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Leading Well: Anesthesiology Program Directors as Servant Leaders and Their Development of Resident Wellness Programs

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LEADING WELL: ANESTHESIOLOGY PROGRAM DIRECTORS AS SERVANT LEADERS AND THEIR DEVELOPMENT OF RESIDENT WELLNESS PROGRAMS

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Education
at the University of Kentucky

By
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ABSTRACT OF DISSERTATION

LEADING WELL: ANESTHESIOLOGY PROGRAM DIRECTORS AS SERVANT LEADERS AND THEIR DEVELOPMENT OF RESIDENT WELLNESS PROGRAMS

Anesthesiology residents are at significant risk of developing serious issues during training including burnout, depression, and substance abuse. Recent accreditation requirements mandate that these well-being issues be addressed by residency training programs. Program directors, as the leaders of residency programs, are charged with protecting the wellness of residents and leading wellness initiatives. The program director role can be well-described in a servant leadership construct because they are charged with caring for the individual needs of their residents.

This dissertation is a report of a mixed-methods study that explores anesthesiology program directors' self-perceptions as servant leaders and their efforts to lead the development of resident wellness programs. It describes program director perceptions of challenges to resident wellness and barriers to implementing wellness initiatives. Because the current state of anesthesiology residency wellness programs is unknown, findings from this study may prove useful to the field.

KEYWORDS: Servant Leadership, Anesthesiology, Graduate Medical Education, Burnout, Wellness

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July 30, 2020

Date

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Date

DEDICATION

This dissertation is dedicated to my husband, Matt and our children, Dominic, Angelo, and Gianna.

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CHAPTER ONE

INTRODUCTION

The physician workforce in the United States of America (USA) is instrumental in maintaining and improving the health of the nation. As key leaders in the health care system, physicians must treat patients while assuring they themselves are in fact physically and mentally healthy enough to take on this important role. The personal journey to become a physician is a lengthy and challenging one: A typical path of training for physicians in the USA includes a four-year bachelor's degree, followed by four years of medical school, followed by three to seven years of residency training in a specialty (with the total length of residency dependent upon specialty choice). For those in some medical specializations, their residencies are often followed by one or more years of advanced fellowship training. This professional-development path involves academic rigor and requires dedication, persistence, personal sacrifices, and often assumption of significant financial debt (Rohlfing, Navarro, Maniya, Hughes, & Rogalsky, 2014). Anesthesiology residents, the focus of this study, complete four years of medical school, an internship year, and three years of clinical anesthesia training. Each anesthesiology training program has one appointed academic program leader, called the program director. Program directors are board certified physician anesthesiologists who are deemed by the Anesthesiology Residency Review Committee to have the experience, leadership, and academic achievements necessary to fulfill this role (Accreditation Council on Graduate Medical Education [ACGME], 2019).

Physicians in training are at significant risk of burnout, depression, substance abuse, and suicide (Dyrbye, Thomas, & Shanafelt, 2006). A growing recognition of these

issues and the importance of supporting physicians to be not only healthcare providers but also personal healthcare ambassadors and role models for their patients has emerged as a critical issue. Medical students enter their four years of training with similar rates of burnout as their age-matched peers in other professions and educational programs according to Dyrbye and colleagues (2014). However, after matriculation into medical school and during medical training, evidence emerges that many aspiring physicians experience overall burnout, high levels of depersonalization, and high fatigue during their residency. Depressive symptoms are more commonly reported by residents than the similarly aged population in the USA (Dyrbye et al., 2014). Further, anesthesiology residents may be subject to serious consequences in training such as substance abuse and suicide (de Oliveria et al., 2013; Kuhn & Flanagan, 2017; Pospos et al., 2019). Some reasons for increased risk in anesthesiology residents, in comparison to peers in other specialties, include work compression, production pressure, demands for constant vigilance, relative isolation in the workplace, and access to medications that can be easily diverted and abused (Kuhn & Flanagan, 2017).

