 shared reflected on staffing issues:

> I have seen, especially coming through covid at the hospital, that an ICU ratio of one nurse to 5 patients is not a good idea. Having ten echo techs and have to do twenty echoes in a day is not a good idea. First thing I would do is do things to entice staff to make sure we're fully loaded with staff, so that patients can be taken care of properly. The hospitals have a thing where the nurse has to go in every hour, well, I've been in the room sometimes for two hours, and I've never seen a nurse. I've had patients who needed something, and I said, 'well, did you call?' I walk in, they go, 'I need to go to the bathroom,' and I go, 'okay!' I offer a little bit of help, but if the patient falls on my watch, and it's not part of my job description, and I don't know I'm going to have anybody protecting me because I still have my [redacted] license. I prefer to have the nurse who knows that patient

> take care of them. ‘Oh yeah, I've been calling her, they keep saying they're coming in, but it's been a half an hour.’ Okay. I think we need better ratios to take care of the patients in the best manner. I think, having staff stretched so thinly puts people in danger.

“Danger” was the key word to consider here as she obviously felt strongly that by not having enough staff, hospitals were putting patients in peril. Despite her willingness to help patients in any way she could, such as assisting them go to the bathroom, she did not feel entirely comfortable doing so without a nurse present. Rather than attribute this to an instance of “it’s not my job,” this was more of a liability issue when she mentioned her other medical license in addition to being a licensed echocardiographer. She did not feel she could assist patients in such a manner without jeopardizing her license, demonstrating an invisible boundary constraining her actions even when her intentions to help the patient were justified. Patients were not aware of these licensing or legal constraints and likely only perceived hesitation to assist them, and any attempt to explain in that moment would likely fail. In terms of interprofessional conflict, nurses likely saw the hesitation displayed by S5 as her unwilling to do her job, demonstrating neglect towards a patient’s needs. Clearly, S5 viewed the nurses she interacted with in some cases as engaging in neglect, even though she understood the hospital was responsible for the staffing ratios:

> So, I’m like ‘when was last time somebody was in this room to check on this person?’ And I've had more than one patient complain, ‘yeah, I called my nurse an hour ago and they haven't shown up.’ And by rights they really hadn't because I'd been in the room when nobody shows up. Still, I’ve pressed the button for

> patients, and that nobody responds in, while I'm in there, 'oh, let me get your nurse for you.' 'No, good luck with that!'

When patients were aware of the nurses' absence so often that they made jokes about it, there was a serious problem. The normalization of absentee nurses was deeply troubling and should not be viewed as a trivial matter: How many patients could have died in similar situations where no nurse was available?

S8 attributed the increased levels in stress and frustration to staffing: "I think short staffing and stress bring out the worst in people sometimes. People can only take so much before they get frustrated, and they take it out on the nearest person." The result of her recent experiences working third shift in an ER gave her some radical ideas for changing the staffing situation:

> The first thing I would do is give power to all the immediate supervisors and managers that still do the job of the people they are over. There are too many people making rules for jobs they know nothing about. For example, the ones deciding radiology has to take on the roles of 6 other people. We are not getting a pay increase and we do not have a choice if we want to work here. I would also eliminate most of the jobs that have nothing to do with patients or managing employees. There are too many chefs in the kitchen and the chain of command is way too long. I would also hire enough staff, so no one is getting used, taken advantage of or overworked.

I did not have the chance to ask S8 if she felt that she was being taken advantage of in her situation, but from her previous statements regarding excessive testing being performed and how much that irritated her I assumed she felt overworked. Her comment

about individuals “making rules for jobs they know nothing about” was interesting here, suggesting outside managers were placed in positions over professionals in specialized departments. This was evidence of the heteronomous nature of professionals working in hospitals who were managed by professionals who did not share the same profession (Abbott, 1988). Promoting individuals to management positions from different professional backgrounds could create conflict due to perceived incompetence from subordinates who could undermine their authority. For medical imaging professionals engaged in direct patient care, it was probably important that those who managed them were leaders who could perform medical imaging exams rather than “desk jockeys” (Merriam-Webster, 2023) ignorant of—or oblivious to—the job roles of their subordinates.

According to interviewees, staffing issues presented serious problems for medical imaging professionals as well as their patients. If any systemic issue affected patient care, understaffed nursing units was a concern that needed to be addressed. The interdepartmental conflict aspect of staffing issues was related to the cascading effect the absence of nursing staff had on other departments, reducing revenue production for the hospital as services were limited. This created added stress and tension between departments, as well as the perception that nurses were neglecting patients. I must reiterate that the primary concerns of interviewees were patient care and not the financial status of the hospitals; this needed emphasis given when hospitals begin to fall into the red medical imaging services and other ancillary staffing would likely be reduced to compensate (Houghton, 2022). Interviewees were more concerned with their patients than with job security, indicating what these medical imaging professionals were willing

to give up ensuring proper patient care and safety. The next experiential sub-theme explored the phenomenon when the roles of interviewees were unexpectedly changed due to factors beyond their control.

Role Changes

Interprofessional conflict occurred when the roles of medical imaging professionals were changed due to scheduling issues, a lack of flexibility demonstrated by other professionals, or for financial reasons not directly communicated to staff. S1 described a role change whereby nurses were systematically placed in leadership positions, likely without input from those medical imaging departments: “Here, one of the cost saving efforts they do is they try to transition all of the managerial positions to nurses. So, like they’ll put a nurse over top of a of an imaging department.” Did this mean that qualified medical imaging professionals with years of experience were exempted from leadership positions because they were not nurses? Such practices could be noted as either favoritism or discriminatory in nature when viewed from an outsider’s lens. Were nurses better leaders or managers by their qualifications, or were hospitals being subjected to outside influence on their accreditation status by well-organized groups to promote nurses to leadership positions (ANCC, 2022)?

Flexibility was a term used by S1 to describe issues pertaining to nurses who did not wish to participate in activities that did not fit into their job descriptions, such as working for another physician in a different specialty:

> And it’s gotten worse, and it might have to do with the fact that now the hospital’s trying to utilize those nurses and physicians that we need them. And sometimes that doesn’t necessarily fall into the position that they were hired to do or that was

> in their job description. And like, they're not very flexible, like they don't want to be flexible at all. Like we have clinic nurses who would literally, they were complaining to us the other day that they were a cardiology clinic nurses, and they were asked to do the medical reconciliation for a vascular surgeon instead of a cardiologist. And I said, 'isn't that what you do for the cardiologists?' and they said 'yeah.' So, it's the same exact job, it's just for a different provider, and they're like 'well it's another screen.' And I'm like 'okay, so you have to go into another screen of the computer, so?' Like it doesn't make sense to me because, like, yes I'm a vascular technologist, but I can go over if the ultrasound department is having issues.

This could also be another example of poor training concerning the use of EMR system, but her description of the tone of the nurse suggested this was more an excuse to get out of performing a task. It was difficult for S1 to understand how this nurse couldn't just complete the task without making a complaint about it as she would, without hesitation, perform extra duties as needed for the greater benefit of the hospital. S1 explained how she helped during the covid pandemic: "I have no problem doing other jobs that don't necessarily fit into the vascular sonographer position. During covid I worked in housekeeping for them because we were slow in vascular, so I went and scrubbed down the handrails on staircases." It was clear S1 felt a sense of ownership and pride in her organization which may have had some influence over her actions; but this felt more like adaptability than flexibility in her case. S4 experienced role change when more responsibilities were added to her for performing her job well:

> If you're an overachiever, you're going to get more tasks that have nothing to do with your job. For instance, I order supplies, and I used to order supplies for multiple offices that I didn't even ever go to. But I had done it for one and so then they just started adding different sites to my ordering. It's just, I did it.

In that environment it would disincentive employees to go above and beyond their regular job duties. S4 also explained that she also was expected to help schedule her peers for their weekly travel assignments, a job normally performed by either an administrative assistant or a manager:

> The one thing that I would change is the fact that we have technologists making technologists pay doing administrative assistant jobs And, really I feel like that is the only thing that I know that I would change. I feel like we could save tremendous amounts of money if we paid an administrative assistant to do the technologists schedule, and to do some of the other reports that we do, instead of paying a technologist because we have to pull that technologist from our working tech staff to do these special tasks that any administrative assistant could do.

It seemed her employer was taking advantage of her by having her perform extra work that an administrative assistant would perform, and S4 admitted this was the impetus for why she left her job before returning to it after a year and a half: “I will be honest, I left the company because they were taking advantage of the fact that I'm willing to go and do, you know, to any site. And when I came back things, were more structured.” The use of the phrase “taking advantage” implied she was experiencing professional abuse as well which clearly demoralized her to the point of leaving. Her absence may have sent a message that without her this company did not function

efficiently, but this was speculative. I wondered if she and other medical imaging professionals were experiencing "Stockholm Syndrome" (Lambert, 2023) or another officially recognized condition by the APA (2023) wherein they felt obligated or compelled to overachieve for their employers only to receive no rewards except more work, more stress, and more feelings of devaluation? Rewarding good employees with more work and extra responsibilities beyond their scope of practice seemed unfair and counterproductive, unless the system was set up to do just that.

Role changes also included changes to work schedules, particularly if those medical imaging professionals in question were traveling techs or sonographers. S10, a general sonographer with 32 years of experience working in a small hospital described her experiences when management changed her work schedule which then influenced her job duties:

> Most recently, the conflict involved a change in schedule and expectations with the problem being that in the discussion, the changes were not clearly defined. The other issue is that only some of the staff were expected to change their schedule and seniority was not a factor. Others making decisions when they clearly do not understand the job and what it entails; not respecting seniority and knowledge, even though they say they do, actions prove otherwise.

Was management aware of her situation and what her job duties entailed? I was curious as to how a change to her schedule could impact her duties, and S10 explained:

> I feel I am being treated without much thought. The team leader and middle manager knows [sic] I can handle what they are asking of me and that covers their immediate need, but it does not really fix the issue. They do not consider that the

> others cannot do my job. I do high level OB exams, certain pediatric exams, and work in an office that has a completely different machine and protocol from other facilities – no one else does all of these things. They don't consider how thin they are spreading me and how that affects my mental and physical health.

It appeared that with more years of experience and the ability to do more challenging OB exams came greater performance expectations for S10. S10 was being used by management to solve a problem, albeit temporarily, without considering the effects on her. She provided further details about her experience and the issues with her schedule made more sense as she was now expected to travel between two clinical sites after being on call:

> My start time in the morning varies daily as do my number of hours per day. It's a lot. I am willing to do this, and I have tried to be positive but a few things have come up for me that I tried to express that it is asking a bit too much. Example: taking call at the hospital all night until 7 am the next morning but needing to work at the [redacted] office the next day (20 minutes away) starting at 7:30 am. It should be obvious that this is a poor choice.

Why did they not consider how long it would take to make this trip or how she was on call the night before? S10 made several reflections on her experience and her last sentence expressed how she felt about her situation:

> Decisions made that do not consider how it affects the employee as long as they check their boxes and not changing even when they see there is an issue likely because they don't want it to seem like they gave in even when the argument is

> valid. The conflict made me feel like I and my coworkers were not valued and appreciated.

This felt like an example of management and not leadership as several prominent business consultants have addressed over the years as they studied organizational cultures (Bolman & Deal, 2013; Collins J., 2001; Schein & Schein, 2017). When those in positions of authority and power use a top-down management approach and never listen to the ideas and input from subordinates, this establishes a recipe for organizational failure (Collins J., 2001, pp. 17-40). By not listening to S10, management may have missed an opportunity to gain valuable information on how to improve their decision-making process. She further reflected on her experience and added the wisdom that her employer missed out on hearing:

> I think when you work in any facility, everyone's job duties affect everyone else. If correct orders aren't put in, if the patient is registered properly, if the exam isn't read in an appropriate or timely manner…All of these things work together in patient care, and everyone is responsible to do their part to the best of their ability. I also believe that no one is above doing any job. If one person is struggling and you can do something to help out, then it should be obvious for you to do it. I feel grateful that the offices where I work there is a spirit of cooperation. I have seen before where there are people who do not help because it isn't their job. That is a sad situation and makes for poor patient care.

Did the "sad situation" S10 described apply to other medical imaging professionals who experienced similar situations where they felt devalued by their hospital? The sacrifices that some medical imaging professionals made to deliver patient

care may not be fully understood by hospital management or by the public. When medical imaging professionals shared their stories with me, many of them described behaviors and feelings that were consistent with demoralization.

Demoralization

The systemic disruptions theme led to the final theme, demoralization, given how macro-level disruptions within the hospital environment made several interviewees feel not only frustrated, but hopeless that anything would change. Thus, demoralization was defined here as the erosion of confidence in the hospital as an institution and weaken the spirit of medical imaging professionals (Merriam-Webster, 2023). This theme came as a surprise when I noticed the repeated trend of interviewees engaged in conflict avoidance behavior/s. Conflict avoidance, while a conflict resolution style, projected a low concern for the overall relationship by demonstrating both low concern for the other party as well as low concern for how the conflict affected the individual (Hocker & Wilmot, 2014). In conflict resolution, this was regarded as less than ideal in terms of resolving conflicts (Katz et al., 2020), though it remained an option that many parties to conflict utilized; sometimes, it was better to just "walk away" than to engage.

When management was inconsistent when addressing conflict, it fueled resentment in S2 and profoundly influenced her views on dealing with interprofessional conflicts around her:

> So, my administrator and my boss came to me to tell me that like, how I talk to people, I need to pretty much change the way how I talk to people. And they brought up an incident, but this incident had occurred 6 months prior. And, so yeah, and so something was said to them, my administrator and my boss, and it

> just, yeah, and that incident occurred 6 months prior to when they said, you know, when they told me that. So, that was really interesting. And the issue is that this person, this person that I have the issue with, that I don't even talk to because she's just a very difficult employee, very difficult. You can't talk to her. It's her way and you know it's her way, and her way only. She doesn't give you an inch. It's gotta [sic] be her way. And you know, you have to work as a team. And so yeah, that was kind of interesting. And, so nothing is said to her about her attitude and how she talks to people. Yet, it was brought up that I need to change how I talk to people.

She felt there was a double standard happening that unfairly targeted her when it was clear to her that she was not a difficult employee. Based on this experience and how it made her feel, S2 felt that engaging in conflicts, such as addressing the gossiping techs who targeted the department scheduler, was a waste of her time:

> But I don't say anything anymore, because it's like, why? Nobody's going to do anything about it. I'm almost to the point where you just feel like people just don't listen. You know? There's too many of them which is the status quo against one of her, you know? You have 15 people talking about her. So how are you going to change those 15 people?

Indeed, how does one change people who do not want to change, or are a part of a culture that tolerates unprofessional behavior? If one or both parties did not wish to resolve the conflict, there was little chance it would be resolved according to conflict resolution literature (Hocker & Wilmot, 2014). Her sense of hopelessness that nothing would ever change, and that any effort put into resolving this conflict was a waste of

time, seemed like a learned response to avoid conflict. As it turned out, the incident involving her boss and an administrator really upset her and turned her opinion on her employer sour:

> After the comment that my administrator and my boss said about me 6 months after the fact that it took place. I kind of just, I'm going to be leaving there in a couple of years, you know, so I'm kind of just "whatever I'm kinda [sic] done," you know? I know it's not the best answer, and the best approach, but nothing's going to change, you know?

She had decided that the interprofessional conflict that bothered her was not worth her time and decided her upcoming departure was her chance to escape; unfortunately, her absence would not resolve those issues, and they would be present for the next sonographer role to experience. It was unknown if she had attempted to address the criticism that soured her opinion of management during our interview, but I assumed it had not been resolved as she spoke of it with a note of finality.

On a case-by-case basis, S5 chose to walk away from conflicts, "I don't get, usually, get in a lot of conflicts because I'll just walk away. I'm like, 'okay, whatever, I'll be back.' Doesn't matter to me." It sounded like S5 chose her battles carefully, but was this her best option considering the necessity of her interactions with physicians and nurses? S5 learned from experience to avoid conflict, particularly if physicians were involved:

> I've found that I've just been in the business long enough to try to keep conflict to a minimum when doctors have hissy fits, I just look and go, "okay" and I walk away. I don't engage because I don't think engaging gets you anywhere.

Engaging in conflict may not have gotten her anywhere, but those she refused to engage with likely benefited from not having her as an obstacle. This also applied to other interviewees who avoided conflict as their lack of dissent enabled others to get away with unprofessional behaviors and potentially negligent patient care. Did S5 believe her engagement held no value, even with her years of experience? It was not hyperbolic to claim that both S2 and S5 were full of knowledge and experience, so why did they feel it was better to walk away than to try to address these interprofessional conflicts?

Interviewees who did not describe direct engagement in interprofessional conflicts relied on management to intervene on their behalf, or to resolve issues before they manifested. Unfortunately, the reliance on management to resolve conflict served to frustrate interviewees such as S4 further, and created "tension" between medical imaging staff and management:

> I mean, you get more like tension between your techs in opposition to the company which puts stress on everybody in general because when you are questioning where the company, you know the concerns of the company, and if you're if you have to question their care for their patients, that kind of what makes you question a lot more about the company in general.

She was referring to the conflicts with physicians over the use of IV contrast on patients with potentially fatal anaphylactic reactions. To resolve this safety issue, she and other techs took their concerns to management who seemed to be stuck in a decision dilemma whether to potentially anger the physicians who ordered the exams by questioning their orders or look out for the safety of their patients. S4 elaborated:

> That's what it feels like when you're doing it. So, when you are doing the test and you're like, you know what, this person's kidney function is not what I as a technologist feel like it should be, but the doctor is still saying, you know, 'it's okay.' It makes you question whether or not that that physician is actually working in the best interest of the patient, or if they're considering everything.

Physicians were supposed to consider the best interest of the patient and to do no harm, if we take the American Medical Association code of ethics (2023) as well as the Hippocratic oath (Britannica, T. Editors of Encyclopaedia, 2023) as the standard of care. If physicians were not acting in the best interests of the patient, then whose interests did they serve: Hospitals, insurance companies, or something else? Moreover, why were RTs such as S4 forced into these morally precarious situations relying on management to be the arbiters of what was best for the patient when those managers may not have understood the intricacies associated with medical imaging? The heteronomous nature of health care professionals (Abbott, 1988) seemed to generate a conflict of interest related to patient care delivery.

Interprofessional conflict was internalized by two interviewees who had a difficult time processing the issues going on around them. I asked S8 to describe how the average conflict she dealt with made her feel:

> They stress me out. My face gets hot, I get shaky, I get angry, I want to walk out. Healthcare is a joke anymore and if I have to deal with this often, I will just be done altogether. I don't need this drama. I don't want to do them anymore, I want to leave and quit. After I cool down, I am ok.

Her answer reminded me of the stress response literature I discussed in the literature review, particularly the article by Epstein and Hamric (2009) discussing a "crescendo effect" relative to moral boundaries being pushed further from an established norm. The only ethical conflict S8 described was her perception of how many unnecessary tests were ordered, and how some of her coworkers demonstrated incompetence which she needed to correct to perform her job duties. Over time these interprofessional conflicts took a toll on her, and S8 described how moving to third shift kept her from leaving her position:

> The only shift I could stand there was nights because even tho [sic] I was by myself and had to do everything, no one was there irritating me by not pulling their weight, I didn't have to watch what I said because of tattletales, and I had no older techs telling me what to do. That is the only thing that made that place bearable. Because of that, I only work third shift jobs now. Day shift drama has left a bad taste in my mouth and I want no part of anything that involves managers in dress clothes walking around and not helping get stuff done.

For S8, conflict avoidance was necessary to avoid mental distress and potential job loss; however, she still encountered conflict during third shift. Her avoidance behavior may have resulted in more responsibilities but fewer opportunities for career advancement by working in isolation.

S10 made an interesting comment when I asked whether her current conflict affected her job duties: "I am not happy at times when at work, but I do not believe it affects my job duties." She also affirmed that this did not affect her ability to deliver patient care: "When I am with my patient, they are the only thing that matters. Not the

company, not my pay, not my schedule – they are a person that deserves my best effort." Despite the interprofessional conflicts they endured, interviewees such as S4, S8, and S10 kept their focus on patient care. However, underneath her statements there was a deeper truth when S10 also admitted to me: "The conflict made me feel like I [sic] and my coworkers were not valued and appreciated. I also began to look at other employment opportunities outside of this system." If a medical imaging professional sought to avoid further conflict by leaving their current position, particularly after 32 years of service in the case of S10, it was hard to believe that the conflict did not affect her job duties. It was obvious she was stressed and frustrated, but based on limited information I was not able to determine if she was experiencing the physical symptoms of job burnout (Mayo Clinic Staff, 2021). When I asked her what she would change about her current employer, S10 provided me further evidence that she did not feel valued:

> I do believe one thing that I would change is training for lower management positions. I would want my employees to feel that they are our best asset because they are. I would make sure that training and equipment are number one and schmoozing community big wigs was secondary. The employees make all the difference in the world to the patient and to their experience about their care. If your employees feel valued, most of them will always do their best and even more than is expected of them. I believe the health system as a whole would have such a great atmosphere.

My interpretation was that S10 was fighting a losing battle against a system that did not share her value structure. This was consistent with the phenomenon of professional dissonance (Agarwal et al., 2020) which included symptoms associated with

the definition of burnout. The changes made to her job role where she was required to work call and then commute over twenty miles to an early morning shift to perform advanced OB ultrasound manifested the latent conflict she already felt. She wanted to give her all to her patients, performing medical imaging to the best of her abilities and continue serving her hospital; her hospital viewed her as an expendable asset that should do as she was told without complaint regardless of her extensive service record. Clearly, her dedication to patients and working for their benefit was misaligned with how the hospital system viewed her position, and this suggested a wider misalignment in how hospitals potentially viewed patients despite claims made in their mission statements (Schueler & Stulberg, 2020).

The first five interviewees were formidable presences whose outspoken natures could come across as intimidating, as lamented by S1: “I think that I can come off as very intimidating. Because people who aren’t, comfortable, people who don’t have that level of expertise, but, they can, they can be intimidated, I think.” Was this why medical imaging professionals such as S1 and S5 felt they had to walk away from conflict, as they feared the intimidation factor immediately escalated situations? Did experienced sonographers such as S1 and S5 challenge the competence of those around them, contributing to an adversarial work atmosphere? Perhaps this could be why people engaged in conflict with physicians, whose presence could also be described as intimidating due to status hierarchy and their tendency towards dominance (Abbott, 1988). The experiences described during some of these interviews indicated that S2, S4, and S5 valued their time and energy more than their relationships with other professionals, consistent with conflict avoidance behavior (Hocker & Wilmot, 2014).

Also, S8 and S10 felt they were not valued by their employers and in proportional response neither valued nor respected their employers as they once probably claimed. They did not begin their medical imaging careers with that experiential attitude but developed it as they became further demoralized.

The key takeaway from the experiential theme of demoralization was the issue of whether interviewees felt valued by their hospitals. When interviewees described how they were ignored by management, when they perceived double standards regarding how some professionals were treated, and when decisions were made directly pertaining to their job duties that excluded their input, they felt neither valued nor respected. Demoralization was not a sudden occurrence; it was a gradual spiral over time whereby several medical imaging professionals had their confidence in their hospital eroded to the point of experiencing hopelessness.

The final chapter of this dissertation discussed the results in further, conclusive detail, including recommendations for further research, limitations encountered, and final thoughts pertaining to the topic of interprofessional conflict experienced by medical imaging professionals.

Chapter 5: Discussion

The research question that guided this research into the lived experiences of medical imaging professionals experiencing interprofessional conflict revealed several experiential themes shared by the interviewees: Territoriality, professional abuse, systemic disruptions, and demoralization. These themes influenced the interviewees by leading to feelings of frustration, anger, and sadness as they described their lived experiences working in hospitals. Physically, their experiences contributed to stress, prompting several to consider employment elsewhere, or reflect on why they left previous places of employment. According to the subjects, the most common interprofessional conflicts involved nurses, physicians, management, and other medical imaging professionals related to performing medical imaging exams.

The experiential themes showed patterns in the lived experiences of medical imaging professionals and resembled the themes uncovered during the literature review from Chapter 2. Given that some of the semi-structured interview questions were based on organizational themes developed for the literature review, this was not surprising. However, the experiential themes only resembled themes uncovered in the conflict literature and did not fit perfectly into them, demonstrating that lived experiences were not easily categorized or quantified. A blending of experiential themes was also noted during Chapter 4, demonstrating a deeper relationship and connection in those shared lived experiences. As Chapter 4 demonstrated, every lived experience shared by the interviewees was unique, and their perspectives were influenced by their hospital environments, the culture of those institutions, and their years of experience.

Each experiential theme was summarized and analyzed below, followed by a meta theme connecting their experiences based upon my interpretation of them. Given the theoretical influences of this research were complex systems theory (Bar-Yam, 2004; Meadows, 2008), the theory of professions (Abbott, 1988), and social conflict theory demonstrated within organizations (Coser, 1956; Raines, 2013), a meta interpretation of these lived experiences was warranted. A common connection between the experiential themes was a specific interprofessional conflict called "dual agency," referring to role confusion whereby medical imaging professionals were attempting to look out for the interests of their patients while maintaining their employment status with their hospitals (Waitzberg et al., 2022). Dual agency could also be referred to as "professional dissonance" which appeared in literature exploring burnout in primary care physicians (Agarwal et al, , 2020). The similarities between these who phenomenon was almost indistinguishable necessitating that both were applicable to most to the interprofessional conflicts described in the purposeful sample.

Territoriality

Reiterating the definition used in chapter 4, territoriality referred to both spatial boundaries being crossed as well as figurative, invisible professional boundaries that were crossed by medical imaging professionals in the sample. Territoriality also resulted from role confusion interviewees experienced when other health care professionals either neglected their responsibilities or made erroneous assumptions about the roles of medical imaging professionals. Under the conflict antecedents and boundaries and hierarchies themes in Chapter 2, the explanations of role ambiguity (Janss, Rispens, & Jehn, 2012; Portoghese et al., 2017) and task conflict (de Wit, Jehn, & Greer, 2012; Jehn, Rispens, &

Thatcher, 2010) contributed to intragroup and intraprofessional conflicts within my purposeful sample.

S5 provided examples of cardiac sonographers going portable/bedside to perform exams and nurses reacting to them with anger or surprise by their sudden appearance. She attributed both examples as being the fault of younger echocardiographers who decided not to inform those nurses they were coming up to the patient room; this was also an example of unprofessional behavior on their part for not notifying those nurses. S5 reflected on this situation when I had asked her what she would change about her hospital:

> You know, make sure we offered classes that teach them how to communicate, teach them conflict resolution, teach them how to handle that patient that's trying to fight you. They, I just think they need an extra step because I really think the schools are churning out people as fast as they can to try and meet demand, and they obviously are smart enough to pass whatever boards they need to pass, but that doesn't mean they have common sense, or understand the whole patient.

S5 blamed echocardiographer education, remarking that "I think there should be another class and let's talk about the whole patient. These people should learn, instead of just, 'we're just going to teach you echo and then throw you outside.'" I felt she was on to something important here as other interviewees mentioned the importance of education that could potentially reduce overall hospital conflict as well as the interprofessional conflicts that manifested under territoriality. S1, S2, and S3 all held educational roles in addition to performing medical imaging that were responsible for continuing education programs and offered their perspectives on how education was likely the key to reducing

multiple conflicts. Being the first interviewee, S1 first introduced her ideas on how to reduce conflict in healthcare:

> I think the reason there is conflict inside the healthcare profession is one, there isn't much education about the other fields, like as sonographers, we might learn about the other fields of sonography, but we aren't really unless you watch and observe, you don't really know anything about nursing, you don't know anything about nuclear medicine, you don't know anything about all of the things that those housekeepers do, you don't know about what other peoples' job is.

Most healthcare professionals, despite working closely with other professionals, probably did not understand what those other professionals did, or how their jobs impacted the system. This was also key to the "big picture" that S5 mentioned, how so many professionals were unable to connect the dots and realize they worked for the same team. S1 made that connection quickly: "But I do think that that is one thing that would help, if everyone understood that what everyone else's role was there would probably be the less conflict." I appreciated her optimism here, and wondered if her hypothesis was worth testing.

If education was the key to reducing interprofessional conflict, then it needed to also apply to management as well. Poorly trained managers were mentioned by S2 as being a problem since they were not prepared to handle their responsibilities, let alone any conflicts that manifested:

> So, my supervisor has no training on how to be a manager, you know, when we were running the department. You know that we did ask to go to classes, like they would have management classes, but it seems like a lot of the managers were

> former techs and they kind of just work their way up the ladder and become managers. But you know they might not have a degree in that and, you know, or just take any management courses.

Was the lack of management training the reason why nurses were being promoted to managerial positions in medical imaging departments instead of experienced medical imaging professionals as mentioned by S1 in Chapter 4? It would be logical to promote those who were educated in management to managerial positions, but this still could be perceived as professional encroachment (Abbott, 1988), not to mention could be perceived as insulting to experienced staff who anticipated promotion into leadership positions within their own department/s.

Another example of territoriality occurred when two medical imaging departments fought over the volume of patients, or the quality of exams being performed between the general sonography and vascular sonography as described by both S2 and S6. From its inception diagnostic medical sonography belonged to the radiology department and shared spaces with the other imaging modalities such as X-ray (Hagen-Ansert, 2017). As technology improved and Doppler was incorporated into 2D ultrasound exams leading to what we know call “duplex” exams, specialization emerged as now ultrasound could be used to examine the structures and functions of the heart (Armstrong & Ryan, 2019) as well as within arteries and veins (Pellerito & Polak, 2020). This evolution was a natural progression in the division of labor (Abbott, 1988) as highly specialized modalities within the ultrasound profession emerged to evaluate those specific anatomical structures; diagnostic medical sonographers no longer needed to perform every type of ultrasound exam, but could focus their efforts in a more efficient

manner. Thus emerged the fields of vascular sonography (Pellerito & Polak, 2020) and echocardiography (Armstrong & Ryan, 2019) which usually operated independently from radiology departments as their medical directors were either vascular surgeons or cardiologists instead of radiologists. General sonography (Hagen-Ansert, 2017) was also able to focus their imaging efforts on small parts and OB/GYN exams because of the newly recognized specialties of echocardiography (Armstrong & Ryan, 2019) and vascular (Pellerito & Polak, 2020). From the lens of the systems of professions (Abbott, 1988), this branching of ultrasound modalities was a natural evolution as the need for specialization also drove a demand for recognition and acceptance from established professions. Technology was the driving factor behind these changes, but also the demand for testing in hospitals as the reliability and efficacy of these specialized duplex exams was demonstrated in peer-reviewed medical literature (Armstrong & Ryan, 2019; Hagen-Ansert, 2017; Pellerito & Polak, 2020).

So why were territorial disputes happening between general ultrasound departments and vascular labs when their focuses were supposed to be clearly delineated? According to interviews with S1, S2, and S6, many general ultrasound departments and diagnostic medical sonographers working in those departments still performed carotid duplex exams, peripheral venous and arterial exams, and abdominal vascular exams. Those exams are still taught to general sonographers in school (Hagen-Ansert, 2017) and are expected to be performed in many general ultrasound departments whose hospitals lack dedicated vascular labs. If dedicated vascular labs were present in hospitals duplex exams were either assumed to be performed exclusively by them or were preferred to be done exclusively by vascular. It was during off-hour emergent cases that general

ultrasound still conducted duplex exams on patients experiencing vascular-related conditions according to several interviewees, setting the stage for territorial interdepartmental conflict. This conflict concerned the volume of the studies being performed between the departments given the revenue generated from performing any ultrasound exams was being drained from the general ultrasound department to the vascular lab. According to both S2 and S6, the general ultrasound departments wanted that revenue and acted accordingly to keep it, likely fearing departmental encroachment and potential reprisal from management noticing revenue loss.

The systemic issue in the territorial disputes between the general ultrasound department and the vascular labs described by S2 and S6 was why the upper echelons of management tolerated this competition between departments. Was this intentional in how it made two departments fiercely compete for patients, letting the best department win as a business strategy? Or was this a matter of incompetence on the part of upper management in not addressing the boundaries that clearly existed between these two departments as both were specialized for the supposed benefits associated with efficient patient care? It seemed like hospital administrators were enabling chess matches between these departments, creating interprofessional conflict via rivalry and tribalism and placing the middle managers of both imaging departments in ethically tenuous positions as they utilized sonographers as pawns in their game. There was no need for rivalry between general ultrasound and vascular when the goals were delivering the best patient care. In fact, S6 and S2 expressed resentment at having a rivalry between the departments at all, asserting the competition was intentionally created by upper-level management.

Addressing the issues of quality between the two departments seemed like a more important issue to patients and to medical imaging professionals.

Territoriality also included behaviors exhibited between professionals who did not share the same job expectations, such as being on call versus not being on call described by S1. When another medical imaging professional noticed that S1 was not required to be on call, she started a gossip campaign that othered S1, perceiving that she was too good for the larger group who collectively had to experience call. Was this a case of scapegoating and the result of mimetic desire (Cayley, 2019; Girard, 1961), or was this just a simple case of jealousy as S1 interpreted? The way in which S1 described the situation suggested the woman on call was obsessed with hurting S1's career which felt more than jealousy. Individuals are jealous of those who won the lottery, but they (usually) did not launch smear campaigns that could destroy careers. Mimetic desire and scapegoating were discussed in the next section as they applied towards professional abuse more than territoriality (Cayley, 2019).

Professional Abuse

Professional abuse was defined as unprofessional behavior/s exhibited by health care professionals towards other professionals as well as the misuse of privileges to attain specific favorable outcomes at the expense of another person or group. In Chapter 2, professional abuse was mentioned in the conflict antecedent literature, often under confusing vernacular such as "horizontal/vertical violence" (Ceravolo et al., 2012) and "bullying" (Goff, 2018; Schlitzkus et al., 2014) which were often conflated as the same phenomenon. Both of those terms did not indicate physical violence, but behaviors such as verbal abuse and intimidation directed at other healthcare professionals.

Unprofessional behavior was subjective in the shared experiences of interviewees; it was impossible to ascertain if their experiences were valid, hyperbolically described, or misinterpreted. This is not to belittle or dismiss anything shared with me; this is just a point of objective fact. Their stories were animated, emotional, and moving to hear during our interviews, leading me to believe they were sincere. Two of those interviewees, S3 and S5, shared disturbing anecdotes of actual or attempted battery which not only was evidence of unprofessional behavior, but also illegal activity (Justia.com, 2022), suggesting at one point they both worked in abusive work environments. S3 used the word abusive several times during his interview, which inspired the name of the experiential theme professional abuse.

Why did some of the medical imaging professionals in the purposeful sample experience professional abuse? In the case of the gossip described by S1 and S2 the answer was likely related to scapegoating and mimesis as described by Rene Girard to David Cayley (2019). Mimetic theory was developed by Rene Girard and referred to the tendency of people to mimic each other's desires through a concept he called "mimetic desire" or mimesis (Girard, 1961). Mimesis led to conflict as it created a sense of "rivalry" wherein individuals projected their "shared desires" onto others; conflicts were resolved when a "scapegoat" was created by the collective and destroyed as was the example case Girard used in his interpretation of the fate of Jesus Christ (Girard, 1979).