Residency program directors are charged with the educational oversight and direction of residency training programs. Themselves physician anesthesiologists, program directors of anesthesiology residencies are subject to many of the same stressors as the residents coupled with the responsibility for guiding the future generation of anesthesiologists in their program (de Oliveria, Almeida, Ahmad, Fitzgerald, & McCarthy, 2011). This study focuses specifically on anesthesiology residents and their program directors in the USA who provide the educational leadership in their learning environment.

Definitions

Terms related to this study are defined in Table 1.1. An explanation of common terminology used throughout the study is intended to aid the reader in understanding the research and conclusions.

Table 1.1

Key Terms Used in the Study

Term	Definition
Accreditation Council for Graduate Medical Education (ACGME)	The body responsible for accrediting the majority of graduate medical education training programs (i.e., internships, residencies, and fellowships) for physicians in the USA.
Anesthesiology residency	The internship year and three years of clinical anesthesia specialty training (four years total) after medical school in order to become a board-certified anesthesiologist in the USA.
Sponsoring institution	The organization or entity that assumes the ultimate financial and academic responsibility for a program of graduate medical education consistent with ACGME institutional requirements. For example, the sponsoring institution for the University of Kentucky Anesthesiology Residency Training Program is the University of Kentucky College of Medicine (Lexington, KY).
Anesthesiology program director	The appointed anesthesiology faculty member with the authority over and accountability for an anesthesiology residency training program.
Wellness	Defined for the purpose of this study as "a dynamic and ongoing process involving self-awareness and healthy choices resulting in a successful, balanced lifestyle" (Eckleberry-Hunt, Van Dyke, Lick, & Tucciarone, 2009, p. 227).
Educational leaders	Defined for the purpose of this study as program directors of anesthesiology residency programs. These individuals are themselves physician anesthesiologists appointed to oversee all aspects of residency training and the learning environment.
Servant leaders	Defined for the purpose of this study as leaders who bring out the best in others by building trust, serving others first, and focusing on the needs of individuals.

Program Director Role

An understanding of the depth and the nature of the role of the residency program director is important because they are the leaders at the center of this research. The ACGME Common Program Requirements (2019) for all residency training programs specifies that the program director must

> have responsibility, authority, and accountability for: administration and operations; teaching and scholarly activity; resident recruitment and selection, evaluation, and promotion of residents, and disciplinary action; supervision of residents; and resident education in the context of patient care. The program director must: be a role model of professionalism; design and conduct the program in a fashion consistent with the needs of the community, the mission of the Sponsoring Institution, and the mission of the program; administer and maintain a learning environment conducive to educating the residents in each of the ACGME Competency domains; . . . provide a learning and working environment in which residents have the opportunity to raise concerns and provide feedback in a confidential manner as appropriate, without fear of intimidation or retaliation. (p. 9)

The significance of the leadership role and influence of the program director upon the experience of residents within a training program cannot be overstated. Their responsibilities include selecting residents, overseeing their education and their well-being during training, overseeing the clinical learning environment, and ultimately attesting that each resident is ready for independent, safe practice upon graduation. Little has been studied or written about the anesthesiology program director as an educational leader. This research provides new information about program director self-perceptions as leaders and specifically their self-perceptions as servant leaders.

Wellness in Residency Training

The ACGME acknowledges the significant risk potential of resident burnout and depression. In the most recent version of its Common Program Requirements (2019), the ACGME outlines specific responsibilities of the program and sponsoring institution to

address resident well-being. It is important to understand the factors related to resident wellness that the ACGME has emphasized in program requirements because they drive the creation of residency wellness programs and policies. ACGME requirements specifically charge the program and sponsoring institution with (a) enhancing the meaning that each resident finds in the experience of being a physician, (b) developing resident schedules that are attentive to work intensity and work compression that could negatively affect resident wellness, (c) evaluating workplace safety data to address the safety of residents and faculty members, (d) implementing policies and programs that encourage optimal resident and faculty member well-being, and (e) educating faculty members and residents in identification of the symptoms of burnout, depression, and substance abuse, including means to seek appropriate care for those who experience these conditions. While these significant additions have been made to program requirements, the ACGME does not specify exactly how programs should achieve these aims in order to ensure the well-being of anesthesiology residents and faculty. The current study seeks to illuminate how programs across the country are meeting the new well-being requirements.