The jealous coworker described by S1 fit into mimetic theory's description of "competition" as described by David Cayley:

> Competition, according to the mimetic theory, is inherent in imitation; and once competition begins, Girard says, it will tend to be self-sustaining because the

> conflict itself will quickly become the main source of attraction. The competitor will become more interesting than the object of the competition. (Cayley, 2019, p. 10)

The gossiping vascular techs described by S2 who blamed their department scheduler for giving them more work was an example of scapegoating when they placed the blame of having more work onto the scheduler, who had nothing to do with placing the orders for vascular exams. She was only the messenger, but they chose to metaphorically shoot her behind closed doors whenever their collective frustrations got the better of them.

The interpretation of the violent behaviors described by S3 and S5 were likely related to the fight or flight response described in Chapter 2 (Cannon, 1914; Selye, 1956; Szabo et al., 2012; Tan & Yip, 2018). I preferred it if mental health professionals or law enforcement explained what happened in those instances of violence described by S3 and S5 as without hearing from all parties involved in those incidents, interpretation is conjecture. Based upon what is known about stress and the "fight or flight" response (Cannon, 1914; Selye, 1956; Szabo et al., 2012; Tan & Yip, 2018), I assumed the physicians described in the anecdotes of S3 and S5 felt no option except to fight. But what were they fighting for given their lives were not in danger? Was it their status as physicians and team leaders that compelled them to fight to not appear weak or uncertain? Did they feel trapped by their environment, or intimidated by the medical imaging professionals and other staff around them? Or was it the cumulative effect of stress on those physicians as their performance expectations were set much higher than other health care professionals?

An alternative interpretation to the narratives shared by S3 and S5 would be a psychological condition known as intermittent explosive disorder noted in Kessler, et al. (2006, p. 669) describing the *DSM-IV* definition: "characterized by recurrent episodes of serious assaultive acts that are out of proportion to psychosocial stressors and that are not better accounted for either by another mental disorder or by the physiological effects of a substance with psychotropic properties." When I wrote my notes listening to S3 and S5 describe their experiences, I scribbled in the margins "road rage" as it seemed like these physicians were lashing out in a disproportionate, irrational response to stimuli most would regard as stressful, but not placing the subject in mortal danger. Intermittent explosive disorder fit that description and shared comorbidity with anxiety disorders and stress (Kessler, et al., 2006); it was also associated with substance abuse disorders which are rising in prevalence in hospitals and related to physician burnout (Ryan et al., 2023). The violent, abusive incidents S3 and S5 described were probably not localized given how incidents of violence against healthcare workers were covered in literature explored in Chapter 2 (Kelly et al., 2014). Physical violence against healthcare workers should entail a zero-tolerance policy, including origination from physicians and patients.

Based on further details shared by S3, most of the cardiologists who engaged in abusive behaviors changed once they were called out:

> My friend and I, we kind of had an attitude, so we'd rather just tell them, look, we'd be nice, so I'm like, 'you know, you're not going to treat us like this, so.' And when we stood it [sic], and when we stood up for ourselves they pretty much, they kind of chilled out, you know? They, but we did, we were good at our jobs,

too, so that helped. Yeah, I was mostly when we would stand up ourselves, they would back up a little bit and kind of be a little bit more respectful.

Somehow S3 got through to several of those cardiologists and they changed their ways, demonstrating their humanity that was hidden beneath all their egotistical bluster. His actions and his confidence in handling that abusive work environment was a case study in how to engage and resolve issues with volatile physicians when he set clear boundaries on how he and his coworkers were going to be treated. Granted, the "I'll drop you on your ass" comment was a threat of violence towards the cardiologist in his narrative, but I felt S3 needed to make a powerful statement that asserted a consequence should an intrusive action continued. His proclamation of consequence worked, and thankfully it was not repeated, as asserting his professional boundaries nonviolently were enough moving forward.

The easiest of the professional abuses to interpret was the excessive volume of tests that were ordered as well as erroneously ordered exams. Hospital systems depend on medical imaging to make money, often subsidizing departments in the hospital that do not make money, such as housekeeping and food services according to S1. Additionally, the revenues generated by hospitals are entirely dependent on health insurance reimbursement, so the more medical imaging procedures that are performed, hypothetically the more revenue is generated in the fee-for-service system in the United States (Clemens & Gottlieb, 2017; Gliadkovskaya, 2021; Lopez, et al., 2020). As many lament the high cost of health care, most do not consider where the money goes: Labor costs. Healthcare is increasingly expensive because of labor (Gliadkovskaya, 2021), and it is currently the largest service-based industry in the United States (Bureau of Labor

Statistics, 2023; U.S. Department of Labor, 2023). Increasing wages for nurses, widely regarded as a goal towards equitable distribution of wealth between the sexes, was mentioned as one of the indicators of increased labor costs on a per patient basis (Southwick, 2022). Keeping nurse wages stagnant was equated with controlling the cost of labor (Southwick, 2022), demonstrating again the probable differences in professional values between hospital employees and their employers who likely viewed them as expensive but expendable assets.

Erroneously ordered exams were likely due to incompetence, ignorance, or in the case of medical imaging exams ordered falsely as stat, deviousness. Incompetence implied those ordering the exams did not know how to use the EMR to order tests. Ignorance implied those ordering the tests lacked the medical knowledge necessary to understand the medical imaging tests they were ordering. Deviousness implied those ordering the tests were being deceptive and pushing their patients to the front of the imaging queue for their own benefit at the time expense of other patients. Considering the tremendous stress nurses and physicians worked under and the pressures to keep hospital beds filled for the hospital revenue stream, their actions were probably taken out of self-preservation. Regardless of my interpretation of these erroneously ordered exams, they should be regarded as completely unacceptable as they waste time and endangered patients who needed urgent care. The phrase “time is money” seems less of an aphorism pertaining to laziness (Chayka, 2017) and more of an equation for revenue flow in modern hospital systems directed by EMRs.

Systemic Disruptions

Systemic disruptions were experiences described by interviewees that affected a larger population of health care workers. These experiences included the adoption or upgrading of EMR systems, the noticeable impact of hospital understaffing, and how role changes impacted the work environment.

Due to health care mandates and the adoption of PPACA in 2010, all hospitals are required to utilize EMR systems (Little, 2013). While the stated purpose of health care systems were unchanged by the adoption of EMR, the interconnections were all impacted due to patient record digitization and the necessity of EMR utilization to coordinate every aspect of patient care (Alder-Milstein, et al., 2017). The human elements within the hospital system either accepted the changes readily or rejected them at significant risk to their continued employability; there was also a learning curve that S7 indicated with EMR adoption that may have disproportionately affected older health care workers as they struggled to adapt to the newer technology. Suggestions of age discrimination could likely be dismissed by hospital administration as disgruntled employees or luddites for expressing fear of the EMR system; if that were the case, those older employees would begin to feel demoralized if not outright discriminated against. Change does cause predictable anxiety in the workplace and management/administration would be wise to plan for it anticipating potential issues with adoption of new technology as it could profoundly impact hospital “culture” (Schein & Schein, 2017, pp. 319-341), particularly initial EMR adoption and inevitable upgrades for software efficiency and data security. A recent article by Krevat et al., (2023) suggested EMR could also be associated with diagnostic errors due to poor software design or inadequate training to properly use the

EMR. If highly educated physicians and nurses had trouble using an EMR due to its poor design (Krevat et al., 2023), it suggested massive systemic consequences jeopardizing patient safety as medical imaging professionals struggled to clarify improperly ordered exams through the EMR.

The systemic issues with EMR also involve a concept called workflow (Cain & Haque, 2008), a trendy description used by management and EMR companies describing the entire process of patient care within hospitals; the key to understanding workflow is in its purpose to eliminate wasted time (Bird, 2015). Outpatient and inpatient medical imaging were scheduled by appointment according to staff and patient availability; for example, a vascular sonographer working an eight-hour shift should expect to do at least seven patients during their shift as an FTE (full time equivalents). The acronym FTE is used in place of employee here as it represents a calculated metric to quantify and predict employee productivity (BFW, 2019). If they do more patients, it was likely due to those exams being scheduled for a shorter amount of time; if they do fewer patients, it was likely due to performing an exam that took longer than an hour. Delays in outpatient arrival or registration, delays in inpatient transportation, or issues involving the patient caused a metaphoric traffic jam or backup in the workflow. While this frustrated interviewees such as S8, and probably many others in similar situations, I wondered if this increased the stress to medical imaging departments as they were still expected to carry out their duties as if none of these workflow backups occurred? Moreover, were those variables considered when calculating FTE in hospitals (BFW, 2019), or were they considered but labeled outliers that did not need to be addressed? Many patients in the United States who required emergency care, or a visit to their doctor's office, can attest to

what these delays are like and how long they can last (Axene, 2019). Many of those delays were likely related to issues similar to what S8 described, or perhaps even other interprofessional conflicts to which patients were oblivious. I can conclude that when it comes to systemic analysis of interprofessional conflict in hospitals should include the variable of time in quantitative analysis. For example, if researchers wanted to discover if patient care was influenced by interprofessional conflicts related to incorrectly ordered tests the amount of time spent to correct those errors minus the time medical imaging professionals were allowed to complete their tests might demonstrate interesting results. Time is everything in the modern hospital system run by EMRs and it should not be difficult to track these metrics using that software.

Understaffing in hospitals, particularly concerning nurses, is an ongoing problem in the United States often related to austerity measures taken by hospital systems to reduce costs (Houghton, 2022). Unfortunately, these cost reduction measures could lead to a reduction in other services offered by the hospital as S1 mentioned and to systemic disruption to the efficiency and quality of patient care delivery. Of all the conflicts shared by interviewees, understaffing presented the greatest threat to patient safety. The current nursing shortage combined with the slow recovery from the covid 19 pandemic could be a recipe for disaster for both hospitals as well as for patients (Russell, 2023). Despite the nursing shortages and understaffing, hospitals systems will continue to utilize layoffs and staff reductions despite how these actions are perceived by the public (Gamble, 2023). S1 made this comment after she described the ongoing nursing shortage in her hospital and how the hospital was paying travel nurses to fill in:

> No one lives in a in a vacuum, like there are other outside circumstances that are, that hinder things, like would I like us to have a brand-new machines every year? Yeah! I would love that, but with the, us paying, having to pay travel nurses a hundred plus dollars an hour just to get the care to the to the patients that that we're not gonna [sic] get that you know what I mean?

She was describing the financial sacrifices departments were being forced to make to accommodate for the nursing shortage, demonstrating the systemic impact understaffing had on the entire hospital system. This was unfair for medical imaging professionals who likely had no voice in these decisions. As other interviews demonstrated, role changes and broad decisions made by administration led to feelings of demoralization due to a growing sense of uncertainty, or repeated statements such as "healthcare is broken" and "healthcare is a joke anymore" as S8 stated or questions S10 asked such as "what is happening in healthcare?"

The deeper, personalized impact on medical imaging professionals due to systemic disruptions were related to the thematically organized conflict antecedents literature discussed in Chapter 2, with the most relevant addressing "role ambiguity" (Janss et al., 2012; Portoghese et al., 2017) and its effect on "emotional exhaustion" (Guidroz et al., 2012). Role ambiguity was also discussed in the professional boundaries and hierarchies section in Chapter 2 under the sub-heading task and process conflict (de Wit et al., 2012; Jehn et al., 2010; Jehn K. , Rispens et al., 2013). Task and process conflict were described by Jehn (1995, p. 258) as disagreements over how tasks were performed within a group; these disagreements also involved the possible outcomes of the tasks being performed (de Wit et al., 2012). These studies were relevant to medical

imaging professionals in the purposeful sample who were guided by EMRs, who experienced the trickle-down effects of understaffing, and whose job roles/functions were changed unexpectedly. Role ambiguity and task conflicts were inevitable for them, and over time the cumulative effect of dealing with these systemic disruptions impacted their work experience through the onset of emotional exhaustion and burnout.

Demoralization

The most disheartening of the experiential themes were interviewees describing their own demoralization. Demoralization was related to the literature review theme of moral conundrums and some aspects of the conflict antecedent literature explored in Chapter 2. Originally, I wanted to label this theme conflict avoidance since so many interviewees engaged in conflict avoidance behavior, but I felt this failed to describe the deeper meaning behind their actions. It was important to understand why interviewees felt compelled to avoid conflict, even to the point where it could potentially jeopardize decisions related to patient care. An example of such happened to S1 who described a group of squabbling nurses making a scene in front of her patient:

> Well, it in our department, it seems like the nurses engage in conflict more. They fight amongst each other. Like we have a morning, and it's got a little bit better, but we have we have a morning huddle where everyone stands there and they'll make biting comments to one another. They get into verbal altercations in front of the room I work in and sometimes I've even had to shut the door because I'm embarrassed that my patients are listening to them scream at the shouting match and they seem to have a big issue in that in that department and I can't tell you

why it is. I just kind of like, I'm thinking I'm not their manager, I'm not going to get involved, I have no idea what they're doing.

It was as if S1 was experiencing a bystander effect (Psychology Today Staff, 2023) whereby she could only witness these behaviors in disbelief instead of acting to stop them. In her narrative S1 did get involved when she closed the door and through that action made her disapproval known; however, she decided against any direct intervention because she was not their manager even though at the time, she was managing the care of her patient. Did she feel demoralized by how management did not stop the nurses from acting out, or did she truly feel that intervention was not her job?

As I began to review literature related to demoralization experienced by the interviewees, I stumbled upon an article that resonated with me as it seemed to include not only aspects of the moral conundrums described in Chapter 2, but also a term I had never seen before: Professional dissonance (Agarwal et al., 2020). I was then tempted to change the title of this experiential theme from demoralization to professional dissonance but wanted to share the individual effects of interprofessional conflict that contributed to demoralization before making a larger claim that applied to the purposeful sample. Professional dissonance was a phenomenon related to burnout experienced by physicians in primary care settings; however, it was applicable to other health care professionals who felt devalued by their employers and demoralized by working conditions (Agarwal et al., 2020).

The root of demoralization described by several interviewees was their interpretation that they were not valued by their employers. Based on these interpretations, demoralization was a top-down effect that originated with hospital

administration when unilateral decisions were either made—or avoided—that impacted health care professionals down the hierarchical chain. Double standards were applied by management when they addressed interpersonal conflict described by S2, demonstrations of favoritism by management were described by S8, and willful ignorance of legitimate patient safety concerns were described by S4, S6, and S9. These lived experiences contributed to medical imaging professionals expressing emotions and behaviors consistent with demoralization (Merriam-Webster, 2023).

Deeper interpretation noted a perceptible lack of respect shown towards these medical imaging professionals when they were excluded from decision-making processes and given no choice but to comply with changes that affected their job roles/duties, particularly in the case of S10. The lived experiences described by S10 were similar to the findings and conclusions made by Gaudine et al., (2011) and Gaudine & Thorne (2012) in their investigations into ethical conflicts involving nurses described in Chapter 2. Gaudine et al., concluded that ethical conflicts were related to how nurses felt disrespected by their hospitals, uncovering five explanatory themes: hospital issues ignored by administators, insufficient resources provided to facilitate patient care, opacity in decision making, exclusionary decision making, and disrespectful behaviors (2011, pp. 758-762). Every interviewee described interprofessional conflicts that were either ignored or downplayed by hospital administrators/management. Insufficient staffing (S1, S7, S8), indecisive and/or exclusionary management (S2, S4, S5, S6, S8, S10), and disrespectful behaviors (S2, S3, S5, S10) were also described by most of the purposeful sample. A longitudinal follow up study by (Gaudine & Thorne, 2012) into ethical conflicts involving nurses revealed an association with stress, turnover, and commitment to

working at the hospital which were all shared in the lived experiences of S1, S4, S8, and S10.

My interpretations of the lived experiences of medical imaging professionals in the purposeful sample supported the findings of Gaudine & Thorne (2012). It was not a stretch to conclude that every interviewee wanted to feel respected by their employers and valued for their contributions. The time and energy put into their patients was a sacrifice these medical imaging professionals were willing to make for a greater purpose; if they felt that purpose was in flux, or deviant from their own values, demoralization rooted, and their spirits began to wane. What was described as happening to both physicians (Agarwal et al., 2020; Tilburt, 2014) and nurses (Gaudine et al., 2011; Gaudine & Thorne, 2012) in the literature was also present in my sample, supporting my earlier claims in Chapters 1 and 2 that marginalizing allied health professionals in studies examining conflict in health care was a major gap in the literature.

Demoralization was not limited to their own lived experiences as interviewees also commented on the effects of demoralization on other hospital staff, such as nurses and even middle management. Nurses were mentioned multiple times by interviewees as having to fill too many roles due to chronic understaffing, and interviewees noted they appeared to be frustrated, burnt out, and barely holding closed the floodgates of catastrophe. Middle management was described in a perpetual state of dealing with conflicts by S4, acting as liaisons between conflicted parties while trying to perform their basic job duties:

> There's always a middle person between us and the physicians. Whether it be their physician's assistant, or their ARNPs, or *my* management in general. But

> there's always that middle person, so I feel like whoever is acting as the middle person is always got their hands in some kind of conflict. And unfortunately, if they're having to go to the doctor and say, 'hey, we can't do this,' essentially they're *causing* the conflict, even though I mean, in a round about way, the physician did it when he didn't check their labs, for instance, first, and say, 'hey, you know, we can't do this.'

Resolving these interpersonal and interprofessional conflicts described by interviewees was interpreted as a burden, wasting tremendous amounts of time in their hospitals and likely impacting patient care delivery. The realization that so much time was wasted while performing patient care was demoralizing and it likely led to increased numbers of hospital staff expressing discontent via interprofessional conflicts. What drove this discontent was likely emotional exhaustion (Guidroz et al., 2012; Portoghese et al., 2017) caused by stress which could lead to burnout.