Statement of the Problem

Anesthesiology residents are at high risk for burnout, depression, and substance abuse for a variety of reasons, not all of which are well understood (de Oliveria et al., 2013). Stress during anesthesiology residency training is one of the conditions that can lead to burnout, distress, and decreased wellness (Eisenach et al., 2014). These issues place anesthesiology residents at risk for suicidal ideation and suicide—a leading cause of death among medical residents (Yaghmour et al., 2017). Additionally, physicians

functioning with suboptimal mental health conditions may be more prone to mistakes and medical errors leading to negative health outcomes for their patients (Azam, Khan, & Alam, 2017; Dewa, Loong, Bonato, & Trojanowski, 2017).

Purpose and Significance

The purpose of this study was to explore the current state of emerging initiatives aimed at enhancing and supporting the wellness of anesthesiology residents and to investigate how anesthesiology program directors perceive themselves as servant leaders in the context of supporting these wellness initiatives. Wellness is important for physicians themselves, their families, their colleagues, and the patients they serve. A greater understanding of the importance of resident wellness is emerging, and recent residency program accreditation requirements have been developed to help drive positive change (Weiss, Bagian, & Wagner, 2014). Previous studies have shown that physician habits formed during residency are replicated in practice for many years after the conclusion of training (Asch, Nicholson, Srinivas, Herrin, & Epstein, 2009). Likewise, professional habits, including those that may degrade or support wellbeing, are formed during residency training.

Researcher Supposition

An assumption driving the current study is that educational leaders in this training setting may have a long-lasting impact upon anesthesiologist resident wellness. As the educational leaders of residency training programs, anesthesiology program directors are charged with providing the conditions necessary for residents to learn and work in an environment conducive to their personal and professional wellbeing. Ultimately, the safety and high-quality care of patients depends in part upon the wellness of their medical

providers, and program directors help provide leadership to develop favorable conditions for optimal resident wellness during training and into their professional careers.

Study Significance

The rationale for the importance of this study is that decreased wellness in anesthesiology residents has the potential for negative effects for both the resident physicians personally as well as for the patients they serve (de Oliveria et al., 2013). Strategies to promote wellness in anesthesiology residency training are being newly developed nationwide, in part due to new program requirements from the ACGME (2019). Although some previous studies have discovered promising strategies for reducing burnout for physicians (Dyrbye et al., 2010), little information is known about common elements within anesthesiology wellness programs nationwide or barriers faced in designing and implementing these residency wellness programs. Further, the role of anesthesiology program directors as educational leaders in this setting and their connection to wellness initiatives is unknown. To this researcher's knowledge, no published studies evaluate anesthesiology program director perceptions of their role as servant leaders in supporting resident wellness.

Findings from this study contribute to knowledge and practice in educational leadership in anesthesiology training programs. The study focus was designed to illuminate the current state of anesthesiology residency wellness programs including common components and barriers to providing a system of supports. In addition, the study was designed to explore the nature of anesthesiology residency program directors as servant leaders and gather their self-perceptions of this role.

Research Questions and Design

The overarching research question this study sought to answer is, *How do program directors perceive themselves as servant leaders in the context of supporting anesthesiology resident wellness initiatives?* Three supporting research questions guided the study: (1) What are the top five challenges to wellness faced by anesthesiology residents as reported by their program directors? (2) What common components of wellness initiatives in anesthesiology residencies currently exist? (3) What barriers to current wellness initiatives do anesthesiology program directors identify?