Guidroz et al, (2012) defined emotional exhaustion as "distress" related to interpersonal workplace conflict, basing their conceptualization on Christina Maslach's (1982) research into the phenomenon of job burnout wherein subjects depleted available emotional resources and stopped caring. The definition of job burnout was revised by the time Maslach et al., (2001) revealed "engagement" as "the positive antithesis of burnout" essential to combating the three dimensions of burnout that included cynicism, inefficacy, and exhaustion. Cynicism, inefficacy, and exhaustion were all present in the sample of medical imaging professionals, demonstrating the presence of both emotional exhaustion as well as burnout. Germane to this interpretation of lived experiences, Guidroz et al., (2012) concluded that interprofessional conflict predicted the onset of emotional

exhaustion, suggesting the wrong types of engagement could lead to emotional exhaustion and burnout via the onset of stress. As described through the lived experiences of medical imaging professionals task and process conflicts were interprofessional in nature, resulting in frustration, stress, and the ineficacy described by Maslach et al., (2001).

Whitehead et al., (2014) found that allied health professionals were susceptible to moral distress when communication was disrupted and their work environment did not promote a perceivable ethical climate. This conclusion, in conjunction with the hypothesized "crescendo effect" described by Epstein & Hamric (2009) presented an explanation for development of demoralization in the sample of medical imaging professionals. Communication breakdowns primarily involving management started a slow process of value conflict which over time led to psychological distress that manifested through attitudes of resentment, confusion, and apathy. These were associated with signs of burnout, the end result of demoralization that interprofessional conflicts seemed to influence in the purposeful sample. Avoiding or alleviating this process of demoralization requires further review of hospitals systems targeting how medical imaging professionals are utilized such that they feel valued, respected, and a part of the decision-making processes in hospital functionality.

Dual Agency and Professional Dissonance

Using interpretive phenomenology and combining the reflections that interviewees shared with me, I was able to conclude that interprofessional conflict usually was the result of these medical imaging professionals stuck between two roles: Acting as de facto patient advocates while serving as reliable employees performing

exams. These two roles conflicted in multiple anecdotes when interviewees advocated against unnecessary tests ordered (S1, S4, S5, S7, S9), unnecessary stat exams (S1, S5, S7, S9), quality issues discovered between medical imaging departments (S2 and S6), neglect shown towards patients (S5, S8), and instances where patient safety was jeopardized (S4). By advocating for patients, the medical imaging professionals I interviewed put themselves in direct interprofessional conflict with nurses, physicians, management, and other medical imaging professionals who were either unable or unwilling to understand the big picture. Conflict was only avoided through disengagement; otherwise, it was inevitable that these medical imaging professionals would encounter interprofessional conflict as their professional values and obligations conflicted with either the values of other professionals or with the hospital system itself. Avoiding conflict was a means of personal advocacy for several interviewees who determined they would not be baited into conflicts that would waste their time like S5 described or become embroiled in emotionally draining drama as S1 and S2 described. A delicate balance had to be reconciled between patient advocacy and personal advocacy as making the wrong decision to engage in interprofessional conflict jeopardized their careers and even their licenses which medical imaging professionals seemed highly motivated to keep.

Further interpretation of their lived experiences revealed a term that already existed in the vernacular describing this phenomenon: “Dual agency” (Waitzberg et al,. 2022). Dual agency was referred to in two contexts: Real estate and in ethics. The contextual definition related to real estate was not relevant to this dissertation; however, the ethical context was relevant when applied to decisions physicians made when

performing patient care (Waitzberg et al., 2022). Waitzberg et al. (2022) claimed physicians filled two roles when performing their duties serving as “proxy agents” to both patients and to the financial interests of the hospital. Patients placed their trust in physicians to evaluate and treat their medical conditions, delegating “decision-making power” to the physician to act in their best interests (Waitzberg et al., 2022, p. 1824). The interests of the patient and the hospitals were incongruent when cost-containment measures were in place such as chronic understaffing of nurses (University of St. Augustine, 2021), or when unnecessary medical procedures/tests were offered to patients (Haiken, 2013). In the latter case, physicians filled the role as arbiter of medical necessity but were likely pressured to meet diagnostic (and clinical management) protocols put in place by the hospital which superseded their authority (Clemmer & Spuhler, 1998). For example, coming to the hospital with minor chest pain now generated a battery of tests to be performed on the patient to cover any potential causes of the chest pain such as heart attack or pulmonary embolism, even if the physician believed the cause was indigestion based on patient interview and examination. Protocols were developed and implemented in hospitals to increase the use of evidence-based medicine for meeting the standard of care (Clemmer & Spuhler, 1998) and gained increased importance in the implementation and use of EMR to track and bill patient care (Little, 2013). There was also the possibility of the hospital influencing physicians to ration care to patients whose insurance company reimbursement rates were not commensurate with profitability (Mehlman, 2015; Pearl, 2017). While ghoulish to consider, this practice was growing in the United States (Pearl, 2017), and was prevalent in government-based health care systems engaged in austerity measures (Owens et al., 2019). I assert the pressures to lower overall costs in the

American healthcare system will inevitably prevail over all other concerns, and I fear the contradictory interests of serving both patient and hospital can only be resolved politically or legally as Mehlman (2015) suggested.

The term “non-profit” in reference to hospitals was a misnomer as all hospitals needed to generate profits; the difference between “non-profit” and “for-profit” hospital systems was in who benefited from the revenue and tax exemption status (Herring et al., 2018). Without patients, hospitals did not generate revenue which was either used by non-profit hospitals to cover expenses and fill the community coffers (Andrzjewski, 2023; Herring et al., 2018), or used by for-profit hospitals to cover expenses and produce dividends for private investors. An ongoing controversy rages over where nonprofit money is going as it does not appear to be benefiting patient care as public concern was exacerbated in aftermath of the 2020 covid 19 pandemic (Andrzjewski, 2023). Revelations pertaining to hospital revenue generation and operational costs were revealed to the public, like the opening of Pandora’s Box (Gill, 2019), regarding the secrets hospitals wished to conceal from the public, from austerity measures used to adjust balance sheets (Cass, 2023), to overutilization of selected services such as surgeries and medical imaging (Rao & Levin, 2012). Despite measures to contain the rising costs of health care in the United States, they are nevertheless increasing while the quality of care appears stagnant. Continued financial investment into a health care system that does not deliver a quality return on investment is an exercise in futility that will continue to aggravate the populations they purport to serve.

Professional dissonance was so closely related to dual agency in how it was described in literature by Agarwal et al., (2020) that it at first appeared to be the same

phenomenon. The key difference between these two phenomena was the incidence of burnout reported in their sample of primary care physicians who identifed three internal and three external factors that contributed to its manifestation (Agarwal et al., 2020). Physicians described excessive workloads, unreasonable expectations, and increased clerical work as external factors while lamenting feelings of demoralization, devaluation, and conflict in decision making as internal factors (Agarwal et al., 2020, pp. 397-398). The conflict in decision making referred to physicians experiencing a crisis in professionalism in not being able to give their undivided attention to patients in addition to serving as their "proxy agents" as Waitzberg et al. (2022) described. This internal conflict physicians described was also related to "doing what's right for the patient vs having to bill or see X number of patients" (Agarwal et al., 2020, p. 398) demonstrating a contradictory duality of purpose. Hopsitals relied on physicians to diagnose patients, to order and interprest tests, and to act as facilitators of care which seemed more like sales associates through the lens of hospitals as businesses. The best interests of some patients likely did not align with the hospital business model, placing physicians in morally challenging positions; repetition of this process likely created "moral residue" leading to moral crisis and inevitable burnout (Epstein & Hamric, 2009). Epstein & Hamric's (2009) description of the "crescendo effect" of moral crisis likely pushed physicians further from their moral baseline, allowing hospitals to drive their business-oritented culture into the medical profession (Mehlman, 2015). This level of professional encroachment by the hospital system likely undermined the medical profession's authority to judge the necessity for, and undermine implementation of, patient care (Abbott, 1988).

Each of the factors mentioned by Agarwal et al. (2020) were described in at least one medical imaging professional I had interviewed, demonstrating this phenomenon was not limited to physicians. What I found interesting was how so many pieces of literature used different terms to describe the same phenomenon in healthcare professionals feeling conflicted by the duality of their job roles serving both patients and the hospitals who employed them (Epstein & Hamric, 2009; Moyo et al., 2016; Tilburt, 2014). Serving both entities seemed impossible, and the rationalization that these two conflicting interests were compatible was an example of cognitive dissonance. When the realization set in that serving both interests inevitably hindered the delivery of patient care, some medical imaging professionals became demoralized. They probably felt trapped into an industry they had assumed placed patient care as their top priority but was revealed to be another unscrupulous business modeled on archaic management techniques for industrialization. Hospitals are too dynamic for traditional business models and need to be revisited at the systemic level if the United States intends to remain a private health care industry independent from government-run healthcare. While tempting to consider the possibilities associated with government-run healthcare models such as those implemented in Canada or the United Kingdom, caution should be shown towards giving total control to any entitity who not only controlled the funding for that system, but also controlled the purpose of that system; as political polarisation has clearly demonstrated in the past decade, universal healthcare could result in disaster when the power to dictate who gets health care is controlled by demagogues and zealots.

Potential Solutions

Based on literature examined in Chapter 2, approaching conflict resolution from the interpersonal lens seemed like a losing battle, as it was nearly impossible to predict how employees would create—or contribute to—interpersonal conflicts. The human factor was simply too vast to address at the systemic level with an infinite number of variables for consideration. What conflict resolution practitioners can address are flaws in interprofessional connections, bad policies, unclear mandates, and changes within the system that could facilitate and exacerbate interprofessional conflict. For example, if there were a lack of clarity in how to properly order medical imaging exams, this issue would need to be addressed immediately to avoid erroneous patient orders entered. While such events may seem trivial, incorrectly ordered tests delay patient care and cost hospitals money as the labor required to address these errors could detract from more productive time. For medical imaging professionals, time not spent performing their exams could be viewed as unproductive, despite that time being devoted to correcting errors for the benefit of the patient and their safety.

Improperly ordered stats in patients who were regarded as non-emergent presented another educational issue that needed to be addressed. One could argue that ordering stat medical imaging exams that were not truly stat was deceptive and unscrupulous on the part of those ordering said exams. If those patients whose care was delayed due to false stat exams knew about why their tests were delayed, they would be outraged and likely inspired to never patronize that hospital again. The struggle some medical imaging professionals endured to weed out false stats and triage their exams appropriately was unknown to patients, and likely viewed by nurses and physicians as

medical imaging departments being difficult or even belligerent in response to receiving orders for tests. What those professionals failed to understand, through their own ignorance, was that medical imaging professionals were required to question orders and ensure patients were receiving the right test for the right reasons as dictated by their licensing bodies (ARDMS, 2022; ARRT, 2022; CCI, 2022). Medical imaging professionals who did exactly what they were told without questioning indications for exams or if the correct exam was ordered were negligent in their duties, placing not only their jobs at the hospital in jeopardy, but also their licenses. The solutions to this problem are twofold: Education and open, healthy lines of communication between medical imaging professionals and nurses and physicians.

Most of the interviewees were reflective on their experiences, using their years of experience as health care professionals as benchmarks or rubrics in how to address workplace conflict. Interviewees with training in conflict resolution felt it was beneficial to them and felt that practical, face-to-face applications of conflict resolution training as opposed to "virtual" training would be most effective as a practical tool to give to health care workers. Of the four interviewees who did not receive training in conflict resolution (S4, S5, S6, and S10), only one (S10) indicated such training would not benefit hospital staff: "I would like to think that it would be beneficial but realistically, I think people would say the right words but still do the same thing."

Two of the potential solutions to addressing interprofessional conflicts in hospitals are training in conflict resolution and IPE. Multiple interviews indicated the need for interprofessional education, known by the acronym IPE, in their hospitals. IPE would involve the education of hospital staff regarding the job roles and responsibilities

of other professionals to combat erroneous assumptions between professionals about issues such as scope of practice. IPE is promoted and practiced at Nova Southeastern University in the Dr. Pallavi Patel College of Health Care Sciences, the Dr. Kiran Patel College of Osteopathic Medicine, and in the Ron and Kathy Assaf College of Nursing. Conflict resolution training should be done in practical environments involving groups of hospital staff who typically work on ad hoc teams, and they should not be administered via online modules. A continuing conflict resolution training program would be ideal in the hospital environment utilizing simulations of real cases under supervision to teach the skills necessary to handle both interpersonal and interprofessional conflicts. However, it is my opinion that conflict resolution training should begin in schools teaching medical imaging, nursing, and in medical schools to be the most effective in application. By the time students graduate and enter the hospital it may be too late to create a change in the hospital system by introducing new elements who will be easily influenced by the existing conflicts within it.

Limitations

Limitations to this study included participant lack of interest, potential sample bias, interviewee honesty when describing their lived experiences, interviewer bias, and potential misunderstandings/misinterpretations of the interviewee narratives. Repeating this study or conducting a similar study examining the lived experiences of other allied health professionals, should take these limitations into consideration. Other future considerations should include examination of the sample along racial/ethnic demographics, age, geographic location, and experiences as immigrants to the United States. The conclusions of this study should not be applied to all medical imaging

professionals or broadly used to categorize the lived experiences of allied health professionals as every workplace interprofessional conflict should be considered unique until demonstrated otherwise.

Recommendations

During research design, the original intention of this dissertation was to examine interprofessional workplace conflict in hospitals at the systemic level. Without the understanding of the lived experiences of allied health professionals, specifically medical imaging professionals who were interviewed for this study, it was impossible to draw any conclusions related to systemic conflict. Future research should include all allied health professionals and expand upon the purposeful sample targeted in this dissertation by creating open-ended surveys. Many health care professionals were reluctant to participate in recorded interviews, likely due to the sensitive nature of the conflicts they were describing as well as the potential for professional reprisal. Given additional time and funding, it is possible to examine the lived experiences of the larger sample population, discovering themes and trends that could uncover elusive systemic factors that could be instigating/enabling workplace conflict in hospitals. This dissertation was focused on workplace interprofessional conflict in the U.S.A. but was also applicable to hospitals around the world; the only way to confirm is to conduct similar studies in those countries, expanding the diversity of lived experiences.

Another area of interest would be the exploration of violence against health care professionals by patients, visitors, and their fellow employees. Two of the interviews from the purposeful sample described incidents of violence that were hard to comprehend: Did those incidents really happen in the hospital setting? I believed both

interviewees and felt distraught upon hearing their experiences as it brought back a few moments in my own career where violence occurred and was tolerated. Both quantitative and qualitative studies should explore the incidence of violent conflict/s as well as those effects on patient care delivery. Violence perpetrated against medical imaging professionals likely not only delayed care by causing physical and mental harm to health care professionals, but could also damage expensive equipment, particularly medical imaging equipment, further driving up the cost of health care. The primary concern in any conflict analysis and/or risk assessment performed in a hospital should be keeping medical imaging professionals safe from violence. This includes violence perpetuated by patients against health care workers, which should also be regarded as unacceptable. Hospitals and health systems seeking to hide data regarding violence perpetuated against its employees, or downgrade violent incidents to avoid gaining the attention of law enforcement, are morally reprehensible and should be publicly shamed for their passive acceptance of violence occurring in their institutions. If hospitals are unable to keep their own employees safe, why would any patient trust that facility with their lives?

The application of IPE and conflict resolution techniques should be evaluated for their effectiveness in reducing incidents of interprofessional conflict in hospitals. Subjects in those research studies should be evaluated on their ability to be assertive in their communication and able to provide positive feedback. The use of online conflict resolution tools and virtual seminars should be reviewed for their effectiveness in teaching health care professionals in how to recognize and resolve conflict as they may not be as effective as in person, practical conflict resolution sessions. Physicians and nurses should be involved in practical conflict resolution events alongside allied health

professionals to learn to interact with each other and address conflict in a healthy manner. These conflict simulations or experiential modules would likely hold tremendous value and provide health care workers with the toolkits they need to adapt and overcome the unpredictability of the modern hospital environment.

Any quantitative study seeking to analyze conflict in hospitals and correlate it to the effectiveness of patient care delivery should include the variable of time being spent on tasks. EMR systems can track when orders are entered and completed but can be altered to also evaluate how much time is spent addressing errors in the system, such as incorrect orders. If medical imaging professionals are hypothetically allotted one hour to complete an exam and half of that time is spent clarifying orders or addressing other issues, that must be accounted for in delay of patient care. Such metrics should not be used to penalize medical imaging professionals but should be used to identify errors in the system such that they can be corrected. By using time as a metric of how much patient care is delayed and professional expertise is wasted, many of the issues related to interprofessional conflict could be resolved.

Final Thoughts

In systems theory, the most important aspect to any system is its purpose (Meadows, 2008) as it drives the entire system; any changes to the purpose would influence every element and interconnection within that system. In hospitals and larger health care system the stated purpose that is publicly known is to provide high quality patient care (Schueler & Stulberg, 2020); the hidden purpose was to also generate revenue to maintain its existence which could only be accomplished through patient flow through the system. Patients were a finite resource entering the hospital system, like

water entering a bathtub in the systems theory analogy of inflow (Meadows, 2008). If no patients entered that system because they were healthy and required no medical care, the system could not generate revenue and self-perpetuate. This system appears to be inherently flawed and the interprofessional conflicts were likely attributable to this duality of purpose centered on patient utilization.

Given that health care is the largest service-based industry in the United States (Bureau of Labor Statistics, 2023) and is overwhelmingly dependent on labor to carry out its functions, disruptions to hospital revenue would imply a reduction in services to compensate for financial loss as was the case during the covid 19 pandemic (Paavola, 2020). Without patients filling beds and without insurance companies and Medicare paying reimbursements for the patients filling those beds (Houghton, 2022; Lopez, et al., 2020; Stempniak, 2023; Tian, 2016), these hospitals have no means of generating revenue. Interestingly, during the covid pandemic while non-profit hospitals and health care systems struggled financially, for-profit hospitals generated revenue and even made gains during the first two years of the covid 19 pandemic (Mensik, 2022). How did that happen? How were for-profit hospital systems succeeding while the larger sample of non-profit hospitals struggled? A publicly traded, for-profit hospital system would need to rely on yearly growth to fulfil its fiduciary duties to investors who would expect dividends on their investment returns; the only way to do so would be to generate more patients, or in this case, customers. Interestingly, non-profit hospitals made a great deal of money during the covid 19 pandemic as well, contrary to reports indicating their financial woes, but these gains came from taxpayer-funded subsidies (Andrzjewski, 2023; Houghton, 2022).

Since patients are not generated on demand, the other options would be to increase the cost of services or increase the volume of services performed, likely on patients who did not need those services (Rao & Levin, 2012). Are patients the real customers from the perspective of hospital systems, or are physicians and insurance companies the true customers? Patients seemed more like finite resources, and with a slowly declining birth rate in the United States (NCHS, & US Department of Health and Human Services, 2022), a declining resource for financial growth and sustainability. If hospital systems wish to continue functioning, they need to adapt quickly and potentially change their current business models to avoid both financial insolvency and obsolescence.

References

Abbott, A. (1988). The System of Professions: An Essay on the Division of Expert Labor. Chicago: The University of Chicago Press.

ABIM. (2021, December 1). *The Physician Charter*. Retrieved from ABIM Foundation: https://abimfoundation.org/what-we-do/physician-charter

Abrams, F. R. (1986). Patient advocate or secret agent? *Journal of the American Medical Association, 256*(13), 1784-1785.

ACPRC. (2021, November 1). *Patient Information*. Retrieved from Association of Chartered Physiotherapists in Respiratory Care: https://www.acprc.org.uk/patient-information/

Agarwal, S. D., Pabo, E., Rozenblum, R., & Sherritt, K. M. (2020). Professional Dissonance and Burnout in Primary Care: A Qualitative Study. *JAMA Internal Medicine, 180*(3), 395-401.

Alder-Milstein, J., Holmgren, A., Kralovec, P., Worzala, C., Searcy, T., & Patel, V. (2017). Electronic health record adoption in US hospitals: the emergence of a digital "advanced use" divide. *Journal of the American Medical Informatics Association : JAMIA, 24*(6), 1142-1148. doi:https://doi.org/10.1093/jamia/ocx080

Almost, J., Doran, D. M., McGillis-Hall, L., & Laschinger, H. S. (2010). Antecedents and consequences of intra-group conflict among nurses. *Journal of Nursing Management, 18*(8), 981-992.

Almost, J., Wolff, A. C., Stewart-Pyne, A., McCormick, L. G., Strachan, D., & D'souza, C. (2016). Managing and mitigating conflict in healthcare teams: an integrative review. *Advanced Nursing, 72*(7), 1490-1505. doi:10.1111/jan.12903

American Medical Association. (2021, May 16). *Scope of Practice*. Retrieved from AMA-ASSN.org: https://www.ama-assn.org/practice-management/scope-practice/ama-successfully-fights-scope-practice-expansions-threaten

American Medical Association. (2023, May 15). *AMA Code of Medical Ethics.* Retrieved from Ama-assn.org: https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/principles-of-medical-ethics.pdf

American Nurses Association. (2021, May 14). *Scope of Practice*. Retrieved from Nursingworld.org: https://www.nursingworld.org/practice-policy/scope-of-practice/

American Nurses Association. (2023, May 10). *Scope of Practice*. Retrieved from Nursingworld.org: https://www.nursingworld.org/ana/

American Psychological Association. (2023, May 11). *American Psychological Association*. Retrieved from Apa.org: https://www.apa.org/

ANCC. (2022, October 1). *About Magnet*. Retrieved from American Nurses Credentialling Center: https://www.nursingworld.org/organizational-programs/magnet/about-magnet/

Andersen, G. R., Aasland, O. G., Fridner, A., & Lovseth, L. T. (2010). Harassment among university hospital physicians in four European cities. Results from a cross-sectional study in Norway, Sweden, Iceland and Italy (the HOUPE study). *Work, 37*, 99-110. doi:10.3233/WOR-2010-1061

Andrzjewski, A. (2023, May 10). *Top U.S. "Non-Profit" Hospitals & CEOs Racked Up Huge Pandemic Profits*. Retrieved from OpenTheBooks Substack.com: https://openthebooks.substack.com/p/top-us-non-profit-hospitals-and-ceos

Apesoa-Varano, E. C. (2013). Interprofessional Conflict and Repair: A Study of Boundary Work in the Hospital. *Sociological Perspectives, 56*(3), 327-349. doi:10.1525/sop.2013.56.3.327

ARDMS. (2022, June 20). *WELCOME TO THE AMERICAN REGISTRY FOR DIAGNOSTIC MEDICAL SONOGRAPHY® (ARDMS®)*. Retrieved from ARDMS.org: https://www.ardms.org/

Armstrong, W. F., & Ryan, T. (2019). *Feigenbaum's Echocardiography* (8th ed.). Philadelphia, PA: Wolters Kluwer.

ARRT. (2021, September 1). *ARRT Standards of Ethics.* Retrieved from American Registry of Radiologic Technologists: https://assets-us-01.kc-usercontent.com/406ac8c6-58e8-00b3-e3c1-0c312965deb2/eac1b19c-a45a-4e65-917b-922115ff2c15/arrt-standards-of-ethics.pdf

ARRT. (2022, October 21). *State Licensing*. Retrieved from The American Registry of Radiologic Technologists: https://www.arrt.org/pages/about-the-profession/state-licensing

ASAHP. (2018, October 16). *What is Allied Health*. Retrieved from Association of Schools of Allied Health Professions: https://www.asahp.org/what-is/

Askew, R. W. (2011). *The Hospital Frontline Nurses' Number of Conflict Styles as a Predictor of Self-Reported Perception of Conflict (Dissertation).* Retrieved from ProQuest Dissertation Database.

ASRT. (2021, June 20). *ASRT Position Statements*. Retrieved from American Society for Radiologic Technologists: https://www.asrt.org/main/standards-and-regulations/professional-practice/position-statements-online

Axene, J. W. (2019, May 30). *Take a number: Would long wait times in US healthcare be acceptable?* Retrieved from State of Reform: https://stateofreform.com/news/2019/05/take-a-number-would-long-wait-times-in-us-healthcare-be-acceptable/

Baldwin Jr, D. C., & Daugherty, S. R. (2008). Interpersonal conflict and medical errrors: Results of a national mutli-specialty survey of hospital residents in the US. *Journal of Interprofessional Care*, 573-586. doi:10.1080/13561820802364740

Bar-Yam, Y. (2004). *Making Things Work: Solving Complex Problems in a Complex World.* Cambridge: NESCI Knowledge Press.

Begun, J. W., White, K. R., & Mosser, G. (2011). Interprofessional care teams: the role of the healthcare administrator. *Journal of Interprofessional Care, 25*, 119-123. doi:10.3109/13561820.2010.504135

Berezow, A. (2019, December 28). *Blame And Claim: Can We Fix America's Uniquely Litigious Culture?* Retrieved from American Council on Science and Health: https://www.acsh.org/news/2019/12/27/blame-and-claim-can-we-fix-americas-uniquely-litigious-culture-14477

Berlin, L. (2010). Failure of radiologic communication: An increasing cause of malpractice litigation and harm to patients. *Applied Radiology*, 17-23.

Berquist, R., St-Pierre, I., & Holmes, D. (2017). Uncaring Nurses: An Exploration of Facutly-to-Faculty Violence in Nursing Academia. *International Journal of Human Caring, 21*(3), 112-119.

Berry, J. W., & Hosford, C. C. (2015). A Regional Survey & Analysis of Burnout among Physical Therapists in Frontier Counties. *Physical Therapy Journal of Policy, Administration and Leadership, 15*(3), 1-11.

Bertalanffy, L. (1968). *General Systems Theory.* New York, NY: George Braziller, Inc.

BFW. (2019, March 22). *4 Key Hospital Department Staffing Benchmarks*. Retrieved from BFW: https://www.bfwinc.com/hospital-department-staffing-benchmarks/

Bird, J. (2015, October 28). *Target hospital workflow to identify waste, guide process improvement*. Retrieved from Fierce Healthcare: https://www.fiercehealthcare.com/healthcare/target-hospital-workflow-to-identify-waste-guide-process-improvement

Bochatay, N., Bajwa, N. M., Cullati, S., Muller-Juge, V., Blondon, K. S., Perron, N. J., . . . Nendaz, M. F. (2017). A Multilevel Analysis of Professional Conflicts in Health Care Teams: Insight for Future Training. *Academic Medicine, 92*(11), 84-92. doi:10.1097/ACM.0000000000001912

Bolman, L. G., & Deal, T. E. (2013). *Reframing Organizations* (5th ed.). San Francisco, CA: Jossey-Bass.

Borkowski, N. (2016). *Organizational Behavior in Health Care* (3rd ed.). Burlington, MA: Jones and Bartlett Learning.

Borthwick, A. M., Boyce, R. A., & Nancarrow, S. A. (2015). Symbolic power and professional titles: the case of the "podiatric surgeon". *Health Sociology Review, 24*(3), 310-322. Retrieved from https://doi.org/10.1080/14461242.2015.1051081

Boyle, P. (2020, June 26). *U.S. physician shortage growing*. Retrieved from AAMC.org: https://www.aamc.org/news-insights/us-physician-shortage-growing

Braithwaite, J., & Westbrook, M. (2005). Rethinking clinical organisational structures: an attitude survey of doctors, nurses, and allied health staff in clinical directorates. *Journal of Health Services Research & Policy, 10*(1), 10-17.

Braithwaite, J., Clay-Williams, R., Vecellio, E., Marks, D., Hooper, T., Westbrook, M., . . . Ludlow, K. (2016). The basis of clinical tribalism, hierarchy and stereotyping: a laboratory-controlled teamwork experiment. *BMJ Open, 6*, 1-11. doi:10.1136/bmjopen-2016-012467

Brewer, C. S., Kovner, C. T., Obeidat, R. F., & Budin, W. C. (2013). Positive work enivronments of early-career registered nurses and the correlation with physician verbal abuse. *Nursing Outlook, 61*, 408-416.

Britannica, T. E. (2022, September 5). *Hippocratic oath*. Retrieved from Encylopedia Britannica: https://www.britannica.com/topic/Hippocratic-oath

Britannica, T. Editors of Encyclopaedia. (2023, April 29). *Hippocratic oath*. Retrieved from Encyclopedia Britannica: https://www.britannica.com/topic/Hippocratic-oath

Britannica, T. Editors of Encyclopaedia Britannica. (2022, August 26). *Prometheus*. Retrieved from Encyclopedia Britanica: https://www.britannica.com/topic/Prometheus-Greek-god

Brown, J., Lewis, L., Ellis, K., Stewart, M., Freeman, T. R., & Kasperski, J. M. (2011). Conflict on interprofessional primary health care teams - can it be resolved? *Journal of Interprofessional Care, 25*, 4-10. doi:10.3109/13561820.2010.497750

Bureau of Labor Statistics. (2023, January 25). *Total employed persons in the United States in 2022, by industry (in 1,000s) [Graph].* Retrieved from Statista: https://www-statista-com.ezproxylocal.library.nova.edu/statistics/200143/employment-in-selected-us-industries/

Cain, C., & Haque, S. (2008). Ch. 31: Organizational Workflow and Its Impact on Work Quality. In R. G. Hughes (Ed.), *Patient Safety and Quality: An Evidence-Based Handbook for Nurses.* Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from https://www.ncbi.nlm.nih.gov/books/NBK2638/

Campbell, S. M., Ulrich, C. M., & Grady, C. (2016). A broader understanding of moral distress. *American Journal of Bioethics, 16*(12), 2-9.

Cannon, W. B. (1914). The emergency function of the adrenal medulla in pain and the major emotions. *American Journal of Physiology, 33*, 356-372.

Carpenter, S. L., & Kennedy, W. J. (2001). *Managing Public Disputes: A practical guide for government, business and citizens' groups.* San Francisco: Jossey-Bass.

Cass, A. (2023, May 11). *32 hospitals closing departments or ending services*. Retrieved from Beckershospitalreview.com: https://www.beckershospitalreview.com/finance/10-hospitals-closing-departments-or-ending-services.html

Cayley, D. (Ed.). (2019). *The Ideas of Rene Girard: An Anthropology of Violence and Religion.* Coppell, TX: David Cayley.

CCI. (2022, October 21). *Credentials*. Retrieved from Cardiovascular Credentialing International : https://cci-online.org/

Centers for Medicare & Medicaid Services. (2022, November 7). *Hospital Center*. Retrieved from CMS.gov: https://www.cms.gov/Center/Provider-Type/Hospital-Center

Centers for Medicare & Medicaid Services. (2023, May 1). *Patient's Bill of Rights*. Retrieved from Cms.gov: https://www.cms.gov/CCIIO/Programs-and-Initiatives/Health-Insurance-Market-Reforms/Patients-Bill-of-Rights

Ceravolo, D. J., Schwartz, D. G., Foltz-Ramos, K. M., & Castner, J. (2012). Strenghtening communication to overcome lateral violence. *Journal of Nursing Management, 20*, 599-606.

Chayka, K. (2017, June 14). *Time is money but that doesn't mean you need to work non-stop*. Retrieved from psmag.com: https://web.archive.org/web/20190823202307/https://psmag.com/economics/time-money-doesnt-mean-need-work-non-stop-81438

Cheldelin, S., Druckman, D., Fast, L., & Clements, K. (2003). *Conflict.* S. Cheldelin, D. Druckman, & L. Fast, Eds. London: Continuum.

Clemens, J., & Gottlieb, J. D. (2017). In the shadow of a giant: Medicare's influence on private physician payments. *The Journal of Political Economy, 125*(1), 1-39. doi:https://doi.org/10.1086/689772

Clemmer, T. P., & Spuhler, V. J. (1998). Developing and gaining acceptance for patient care protocols. *New Horizons (Baltimore, MD), 6*(1), 12-19.

Cleveland Clinic. (2021, October 22). *Cardiologist*. Retrieved from My.Clevelandclinic.org: https://my.clevelandclinic.org/health/articles/21983-cardiologist

Cleveland Clinic. (2022, September 21). *Radiologist*. Retrieved from my.ClevelandClinic.org: https://my.clevelandclinic.org/health/articles/24184-radiologist

Cleveland Clinic. (2022, August 8). *Vascular Surgeon*. Retrieved from my.clevelandclinic.org: https://my.clevelandclinic.org/health/articles/24061-vascular-surgeon

Collins, J. (2001). *Good to Great.* New York, NY: HarperCollins Publishers Inc.

Collins, S. E. (2012). Rule bending by nurses: Environmental and personal drivers. *Journal of Nursing Law, 15*(1), 14-26.

Conbere, J. P. (2001). Theory building for conflict management system design. *Conflict Resolution Quarterly*, 215-236. doi:10.1002/crq.3890190206

Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: A review of research literature. *International Journal of Nursing Studies, 44*, 297-314.

Cooper, R. (2014). Phenomenology in peace and conflict studies research. In R. Cooper, & L. Finley (Eds.), *Peace and Conflict Studies Research: A Qualitative Perspective* (pp. 69-90). Charlotte, NC: Information Age Publishing, Inc.

Coser, L. (1956). *The Functions of Social Conflict.* New York: The Free Press.

Costantino, C. A. (2009). Second generation organizational conflict management systems design: A practitioner's perspective on emerging issues. *Harvard Negotiation Law Review, 14*(81), 81-100.

Creswell, J. W. (2013). *Qualitative inquiry and reserach design: Choosing among the five approaches.* Thousand Oaks, CA: Sage.

Dabekaussen, K. F., Scheepers, R. A., Heineman, E., Haber, A. L., Lombarts, K. M., Jaarsma, D. A., & Shapiro, J. (2023). Health care professionals' perceptions of unprofessional behaviour in the clinical workplace. *PLoS ONE, 18*(1), 1-14. doi:https://doi.org/10.1371/journal.pone.0280444

de Waal, F. (2005). *Our Inner Ape.* London: Granta Publications.

de Wit, F. R., Jehn, K. A., & Greer, L. L. (2012). The paradox of intragroup conflict: A meta-analysis. *Journal of Applied Psychology, 97*(2), 360-390. doi:10.1037/a0024844

DeJesse, L. D., & Zelman, D. C. (2013). Promoting optimal collaboration between mental health providers and nutritionists in the treatment of eating disorders. *Eating Disorders, 21*, 185-205. doi:10.1080/10640266.2013.779173

Eagar, S. C., Cowin, L. S., Gregory, L., & Firtko, A. (2010). Scope of practice conflict in nursing: A new war or just the same battle? *Contemporary Nurse, 36*(1-2), 86-95.

Ells, C., & Thombs, B. D. (2014). The ethics of how to manage incidental findings. *Canadian Medical Association Journal, 186*(9), 655-656. doi:https://doi.org/10.1503/cmaj.140136

Epstein, E. G., & Hamric, A. B. (2009). Moral distress, Moral residue, and the crescendo effect. *Journal of Clinical Ethics, 20*(4), 330-342.