Because both quantitative and qualitative research paradigms were utilized to enhance and clarify conclusions, a mixed-methods design was most appropriate for this research. The study was thus modeled after the sequential explanatory design model outlined by Creswell (2009). The first phase of the research gathered quantitative data via a survey administered to all anesthesiology program directors in the USA. The survey included questions related to program directors' perception of anesthesiology resident wellness issues, wellness initiatives present at their own institution, barriers that program directors perceive in being able to provide wellness initiatives, and self-perceptions of their own servant leadership characteristics informed by the Servant Leadership Profile (Wong & Page, 2003). The second phase of the research involved collection of qualitative data through phone interviews with fifteen program directors. The qualitative data were used to clarify and enhance the results of the quantitative data analysis.

Assumptions and Delimitations

Some assumptions and limitations were present in this study. It is important to describe these factors in order to consider how they may affect the interpretation of the study results and conclusions.

Assumptions

This study operated on the underlying assumption that anesthesiology program directors view themselves as serving in a capacity to have an effect on resident wellness. In addition, I assumed that the wellness program descriptions provided by program directors were accurate. No data were available to verify the accuracy of these program descriptions.

Delimitations

The nature of this study has inherent limitations. First, the ACGME is the only entity that accredits anesthesiology programs in the USA; hence, the population sample is limited. As such, data collected should evidence consistency in program attributes and conditions. It is unknown whether the data and resulting conclusions are applicable to international settings. In addition, because program directors are also at high risk for job-related stressors and burnout (de Oliveria et al., 2011), it is unknown how personal stress among program directors may influence their perceptions about resident wellness and their leadership in this component of residency training.

Summary

This chapter provided an introduction to the study, beginning with a brief background exploring the study's context. The information presented included a brief overview of the current state of knowledge related to wellness challenges in

anesthesiology residents along with an overview of their educational leaders. This overview was followed by definitions related to the study, a statement of the problem, study significance, and a methodology overview. The chapter concluded by discussing assumptions and delimitations and providing a foundation for a deeper exploration into existing literature related to this topic.

Chapter Two presents a review of the literature relevant to servant leadership and issues related to wellness challenges in anesthesiology residents, while Chapter Three provides details about the research methodology. Chapter Four presents the results and findings of collected data, and Chapter 5 closes the study report with conclusions and implications for anesthesiology residency programs, program leaders, and researchers. A copy of the university's approval to conduct the study, examples of all data collection instruments and prompts, a reference list of all cited works, and a brief researcher vita follow Chapter 5.

CHAPTER TWO

LITERATURE REVIEW

This chapter includes a comprehensive overview of research on issues associated with physician resident wellness, resident burnout, and depression specific to anesthesiology residents as well as existing interventions utilized currently to address the effects of resident burnout. The literature reviewed also provides an overview of the graduate medical education system as it relates specifically to anesthesiology residents and a synopsis of current patterns of education delivery in anesthesiology education programs. This context-defining information is important toward enhancing the reader's understanding the educational context in which residents are learning and working and in which their program directors are teaching. The first major section also details accreditation requirements related to resident wellness as well as accreditation requirements that direct the activities of their educational leaders, the residency program directors.

The next major section in the chapter focuses on program directors as leaders in the healthcare system. Their leadership role is placed in the context of the larger healthcare system and the economics and other complexities that create leadership challenges. The final section reviews literature informing the conceptual framework of servant leadership and the characteristics and actions of servant leaders. Connections are drawn between the characteristics and actions of servant leaders in general and residency program directors specifically. The chapter concludes with a focus on survey tools designed to measure servant leader characteristics and the model used in this study. This

model includes a survey of anesthesiology program directors to gather their perceptions of their own servant leadership qualities.