FDA. (2020, September 28). *Ultrasound Imaging*. Retrieved from U.S. Food and Drug Administration: https://www.fda.gov/radiation-emitting-products/medical-imaging/ultrasound-imaging

Field, A. P. (2013). *Discovering Statistics Using IBM SPSS Statistics* . London: SAGE Publications.

Galtung, J. (1969). Violence, peace, and peace research. *Journal of Peace Research*, 167-191.

Gamble, M. (2023, May 17). *Ochsner gets blowback for nurse layoffs*. Retrieved from Beckershospitalreview.com: https://www.beckershospitalreview.com/workforce/ochsner-gets-blowback-for-nurse-layoffs.html?utm_campaign=bhr&utm_source=website&utm_content=most-read

Gaudine, A., & Thorne, L. (2012). Nurses' ethical conflict with hospitals: A longitudinal study of outcomes. *Nursing Ethics, 19*(6), 727-737. doi:10.1177/0969733011421626

Gaudine, A., LeFort, S. M., Lamb, M., & Thorne, L. (2011). Ethical conflicts with hospitals: The perspective of nurses and physicians. *Nursing Ethics, 18*(6), 756-766.

Gill, N. (2019, June 27). *Understanding the Significance of Pandora's Box*. Retrieved from Thoughtco.com: https://www.thoughtco.com/what-was-pandoras-box-118577

Girard, R. (1961). *Deceit, Desire, and the Novel: Self and Other Literary Structure.* Baltimore, MD: Johns Hopkins University Press.

Girard, R. (1979). *Violence and the Sacred.* Baltimore, MD: The Johns Hopkins University Press.

Gliadkovskaya, A. (2021, November 21). *Rocky road ahead for hospitals in 2022 with rising labor costs, tougher negotiations with payers*. Retrieved from Fiercehealthcare.com: https://www.fiercehealthcare.com/hospitals/respiratory-care-departments-high-labor-and-supply-costs

Goff, J. A. (2018, January 1). *Intraprofessional Conflict among Registered Nurses in Hospital Nursing: A Phenomenological Study of Horizontal Violence and Bullying.* Retrieved from NSUWorks, College of Arts, Humanities and Social Sciences - Department of Conflict Resolution Studies: https://nsuworks.nova.edu/shss_dcar_etd/82

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*(1), 26-34. doi:10.1037/0003-066X.48.1.26

Guidroz, A. M., Wang, M., & Perez, L. M. (2012). Developing a model of source-specific interpersonal conflict in health care. *Stress and Health, 28*, 69-79. doi:10.1002/smi.1405

Hagen-Ansert, S. L. (2017). *Textbook of Diagnostic Sonography* (8th ed.). St Louis, MO: Mosby.

Haghighinezhad, G., Atashzadeh-Shoorideh, F., Ashktorab, T., Mohtashami, J., & Barkhordari-Sharifabad, M. (2019). Relationship between perceived organizational justice and moral distress in intensive care unit nurses. *Nursing Ethics, 26*(2), 460-470. doi:10.1177/0969733017712082

Haiken, M. (2013, November 14). *Just Say No: 10 Common Medical Tests That May Do More Harm Than Good*. Retrieved from Forbes.com: https://www.forbes.com/sites/melaniehaiken/2013/11/14/5-medical-tests-and-treatments-to-avoid-or-at-least-question/?sh=509ef413d5d9

Hamblin, L. E., Essenmacher, L., Ager, J., Upfal, M., Luborsky, M., Russell, J., & Arnetz, J. (2016). Worker-to-worker violence in hospitals: Perpetrator characteristics and common dyads. *Workplace Health Safety, 64*(2), 51-56. doi:doi:10.1177/2165079915608856.

Hart, C. (2014). *Doing a Literature Review.* Los Angeles: Sage.

Herring, B., Gaskin, D., Zare, H., & Anderson, G. (2018). Comparing the value of nonprofit hospitals' tax exemption to their community benefits. *Inquiry, 55*. doi:10.1177/0046958017751970

Hocker, J. L., & Wilmot, W. W. (2014). *Interpersonal Conflict* (9th ed.). New York: McGraw-Hill.

Houghton, K. (2022, August 26). *Hospitals Cut Jobs and Services as Rising Costs Strain Budgets*. Retrieved from kffhealthnews.org: https://kffhealthnews.org/news/article/hospitals-cut-jobs-services-rising-costs-budgets-covid-pandemic-inflation/

HRSA. (2022, August). *Allied Health Workforce Projections*. Retrieved from Health Resources & Services Administration: https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand/allied-health

Huby, G., Harris, F. M., Powell, A. E., Kielman, T., Sheikh, A., Williams, S., & Pinnock, H. (2014). Beyond professional boundaries: relationships and resources in health services' modernisation in England and Wales. *Sociology of Health & Illness, 36*(3), 400-415. doi:10.1111/1467-9566.12067

Jameson, J. K. (2003). Transcending intractable conflict in health care: An exploratory study of communication and conflict management among anesthesia providers. *Journal of Health Communication, 8*(6), 563-581. doi:10.1080/716100415

Janss, R., Rispens, S., & Jehn, K. A. (2012). What is happening under the surface? Power, conflict, and the performance of medical teams. *Medical Education, 46*, 838-849.

Jedro, C., Holmberg, C., Tille, F., Widmann, J., Schneider, A., Stumm, J., Schnitzer, S. (2020). The acceptability of task-shifting from doctors to allied health professionals. *Deutsches Arzteblatt International 2020, 117*, 583-590. doi:10.3238/arztebl.2020.0583

Jehn, K. A. (1995). A multimethod examination of the benefits and detriments of intragroup conflict. *Administrative Science Quartlerly, 40*, 256-282. doi:10.2307/2393737

Jehn, K. A., Rispens, S., & Thatcher, S. M. (2010). The Effects of conflicy asymmetry on work group and individual outcomes. *Academy of Management Journal, 53*(6), 596-616.

Jehn, K., Rispens, S., Jonsen, K., & Greer, L. (2013). Conflict contagion: a temporal perspective on the development of conflict within teams. *International Journal of Confict, 24*(2), 352-373. doi:10.1108/IJCMA-05-2011-0039

Jeong, H.-W. (2003). Structure. In S. Cheldelin, D. Druckman, & L. Fast (Eds.), *Conflict* (pp. 154-167). London: Continuum.

Jerng, J.-S., Huang, S.-F., Liang, H.-W., Chen, L.-C., Lin, C.-K., Huang, H.-F., Sun, J.-S. (2017). Workplace interpersonal conflicts among the healthcare workers: Retrospective exploration from the institutional incident reporting system of a university-affiliated medical center. *PLoS ONE, 12*(2), 1-13. doi:doi:10.1371/journal.pone.0171696

Jones, M. C., Wells, M., Gao, C., Cassidy, B., & Davie, J. (2013). Work stress and well-being in oncology settings: a multidisciplinary study of health care professionals. *Psycho-Oncology, 22*, 46-53. doi:10.1002/pon.2055

Justia.com. (2022, October). *Assault and Battery* . Retrieved from Justia.com: https://www.justia.com/criminal/offenses/violent-crimes/assault-battery/

Kane, R. L., Shamliyan, T. A., Mueller, C., Duval, S., & Wilt, T. J. (2007). The Association of Registered Nurse staffing levels and patient outcomes: Systematic review and meta-analysis. *Medical Care*, 1195-1204. doi:10.1097/MLR.0b013e3181468ca3

Katz, N. H., Lawyer, J. W., Sweedler, M., Tokar, P., & Sosa, K. (2020). *Communication and Conflict Resolution Skills* (3rd ed.). Kendall Hunt Publishing.

Kelly, E. L., Subica, A. M., Fulginiti, A., Brekke, J. S., & Novaco, R. W. (2014). A cross-sectional survey of factors related to inpatient assault of staff in a forensic psychiatric hospital. *JAN*, 1110-1122.

Kessler, R. C., Coccaro, E. F., Fava, M., Jaeger, S., Jin, R., & Walters, E. (2006). The prevalence and correlates of DSM-IV intermittant explosive disorder in the National Comorbidity Study. *Arch Gen Psychiatry, 63*(6), 669-678. doi:10.1001/archpsyc.63.6.669

Kim, S., Bochatay, N., Relyea-Chew, A., Buttrick, E., Amdahl, C., Kim, L., Lee, Y. (2017). Individual, interpersonal, and organisational factors of healthcare conflict: A scoping review. *Journal of Interprofessional Care, 31*(3), 282-290.

Kim, S., Buttrick, E., Bohannon, I., Fehr, R., Frans, E., & Shannon, S. E. (2016). Conflict narratives from the health care frontline: A conceptual model. *Conflict Resolution Quarterly, 33*(3), 255-277. doi:10.1002/crq.21155

Klarman, M. J. (2004). *From Jim Crow to Civil Rights: The Supreme Court and the Struggle for Racial Equality.* New York, NY: Oxford University Press, Inc.

Krevat, S. A., Samuel, S., & Boxley, C. (2023, April 14). Identifying electronic health record contributions to diagnostic error in ambulatory settings through legal claims analysis. *JAMA Network Open, 6*(4). doi:10.1001/jamanetworkopen.2023.8399

Lambert, L. (2023, January 5). *Stockholm Syndrome*. Retrieved from Britannica.com: https://www.britannica.com/science/Stockholm-syndrome

Lancman, S., Mangia, E. F., & Muramoto, M. T. (2013). Impact of conflict and violence on workers in a hospital emergency room. *Work, 45*, 519-527. doi:10.3233/WOR-131638

Lederach, J. P. (2005). *The Moral Imagination: The Art and Soul of Building Peace.* Oxford, MA: Oxford University Press.

Lemert, C. (Ed.). (2013). *Social Theory* (5th ed.). Boulder, CO: Westview Press.

Little, K. S. (2013, January 31). *The Electronic Medical Records (EMR) Mandate*. Retrieved from Totalhealthlaw.com: https://www.totalhealthlaw.com/the-electronic-medical-records-emr-mandate/

Lopez, E., Claxton, G., Schwartz, K., Rae, M., Ochieng, N., & Neuman, T. (2020, July 7). *Comparing Private Payer and Medicare Payment Rates for Select Inpatient Hospital Services*. Retrieved from KFF.org: https://www.kff.org/medicare/issue-brief/comparing-private-payer-and-medicare-payment-rates-for-select-inpatient-hospital-services/

Luetsch, K., & Scuderi, C. (2020). Experiences of medical dominance in pharmacist-doctor interactions - An elephant in the room? *Research in Social and Administrative Pharmacy, 16*, 1177-1182. doi:https://doi.org/10.1016/j.sapharm.2019.12.013

Marvasti, F. F., & Stafford, R. S. (2012). From "Sick Care" to health care: Reengineering prevention into the U.S. system. *New England Journal of Medicine, 367*(10), 889-891. doi:10.1056/NEJMp1206230

Marx, K., & Engels, F. (1848). *The Communist Manifesto.* London: Workers' Educational Association.

Maslach, C. (1982). Understanding burnout: Definitional issues in analyzing a complex phenomenon. In W. S. Paine (Ed.), *Job Stress and Burnout* (pp. 29-40). Beverly Hills, CA: Sage.

Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397-422. Retrieved from https://doi.org/10.1146/annurev.psych.52.1.397

Matthews, E. P., & Matthews, T. M. (2015). Medical ethics and law in Radiologic Technology. *Radiologic Technology, 87*(2), 163-184.

Mayo Clinic Staff. (2021, June 5). *Job burnout: How to spot it and take action*. Retrieved from Mayoclinic.org: https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/burnout/art-20046642

McLean, M. (2017). From being a nurse to becoming a "different" doctor. *Advances in Health Science Education, 22*, 667-689. doi:10.1007/s10459-016-9700-y

McNeil, K. A., Mitchell, R. J., & Parker, V. (2013). Interprofessional practice and professional identity threat. *Health Sociology Review, 22*(3), 291-307.

Meadows, D. H. (2008). *Thinking in Systems: A Primer.* White River Junction, VT: Chelsea Green Publishing.

Mehlman, M. J. (2015). Can law save medicine? *Journal of Legal Medicine, 36*, 121-157. doi: 10.1080/01947648.2015.1121074

Mensik, H. (2022, December 5). *For most of COVID-19 pandemic, major for-profit hospitals' operating margins exceeded years prior*. Retrieved from Healthcaredive.com: https://www.healthcaredive.com/news/kaiser-for-profit-hospitals-pandemic-operating-margins-HCA-Tenet/637979/

Merriam-Webster. (2022, April 22). *Ethics*. Retrieved from Merriam-Webster.com dictionary: https://www.merriam-webster.com/dictionary/ethics

Merriam-Webster. (2022, April 22). *Moral*. Retrieved from Merriam-Webster.com dictionary : https://www.merriam-webster.com/dictionary/moral

Merriam-Webster. (2023, May 1). *Advocate*. Retrieved from Merriam-Webster.com Dictionary: https://www.merriam-webster.com/dictionary/advocate

Merriam-Webster. (2023, May 10). *Demoralize*. Retrieved from Merriam-Webster.com dictionary: https://www.merriam-webster.com/dictionary/demoralize

Merriam-Webster. (2023, May 13). *Desk jockey*. Retrieved from Merriam-Webster.com dictionary : https://www.merriam-webster.com/dictionary/desk%20jockey

Merriam-Webster. (2023, May 7). *Ego*. Retrieved from Merriam-Webster.com dictionary: https://www.merriam-webster.com/dictionary/ego

Merriam-Webster. (2023, April 12). *Tertiary Care*. Retrieved from Merriam-Webster.com dictionary : https://www.merriam-webster.com/dictionary/tertiary%20care

Miller, K. L., & Kontos, P. C. (2013). The intraprofessional and interprofessional relations of neurorehabilitation nurses: a negotiated order perspective. *Journal of Advanced Nursing, 68*(9), 1797-1807. doi:10.1111/jan.12041

Moreland, J. J., & Apker, J. (2016). Conflict and stress in hospital nursing: Improving communicative responses to enduring professional challenges. *Health Communication, 13*(7), 815-823. doi:10.1080/10410236.2015.1007548

Morley, G. (2016). Efficacy of the nurse ethicist in reducing moral distress: what can the NHS learn from the USA? *British Journal of Nursing, 25*(3), 156-161.

Morreim, H. (2014). Conflict resolution in health care. *AHLA Connections*, 28-32.

Moyo, M., Goodyear-Smith, F. A., Weller, J., Robb, G., & Shulruf, B. (2016). Healthcare practitioners' personal and professional values. *Advances in Health Sciences Education, 21*, 257-286. doi:10.1007/s10459-015-9626-9

NCHS, & US Department of Health and Human Services. (2022, February 7). *Birth rate in the United States from 1990 to 2020 (per 1,000 of population) [Graph].* Retrieved from Statista: https://www-statista-com.ezproxylocal.library.nova.edu/statistics/195943/birth-rate-in-the-united-states-since-1990/

Nicotera, A. M., & Clinkscales, M. J. (2010). Nurses at the nexus: A case study in structurational divergence. *Health Communication, 25*, 32-49. doi:10.1080/10410230903473516

Nugus, P., Greenfield, D., Travaglia, J., Westbrook, J., & Braithwaite, J. (2010). How and where clinicians exercise power: Interprofessional relations in health care. *Social Science & Medicine, 71*, 898-909. doi:10.1016/j.socscimed.2010.05.029

Nyholm, S. (2016). The normative and evaluative status of moral distress in health care contexts. *American Journal of Bioethics, 16*(12), 17-19.

Oh, H. (2014). Hospital consultations and juristiction over patients: consequences for the medical profession. *Sociology of Health and Illness, 36*(4), 580-595. doi:10.1111/1467-9566.12087

Orchard, C. A., Sonibare, O., Morse, A., Collins, J., & Al-Hamad, A. (2017). Collaborative leadership, Part 1: The nurse leader's role within interprofessional teams. *Nursing Leadership, 30*(2), 14-25.

Otero, H. J., Nallamshetty, L., & Rybicki, F. J. (2008). Interdepartmental conflict management and negotiation in cardiovascular imaging. *Journal of the American College of Radiology, 5*(7), 834-841. doi:10.1016/j.jacr.2008.02.006

Owens, J., Singh, G., & Cribb, A. (2019). Austerity and professionalism: Being a good healthcare professional in bad conditions. *Health Care Analysis, 27*, 157-170. doi:10.1007/s10728-019-00372-y

Paavola, A. (2020, August 31). *266 hospitals furloughing workers in response to COVID-19*. Retrieved from Beckershospitalreview.com: https://www.beckershospitalreview.com/finance/49-hospitals-furloughing-workers-in-response-to-covid-19.html

Paradis, E., & Whitehead, C. R. (2015). Louder than words: power and conflict in interprofessional education articles, 1954-2013. *Medical Education, 49*, 399-407. doi:10.1111/medu.12668

Patton, C. (2018, September/October). Workplace conflict in medical imaging technology: The role of communication. *Radiology Management*, 25-28.

Pearl, R. (2017, February 2). *Why Healthcare Rationing Is A Growing Reality for Americans*. Retrieved from Forbes.com: https://www.forbes.com/sites/robertpearl/2017/02/02/why-healthcare-rationing-is-a-growing-reality-for-americans/?sh=7beb39b22dba

Pellerito, J. S., & Polak, J. F. (Eds.). (2020). *Introduction to Vascular Ultrasonography* (7th ed.). Philadelphia, PA: Elsevier.