Despite evidence documenting risks to resident wellness during training, existing interventions and accreditation requirements have not yet been effective in addressing this issue (Wolpaw, 2019). This study proposes that leaders in the clinical learning environment—specifically residency program directors—have an important role in developing and directing efforts to combat threats to resident wellness. Studying current wellness initiatives in anesthesiology residency programs as well as program directors' self-perceptions as servant leaders can help inform this vital work.

Wellness

Wellness is important for physicians themselves, their families, their colleagues, and the patients they serve. Professional habits, including those that may support wellbeing, are formed during residency training. Anesthesiology residents are at high risk for burnout, depression, and substance abuse for a variety of reasons, not all of which are well understood (Looseley et al., 2019; Wainwright et al., 2019; Sun et al., 2019). A greater understanding of the importance of resident wellness is emerging, and recent residency accreditation requirements have been developed to influence positive change. As the leaders of residency training programs, anesthesiology program directors are charged with providing the conditions necessary for residents to learn and work in an environment conducive to their personal and professional wellbeing. Ultimately, the safe and high-quality care of patients depends in part upon the wellness of their providers, and program directors lead efforts toward developing favorable conditions for optimal resident wellness during training.

Wellness Definition

Wellness can be simplistically defined as a state of being in good health. It is more completely defined for this purpose by Eckleberry-Hunt and colleagues (2009) as a personal state of strength, resilience, growth, and happiness. From a positive-psychology standpoint, patients, faculty, and residents may be better served by focusing not on the end goal of reducing burnout, but rather on the goal of increasing wellness. Most current research in this area focuses on the study of burnout (i.e., the pathology and what is negative or failing) rather than on wellness and examining what contributes to individuals thriving despite difficult circumstances (Eckleberry-Hunt, Kirkpatrick, Taku, & Hunt, 2017; Eckleberry-Hunt, Kirkpatrick, & Barbera, 2018).

Factors Associated with Resident Wellness

The beginning of anesthesiology residency training can represent a time of incredible psychological, intellectual, procedural, technical, and logistical stress. As described by Eisenach et al. (2014), health behaviors may be impacted leading to "deprivation stress" (p. 879) from a lack of sleep, irregular sleeping schedule due to being on call, and reductions in exercise, pleasurable activities, nutrition, and personal or family time. Factors associated with resident wellbeing may be best described as those which help to ameliorate these stressors.

"Joy in practice" (Swensen & Shanafelt, 2017, p. 308) is described as an aspirational state in which physicians are positively engaged in the care of patients and the mission of their work, and it is in this state that resident physicians may be truly well. Three primary conditions described by Swensen and Shanafelt as being associated with reducing burnout and bringing back a sense of joy in physician work are (a) satisfied

human social and psychological needs, (b) eliminated or mitigated structural and functional drivers of burnout, and (c) strengthened individual resilience.

Burnout Definition

According to Maslach and Leader (1996), burnout is a psychological syndrome resulting from work-related stress including symptoms of emotional exhaustion, sense of low personal accomplishment (inefficacy), and depersonalization (often manifesting as cynicism and reduction in empathy for others). Burnout is observed in individuals with clinical manifestations such as fatigue, eating disorders, headaches, and emotional instability. It is also associated with diminished job performance, depression, and potential alcohol and drug dependence (Maslach & Leiter, 1996).

Factors Associated with Resident Burnout

Multiple studies consistently find that a high proportion of medical students and residents across all residency specialties experience severe work-related stress and burnout. Factors within the learning and work environment are major drivers of burnout, rather than personal attributes such as habits or personality according to Dyrbye and Shanafelt (2015). Multiple studies suggest that 30% to 50% of physicians experience symptoms of burnout, and burnout is more prevalent among physicians than the general U.S. working population (Dyrbye et al., 2017; Shanafelt, 2011).