Peterson, J. B. (2018, March 31). Why there's no such thing as a dominance hierarchy. YouTube. Retrieved from https://www.youtube.com/watch?v=6OT5-xS0Bj8

Polner, M., & Main, K. (2023, May 10). *What Is An EMR? Everything You Need to Know*. Retrieved from Forbes.com: https://www.forbes.com/advisor/business/software/what-is-an-emr/

Porter, J., & Wilton, A. (2020). Professional identity of allied health staff associated with a major health network organizational restructuring. *Nurs Health Sci., 22*, 1103-1110. doi:https://doi.org/10.1111/nhs.12777

Portoghese, I., Galletta, M., Burdoff, A., Cocco, P., D'Aloja, E., & Campagna, M. (2017). Role stress and emotional exhaustion among health care workers: The buffering effect of supportive coworker climate in a multilevel perspective. *JOEM, 59*(10), 187-193.

Pruitt, D. G., & Kim, S. H. (2004). *Social Conflict: Escalation, Stalemate, and Settlement* (3 ed.). New York: McGraw-Hill.

Psychology Today Staff. (2023, May 20). *Bystander Effect*. Retrieved from Psychologytoday.com: https://www.psychologytoday.com/us/basics/bystander-effect

Raines, S. S. (2013). *Conflict Management for Managers.* San Francisco, CA: Jossey-Bass.

Rao, V., & Levin, D. C. (2012, October 16). *The Overuse of Diagnostic Imaging and the Choosing Wisely Initiative*. Retrieved from Acpjournals.org: https://www.acpjournals.org/doi/10.7326/0003-4819-157-8-201210160-00535

Raven's Eye. (2022, June 23). *Raven's Eye*. Retrieved from Ravens-Eye.net: https://ravens-eye.net/

Rice, T. (2021). Chapter 2: Key components of national health insurance systems. In *Health Insurance Systems: An International Comparison* (pp. 9-33). London, United Kingdom: Elsevier Inc.

Robb, A., White, C., Cordar, A., Wendling, A., Lampotang, S., & Lok, B. (2015). A comparison of speaking up behavior during conflict with real and virtual humans. *Computers in Human Behavior*, 12-21.

Rogers, N. H., Bordone, R. C., Sander, F. E., & McEwen, C. A. (2013). *Designing Systems and Processes for Managing Disputes.* Frederick, MD: Wolters-Kluwer.

Rubenstein, R. E. (2003). Institutions. In S. Cheldelin, D. Druckman, & L. Fast (Eds.), *Conflict: From Analysis to Intervention* (pp. 168-186). London: Continuum.

Russell, K. (2023, April 14). *About 100,000 nurses left the workforce due to pandemic-related burnout and stress, survey finds*. Retrieved from Cnn.com: https://www.cnn.com/2023/04/13/health/nurse-burnout-post-pandemic/index.html

Ryan, E., Hore, K., Power, J., & Jackson, T. (2023). The relationship between physician burnout and depression, anxiety, suicidality and substance abuse: A mixed methods systematic review. *Front Public Health, 11*. doi:10.3389/fpubh.2023.1133484

Saldana, J. (2021). *The Coding Manual for Qualitative Researchers* (4th ed.). Los Angeles: Sage Publications Inc.

Scheidel, W. (2018). *The Great Leveler: Violence and the History of Inequality from the Stone Age to the Twenty-First Century.* Princeton: Princeton University Press.

Schein, E. H., & Schein, P. (2017). *Organizational Culture and Leadership* (5th ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Schlitzkus, L. L., Vogt, K. N., Sullivan, M. E., & Schenarts, K. D. (2014, November/December). Workplace bullying of general surgery residents by nurses. *Journal of Surgical Education, 71*(6), 149-154.

Scholz, C. (2011). Keepsake ultrasounds worth the risk? *Radiologic Technology, 82*(4), 373-375.

Schon, D. (1983). *The Reflective Practitioner.* Basic Books, Inc. .

Schueler, K. E., & Stulberg, D. B. (2020, March). How should we judge whether and when mission statements are ethically deployed? *AMA Journal of Ethics, 22*(3), 239-247. doi:10.1001/amajethics.2020.239

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25*(1), 1-65.

Scott, C., & Gerardi, D. (2011). A Strategic approach for managing conflict in hospitals: responding to the Joint Commission Leadership Standard, Part 2. *The Joint Commission Journal on Quality and Patient Safety, 37*(2), 70-80.

Seidman, I. (2006). *Interviewing as Qualitative Research* (3rd ed.). New York, NY: Teachers College Press.

Selye, H. (1956). *The stress of life.* New York: McGraw-Hill .

Skjorshammer, M. (2002). Understanding conflicts between health professionals: A narrative approach. *Qualitative Health Research, 12*(7), 915-931.

Skjorshammer, M. (2011). Co-operation and conflict in a hospital: interprofessional differences in perception and management of conflicts. *Journal of Interprofessional Care, 15*(1), 7-18. doi:10.1080/13561820020022837

Smith, J. A., & Nizza, I. E. (2022). *Essentials of Interpretive Phenomenological Analysis* (Kindle ed.). Washington, D.C.: American Psychological Association. doi:https://doi.org/10.1037/0000259-000

Society for Vascular Ultrasound. (2022, June 25). *Professional Performance Guidelines*. Retrieved from SVU.org: https://www.svu.org/practice-resources/professional-performance-guidelines/

Southwick, R. (2022, May 12). *'Skyrocketing labor costs': Hospitals are paying 37% more since COVID-19 pandemic*. Retrieved from Chiefhealthcareexecutive.com: https://www.chiefhealthcareexecutive.com/view/-skyrocketing-labor-costs-hospitals-are-paying-37-more-since-covid-19-pandemic

Spector, P. E., Zhou, Z., & Che, X. X. (2014). Nurse exposure to physical and nonphysical violence, bullying, and sexual harassment: A quantitative review. *International Journal of Nursing Studies, 51*, 72-84.

Spence Laschinger, H. K., Wong, C. A., Cummings, G. G., & Grau, A. L. (2014). Resonant leadership and workplace empowerment: The value of positive organizational cultures in reducing workplace incivility. *Nursing Economics, 32*(1), 5-16.

Stempniak, M. (2023, May 4). *Industry payments to radiologists dropped precipitously post COVID, with an uneven recovery since*. Retrieved from Radiologybusiness.com: https://radiologybusiness.com/topics/healthcare-management/healthcare-economics/industry-payments-radiologists-drop-covid-jacr

Stogiannos, N. (2019). The effect of ethics on professional practice for mr technologists. *Radiologic Technology, 90*(5), 513-516.

Strauss, A. L. (1964). *Psychiatric Ideologies and Institutions.* New York: Free Press of Glencoe.

Strickland, N. H. (2000). PACS (picture archiving and communication systems). *Archives of disease in childhood, 83*(1), 82-86. doi:https://doi.org/10.1136/adc.83.1.82

Szabo, S., Tache, Y., & Somogyi, A. (2012). The legacy of Hans Selye and the origins of stress research: A retrospective 75 years after his landmark brief "Letter" to the Editor in Nature. *Stress, 15*(5), 472-478.

Tan, S., & Yip, A. (2018). Hans Selye (1907-1982): Founder of stress theory. *Singapore Medical Journal, 59*(4), 170-171.

Teherani , A., Martimianakis, T., Stenfors-Hayes, T., Wadhwa, A., & Varpio, L. (2015). Choosing a qualitative research approach. *J Grad Med Educ, 7*(4), 669-670. doi:10.4300/JGME-D-15-00414.1

The American Registry of Radiologic Technologists. (2021, April 6). *Ethics Requirements*. Retrieved from The American Registry of Radiologic Technologists: https://www.arrt.org/pages/resources/ethics-information

The Zebra. (2023, January 31). *Road Rage Statistics*. Retrieved from The Zebra: https://www.thezebra.com/resources/research/road-rage-statistics/

Thurner, S., Hanel, R., & Klimek, P. (2019). *Introduction to the Theory of Complex Systems.* Oxford: Oxford University Press. doi:10.1093/oso/9780198821939.001.0001

Tian, W. (2016). *Statistical Brief #205: An All-Payer View of Hospital Discharge to Postacute Care, 2013.* AHRQ. Rockville, MD: Agency for Healthcare Research and Quality. Retrieved from https://hcup-us.ahrq.gov/reports/statbriefs/sb205-Hospital-Discharge-Postacute-Care.pdf

Tilburt, J. C. (2014). Addressing dual agency: Getting specific about the expectations of professionalism. *The American Journal of Bioethics, 14*(9), 29-36. doi:10.1080/15265161.2014.935878

Todorova, G., Bear, J. B., & Weingart, L. R. (2014). Can conflict be energizing? A study of task conflict, positive emotions, and job satisfaction. *Journal of Applied Psychology, 99*(3), 451-467. doi:10.1037/a0035134

Torrey, T. (2020, March 4). *Understanding Standard of Care for Patients*. Retrieved from Verywellhealth.com: https://www.verywellhealth.com/standard-of-care-2615208

Tupes, E. C., & Christal, R. E. (1961). Recurrent personality factors based on trait ratings. *ASD Technical Report*(60), 61-97. doi:10.1111/j.1467-6494.1992.tb00973.x

U.S. Department of Health and Human Services, Health Resources and Services Administration, National Center for Health Workforce Analysis. (2017, July 21). *National and Regional Supply and Demand Projections of the Nursing Workforce: 2014-2030.* Retrieved from HRSA.gov: https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/nchwa-hrsa-nursing-report.pdf

U.S. Department of Labor. (2023, March 1). *Occupational Outlook Handbook*. Retrieved from U.S. Bureau of Labor Statistics: https://www.bls.gov/ooh/management/medical-and-health-services-managers.htm

University of St. Augustine. (2021, May). *The 2021 American Nursing Shortage: A Data Study*. Retrieved from University of St. Augustine for Health Sciences: https://www.usa.edu/blog/nursing-shortage/

Vaughan, D. (1997). *The Challenger Launch Decision: Risky Technology, Culture, and Deviance at NASA* (1st ed.). Chicago, IL: University of Chicago Press.

Wagner, I. (1996). Confronting ethical issues of systems design in a web of social relationships. In R. Kling, & R. Kling (Ed.), *Computerization and Controversy (Second Edition)* (2nd ed., pp. 889-902). Morgan Kaufman. Retrieved from https://doi.org/10.1016/B978-0-12-415040-9.50157-3.

Waitzberg, R., Gottlieb, N., Quentin, W., Busse, R., & Greenberg, D. (2022). Dual agency in hospitals: What strategies do managers and physicians apply to reoncile dilemmas between clinical and economic considerations? . *International Journal of Health Policy Management, 11*(9), 1823-1834.

Weick, K. E. (1979). *The social psychology of organizing* (2nd ed.). Reading, MA: Addison-Wesley.

Whitehead, P. B., Herbertson, R. K., Hamric, A. B., Epstein, E. G., & Fisher, J. M. (2014). Moral distress among healthcare professionals: Report of an institution-wide survey. *Journal of Nursing Scholarship, 47*(2), 117-125. doi: 10.1111/jnu.12115

Willis, J. W. (2007). *Foundations of Qualitative Research: Interpretive and Critical Approaches.* Thousand Oaks, CA: Sage Publications, Inc.

Yin, R. K. (2014). *Case Study Research: Design and Methods, 5th Ed.* Los Angeles: SAGE Publications.

Yin, R. K. (2018). *Case study research: Design and methods* (6th ed.). Thousand Oaks, CA: Sage.

Zafeiris, A., & Vicsek, T. (2018). *Why We Live in Hierarchies? A Quantitative Treatise.* Springer.

Zlatev, J., Halevy, N., & Tiedens, L. (2016). Roles and ranks: The importance of hierarchy for group functioning. *Behavioral and Brain Sciences, 39*(E166). doi:doi:10.1017/S0140525X15001545

Table 1

Participant Demographics

Subject	Medical Imaging Profession	Years of Experience	Hospital Size*	Sex
S1	Vascular sonography	17 years	Large	Female
S2	Vascular sonography	25 years	Large	Female
S3	Interventional Radiology/CT	40 years	Varied	Male
S4	PET/CT, nuclear medicine	10 years	Varied	Female
S5	Echocardiography	38 years	Large	Female
S6	Vascular sonography	22 years	Large	Female
S7	Echocardiography	20 years	Large	Male
S8	CT	16 years	Small	Female
S9	Vascular sonography	11 years	Varied	Female
S10	General ultrasound	32 years	Small	Female

*Hospital sizes are determined by the number of beds. From Table 3, (Tian, 2016, p. 13).

Figure 1

Did they feel their job duties were clearly defined?

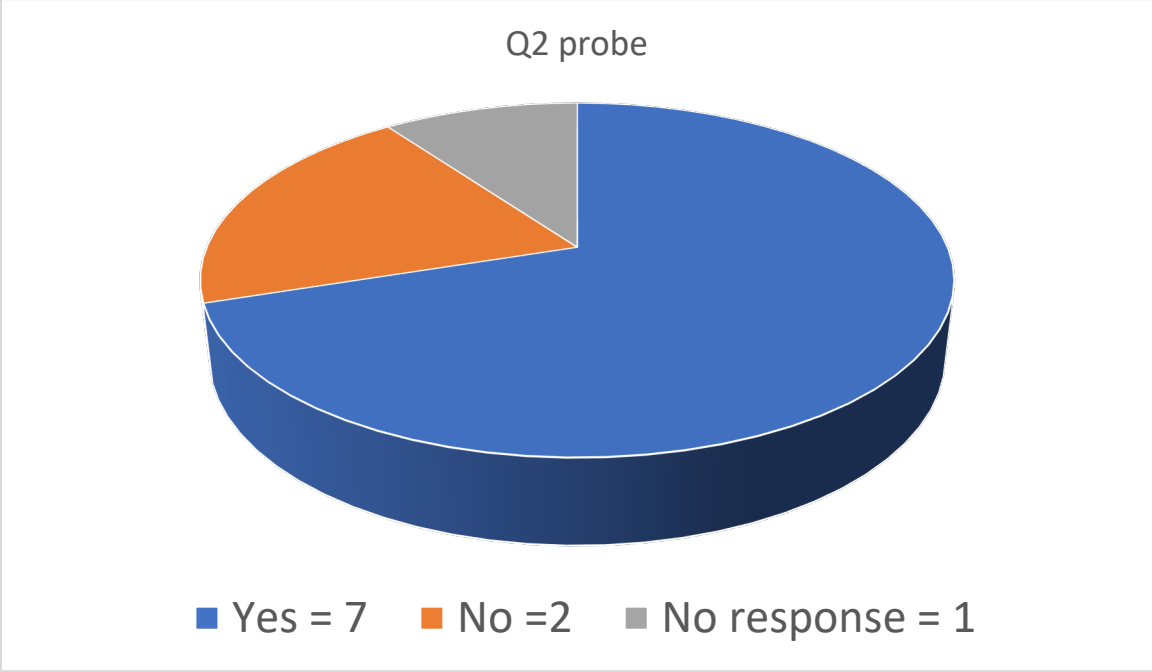


Figure 2

Did the participants feel that their moral compass was challenged by job duties?

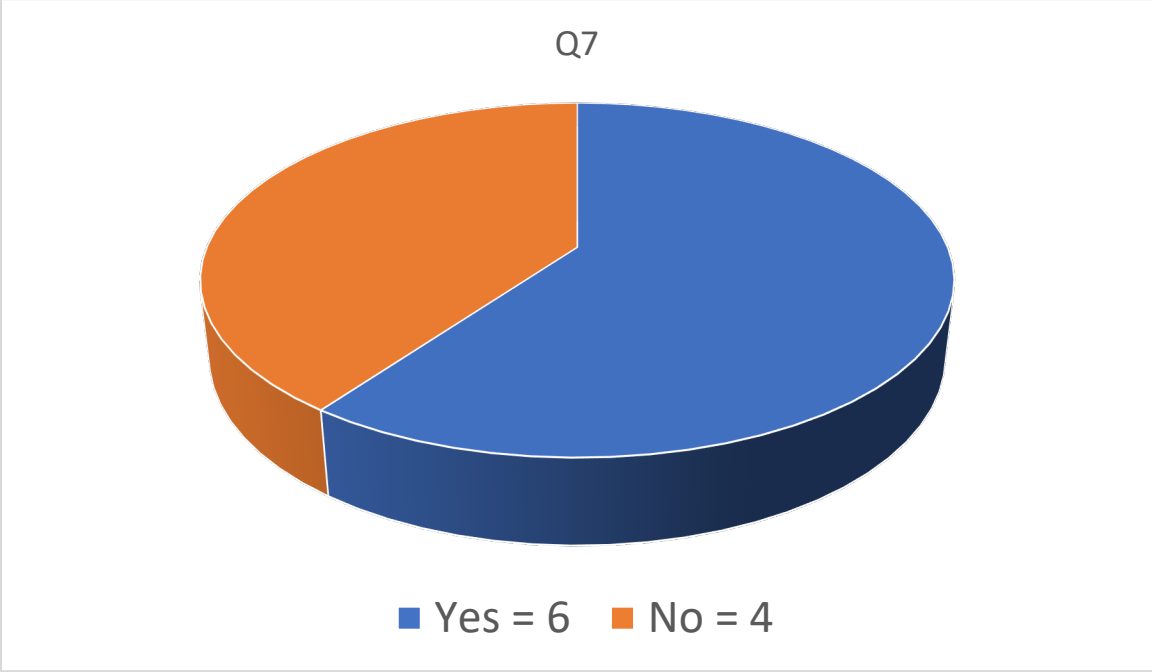
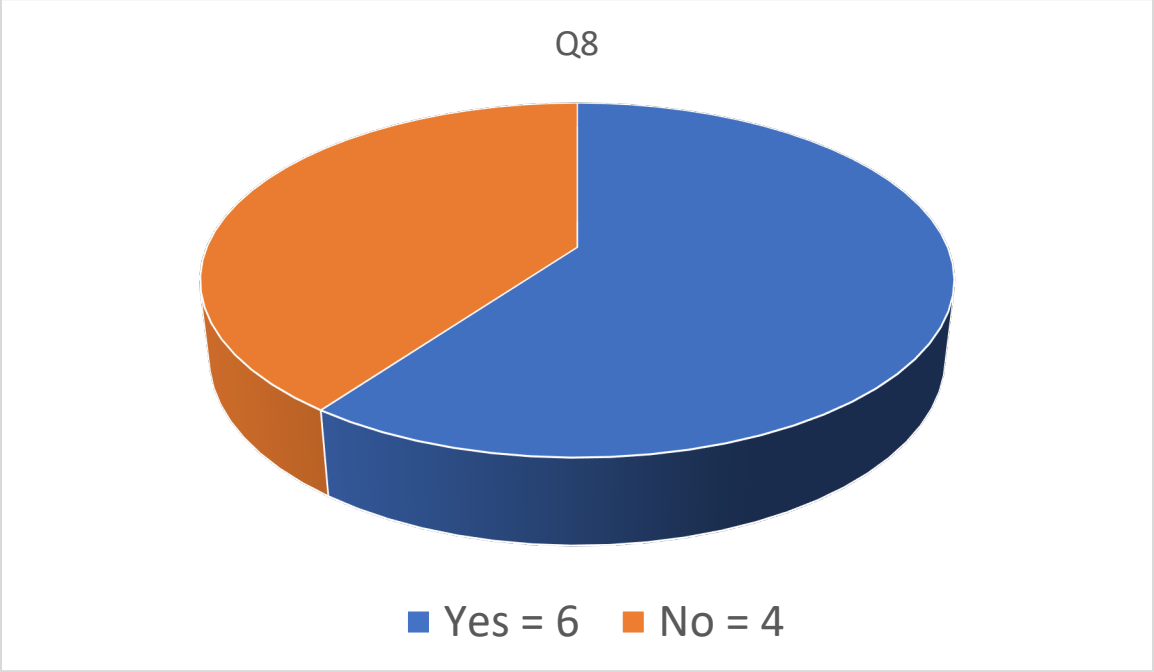


Figure 3

Have they ever experienced training in conflict resolution?



Appendix A: Interview Questions

Demographic questions

1. How long have you been in your profession?
2. Please describe what you do in the work environment, including your job duties.
    i. Probe: Do you feel your job duties/roles/responsibilities are clearly defined.
3. Describe where you work, including the size of the hospital and number of people you immediately work with.
4. Did you previously work for another hospital or medical facility?
    i. Probe: If yes, please feel free to compare your current experience with your previous experience.

Conflict Questions

5. When you agreed to do this interview, you claimed to have experienced conflict. Please describe what you have experienced.
    i. Probe: What are the most common incidents of conflict involving you and/or others?
    ii. Probe: If/when you experienced interprofessional conflict, what factors do you feel contribute to it happening or getting worse?
    iii. Probe: Describe how the conflict/s make you feel.
6. When you experience conflict, describe how it affects your job duties.
    i. Probe: Has the conflict/s influenced your ability to perform patient care activities?

7. Describe any experiences you've had where you felt your moral compass was being challenged by your job duties.
8. Have you ever experienced training in conflict resolution? Describe your experience and how it has benefited you and others.
    i. Probe: If not, how would you imagine this type of training benefiting you or others around you?
9. Are there groups of professionals that are involved in conflict more than other groups? If so, please describe the nature of the conflict they are involved in.
10. Are job roles and responsibilities clearly outlined for all the medical professionals you interact with? If not, could you describe your experience with others whose roles and responsibilities affected you.
11. In your experience, how do you feel you are being treated?
12. If I made you the CEO of the hospital and gave you the ability and power to change anything, what would you change and why?
13. Are there any issues going on within the hospital that you would like to share with me that we have not already covered?

Appendix B: IRB Approval Letter

MEMORANDUM

To: Robert Moody
Dr. Pallavi Patel College of Health Care Sciences

From: Monique Mokha, PhD LAT ATC CSCS
College Representative, Dr. Pallavi Patel College of Health Care Sciences

Date: January 13, 2023

Subject: IRB Exempt Initial Approval Memo

TITLE: Medical Imaging Professionals Experiencing Interprofessional Workplace Conflict: An Interpretive Phenomenological Study.– NSU IRB Protocol Number 2023-14

Dear Principal Investigator,

Your submission has been reviewed and Exempted by your IRB College Representative or their Alternate on **January 13, 2023**. You may proceed with your study.

Please Note: Exempt studies do not require approval stamped documents. If your study site requires stamped copies of consent forms, recruiting materials, etc., contact the IRB Office.

Level of Review: Exempt

Type of Approval: Initial Approval

Exempt Review Category: Exempt 2: Interviews, surveys, focus groups, observations of public behavior, and other similar methodologies

Post-Approval Monitoring: The IRB Office conducts post-approval review and monitoring of all studies involving human participants under the purview of the NSU IRB. The Post-Approval Monitor may randomly select any active study for a Not-for-Cause Evaluation.

Annual Status of Research Update: You are required to notify the IRB Office annually if your research study is still ongoing via the *Exempt Research Status Update xForm.*

Final Report: You are required to notify the IRB Office within 30 days of the conclusion of the research that the study has ended using the *Exempt Research Status Update xForm*.

Translated Documents: No

Please retain this document in your IRB correspondence file.

CC: Monique Mokha, PhD LAT ATC CSCS

Dustin Berna, Ph.D.

Appendix C: IRB Consent Form

General Informed Consent Form
NSU Consent to be in a Research Study Entitled
Medical Imaging Professionals Experiencing Interprofessional Workplace Conflict: An Interpretive Phenomenological Study.

Who is doing this research study?

College: Halmos College of Arts and Sciences, Department of Conflict Analysis and Resolution

Principal Investigator: Robert C Moody Jr., MS, BS, RVT

Faculty Advisor/Dissertation Chair: Dustin Berna, PhD

Co-Investigator(s): N/A

Site Information: Online, from principal investigators home.

Funding: Unfunded

What is this study about?

This is a research study, designed to test and create new ideas that other people can use. The purpose of this research study is to explore and understand the stories (lived experiences) of medical imaging professionals (radiology techs and sonographers) who have experienced workplace conflict with other health care professionals (such as nurses, physicians, or other allied health professionals). By examining the lived experiences of medical imaging professionals, further insights may be gathered into the nature of interprofessional conflict within the complex hospital system. Hospitals in the United States appear to be inundated with interprofessional conflict that may have a common theme previously unexplored by previous researchers.

Why are you asking me to be in this research study?

You are being asked to be in this research study because you identified as a medical imaging professional working in an acute care hospital in the United States of America who is currently or has previously experienced workplace conflict. You seek to share your lived experiences with interprofessional conflict, which is defined as workplace conflict between two different health care professionals, such as nurses in conflict with radiology techs.

This study will include about 9 to 15 people.

What will I be doing if I agree to be in this research study?

While you are taking part in this research study, you will be interviewed at least once but no more than two times via Zoom for 60 minutes based upon your availability and convenience. A second Zoom session will only be used as a "follow-up" in case clarification is needed or if the initial session takes longer than 60 minutes to complete.

Research Study Procedures - as a participant, this is what you will be doing:

Based upon your interest, your first step will be reaching out to the researcher via email to indicate your interest and willingness to participate in an interview. Upon this email contact, the researcher will confirm you meet eligibility criteria before asking you to review this IRB form. Upon written agreement via this IRB form to participate, a time and date of the interview will be scheduled, at the interviewee's convenience.

You will be asked up to 20 questions regarding your experience/s involving interprofessional conflict. The interview format is semi-structured, meaning that not all questions may be asked or answered depending on the content you choose to share as it's important that you tell your story regarding conflict. This conflict you experience or may have experienced involving another health care professional not performing the same hospital functions as you is interprofessional conflict. This is your chance to tell your story in as much or as little detail as you wish. This interview will be recorded and later transcribed such that themes and patterns can be noted from your experience. The interview will last only 60 minutes and there will be no follow-ups unless there is more information you wish to share at another time.

Could I be removed from the study early by the research team? There are several reasons why the researchers may need to remove you from the study early. Some reasons are: HIPAA violations and/or stories describing potentially illegal/illicit activity that could incriminate or endanger the interviewee.

Are there possible risks and discomforts to me?

This research study involves minimal risk to you. To the best of our knowledge, the things you will be doing have no more risk of harm than you would have in everyday life.

By participating in this study, the following risks may apply to you:

- There is no risk of physical harm by participating in this study.
- You may experience psychological risks by choosing to share distressing stories with the researcher.
- There are potential privacy risks if you reveal information about yourself, your medical licensure, your employer, or your physical location voluntarily.

- There are potential legal risks if you violate privacy laws such as HIPAA or potentially engage in slander/libel against your employer or another employee.
- There are potential social risks related to revealing your personal information such that you could be identified by friends or family members who learn that you participated in this study.
- There are no financial risks to you other than those associated with other risks that could cause you to lose your employment status.
- There is potential risk of losing social status by participating in the study and losing medical licensure or employment based on sharing compromising information.

You may find some questions we ask you (or some things we ask you to do) to be upsetting or stressful.

If so, we can provide you materials to help you with these feelings.

What happens if I do not want to be in this research study?
You have the right to leave this research study at any time, or not be in it. If you do decide to leave or you decide not to be in the study anymore, you will not get any penalty or lose any services you have a right to get. If you choose to stop being in the study, any information collected about you **before** the date you leave the study will be kept in the research records for 36 months from the end of the study but you may request that it not be used.

What if there is new information learned during the study that may affect my decision to remain in the study?
If significant new information relating to the study becomes available, which may relate to whether you want to remain in this study, this information will be given to you by the investigators. You may be asked to sign a new Informed Consent Form, if the information is given to you after you have joined the study.

Are there any benefits for taking part in this research study?
There are no direct benefits from being in this research study. We hope the information learned from this study will assist in the greater understanding of conflict in the hospital environment.

Will I be paid or be given compensation for being in the study?

You will not be given any payments or compensation for being in this research study.

Will it cost me anything?

There are no costs to you for being in this research study.

Ask the researchers if you have any questions about what it will cost you to take part in this research study (for example bills, fees, or other costs related to the research).

How will you keep my information private?

Information we learn about you in this research study will be handled in a confidential manner, within the limits of the law and will be limited to people who have a need to review this information. Any names used will be coded and anonymized during data analysis. Participants do not need to be on camera for the Zoom interviews if they do not wish to do so. All audio data and transcriptions from interviews will be kept on encrypted flash drives. This data will be available to the researcher, the Institutional Review Board and other representatives of this institution, and any regulatory and granting agencies (if applicable). If we publish the results of the study in a scientific journal or book, we will not identify you. All confidential data will be kept securely on encrypted computer drives and flash drives. All data will be kept for 36 months from the end of the study and destroyed after that time by erasure followed by physical destruction.

Will there be any Audio or Video Recording?
This research study involves audio and/or video recording. This recording will be available to the researcher, the Institutional Review Board and other representatives of this institution, and any of the people who gave the researcher money to do the study (if applicable). The recording will be kept, stored, and destroyed as stated in the section above. Because what is in the recording could be used to find out that it is you, it is not possible to be sure that the recording will always be kept confidential. The researcher will try to keep anyone not working on the research from listening to or viewing the recording.

Whom can I contact if I have questions, concerns, comments, or complaints?

If you have questions now, feel free to ask us. If you have more questions about the research, your research rights, or have a research-related injury, please contact:

Primary contact:
Robert Moody, MS, BS, RVT can be reached at [redacted]

If primary is not available, contact:
Dustin Berna, PhD can be reached at [redacted]

Research Participants Rights
For questions/concerns regarding your research rights, please contact:

Institutional Review Board
Nova Southeastern University
(954) 262-5369 / Toll Free: 1-866-499-0790

IRB@nova.edu

You may also visit the NSU IRB website at www.nova.edu/irb/information-for-research-participants for further information regarding your rights as a research participant.

All space below was intentionally left blank.

Research Consent & Authorization Signature Section

Voluntary Participation - You are not required to participate in this study. In the event you do participate, you may leave this research study at any time. If you leave this research study before it is completed, there will be no penalty to you, and you will not lose any benefits to which you are entitled.

If you agree to participate in this research study, sign this section. You will be given a signed copy of this form to keep. You do not waive any of your legal rights by signing this form.

SIGN THIS FORM ONLY IF THE STATEMENTS LISTED BELOW ARE TRUE:

- You have read the above information.
- Your questions have been answered to your satisfaction about the research

Adult Signature Section

I have voluntarily decided to take part in this research study.

Printed Name of Participant	Signature of Participant	Date
Printed Name of Person Obtaining Consent and Authorization	Signature of Person Obtaining Consent & Authorization	Date

Appendix D: Online Recruitment Material

Hello! My name is Robert "Rob" Moody and I'm a doctoral student at Nova Southeastern University researching the lived experiences of medical imaging professionals who have experienced interprofessional workplace conflict. The purpose of my research is to further the existing knowledge base of how workplace conflict affects allied health professionals working in hospitals in the USA. The medical imaging professionals I'm looking to engage with are sonographers (DMS), vascular technologists (VT), echocardiographers (DCS) as well as radiology techs (RTs) who perform X-Ray, CT, MRI, PET, and Nuclear Medicine imaging studies. Professionals involved in "dual modalities" are welcome. *To be eligible for participation, you must be one of these professionals working in a hospital setting in the United States of America, must have experienced interprofessional conflict, are able to communicate in the English language, and have reliable access to the internet to use the Zoom videoconferencing application.*

I'm looking for up to 15 volunteers willing to participate in recorded Zoom interviews describing their lived experiences as health care professionals; these interviews will take an hour or less. If you are interested, or know of somebody who is interested and can share this invitation with them, please email me at rmoody@mynsu.nova.edu to let me know and I will respond with a more thorough explanation of the interview process including the need for informed consent as required by Nova Southeastern University's Institutional Review Board. Your participation is completely voluntary and will be kept anonymous. I thank you for reading this and for considering participation as this will undoubtedly help medical imaging professionals and allied health professionals be heard for their valuable contributions to hospital systems.

Appendix E: Request for Written Narratives

After discussing with my dissertation chair about the issues associated with folks expressing concerns about being interviewed (and how the interviews are conducted via Zoom and recorded for transcription and analysis), I potential compromise was reached. If you feel uncomfortable with being interviewed and recorded on audio, the other option is you can write a narrative describing your experience with interprofessional conflict based on several of the interview questions. You can then print out your narrative and either email it to me through a burner email account (they make temporary email accounts that do not last longer than 24 hours), or you can use the USPS and mail it to me. The latter is old school, but definitely a viable option. Obviously, you would still need to sign the IRB form as that is a necessity; these forms are only accessible to you, me, and my Chair and are not a part of any documentation that is published. IRB forms are designed to protect and inform you, which is great. Again, I reiterate that everything is kept strictly anonymous. If you are still interested in participating and this is an option you are more comfortable with, could you please send me your answers/narratives within 2 weeks? Thank you again for your time!

My mailing address is:

The questions, which were designed to be open-ended, are listed below if you wish to answer them like an essay exam. However, you do not have to follow this format, and only need to answer questions you feel comfortable answering. I do need to know

what you do for a living though (Radiology tech, MRI, for instance), how long you have been in your profession, and the size of the hospital you work in (including how many people you work with). These are just basic demographic questions and I have even omitted asking for people's ages. The name of your hospital, or where it's located, should be omitted on purpose. Please use as much space as you like to answer the questions, and if you have any concerns or comments, please reach out to me for clarification. Thank you again for considering participation!

Appendix F: Interview Responses

		Coded subject responses									
		S1	**S2**	**S3**	**S4**	**S5**	**S6**	**S7**	**S8*** **	**S9*** **	**S10*** **
Questions											
Sex		F	F	M	F	F	F	M	F	F	F
1		17 years	25 years	40 years	10 years	38 years	22 years	20 years	16 years	11 years	32 years
2		Vascular	Vascular	Interver	PET/CT	Echo (ac	Vascular	Echo (ac	X-Ray ar	Vascular	General
2p	80%	Yes	No	Yes	Yes	Yes	N/A	Yes	No	Yes	Yes
3		Large ho	Large ho	Medium	Multiple	Large ho	Large	Large ho	Small ho	Multiple	Small
4	100%	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4p		Compared		Compared					N/A		"Unfair
5		Gossip,	Gossip,	Lack of	Patient	Nurse te	General	Nurses	Manage	NP and	Manage
5p1					Patient allergies		Quality issues		Persona	Type of	Decisior
5p2					People don't liste		Nobody listening		Short st	Too mu	Decisior
5p3			Cringe/Disgust		Frustration		Frustrat	Annoye	Stress a	Questio	Don't fe
6				It didn't	Increase	Orderin	More time spent		Wants t	Hard to	I am not
6p						Lighting, patient availabil			No (pret	If patien	No; the
7	60%	No	No	No	Yes	Yes (tria	Yes	Yes	Yes (ina	Yes	No
8	60%	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	No
8p					Yes	Yes	Yes	Yes	No, dep	No resp	No
9		Nurses	General	Cardiolc	Middle	NICU nu	Unknow	Nurses	Unknow	Those w	Unknow
10	100%				Yes	Yes	Yes	Yes	Yes (but	they get	Yes
11		Good	Good	Good	Amazing	Respect	Well (he	Fairly	Fine, tre	Very we	Disrespe
12		Lease ec	Fire one	Create s	Travel te	Attract	Help sta	Fix IT, EI	Get rid c	Reduce	Change
13		N/A		Violence	N/A				Backsta	Communication	

* = education role

** = multiple roles, management and education

***= written submission of questions