Anesthesiology residents may be at particular risk for burnout, depression, substance abuse, and suicide for a variety of reasons (Rose & Brown, 2010). Some commonly cited indicators of stress among anesthesiology practitioners include production pressure, working in isolation from other anesthesia colleagues, and perceived lack of respect (Rose & Brown, 2010). Substance abuse is more common in

anesthesiologists and their support staff than in other medical specialties; however, the reasons for this are not entirely known. Speculated causes for this situation include easy access to mind-affecting drugs, environmental exposure to anesthetics, and potential genetic predisposition toward drug addiction (Bryson & Silverstein, 2008).

Numerous societal and personal consequences of physician burnout have been identified. Physician shortages are already realized in many underserved areas, and the U.S. Department of Health and Human Services projects a shortage of up to 90,000 physicians by 2025 (Shanafelt et al., 2016). Burnout, and specifically emotional exhaustion, are known factors in physicians reducing their work hours or leaving the profession entirely. A study conducted by Shanafelt and colleagues (2015) compared data on changes in burnout related to reduction in physician work hours. They observed that the increase in reported physician burnout between 2011 and 2014 translated into an approximate 1% reduction in the total work-hours effort of the U.S. physician workforce (or roughly equivalent to eliminating the graduating class of seven medical schools). Additional societal consequences linked to physician burnout may contribute to lower quality of care for patients, medical errors, and increased malpractice suits (Shanafelt, 2011).

Personal consequences of burnout for physicians include relationship problems, substance abuse, depression, and suicidal ideation (Shanafelt, 2011). Studies have shown that medical students enter training with a similar mental health status as their peers not entering medical school, but medical students experience substantial burnout and depression early in their medical training that peaks during residency training (Dyrbye, Thomas, & Shanafelt, 2006; Shanafelt, 2011). Commonly cited causes of burnout in

residency are the demanding training process that includes long work hours, unpredictable schedules over which residents have little control, stressful work environments, and accruement of significant educational debt (Shanafelt, 2011). Although the rate is lower than for the age-matched general population, suicide is the leading cause of death for male residents and the second leading cause for female resident deaths (Yaghmour et. al, 2017).

Existing Interventions

Limited data are available regarding how best to address trainee burnout, but efforts attentive to the learning and working environment are needed to promote and protect resident wellness. Existing interventions to prevent and reduce physician burnout were explored by West, Dyrbye, Erwin, and Shanafelt (2016) in a systematic-review and meta-analysis. They identified 2,617 articles related to interventions intended to prevent and reduce burnout in resident and practicing physicians. Their findings substantiate that effective approaches to reducing burnout include individual-focused interventions (e.g. mindfulness, stress management, small-group discussion), and organizational interventions (e.g. work-hour limitations, practice delivery changes). Which specific interventions are most effective for which groups of physicians (e.g., specifically for anesthesiology residents) is currently unknown. In addition, the long-term effects and sustainability of effective interventions is unknown because few studies have measured long-term outcomes (West et al., 2016). It is expected that new training requirements related to wellness (ACGME, 2019) will prompt multiple new interventions and studies of their efficacy.

Graduate Medical Education

After completing medical school, new physicians spend three to seven years in graduate medical education (GME) training in a specialty area. This study focuses on residents in GME training in anesthesiology. In order to understand the learning environment, the following discussion illustrates the current provision of education in anesthesiology residency. Much of the structure of residency programs is designed according to accreditation requirements (ACGME, 2019). Descriptions of the accreditation requirements that relate specifically to the focus of this study, anesthesiologist resident wellness and the program director role, are also presented.

Current Patterns of Education Delivery

Program directors for anesthesiology residency programs oversee the delivery of education to the residents, an experience that includes clinical, didactic, and simulation education. While some components of resident education are mandated by ACGME (2019) accreditation requirements, few national models exist. Hence, program directors make decisions about how education is delivered within their own training program. Program directors develop competency-based goals and objectives for each clinical rotation. The overarching goal of residency training is for the advanced education to culminate in graduating residents who exhibit sound clinical judgement in a wide variety of clinical situations and who can function as leaders of care teams (ACGME, 2019).

Clinical education. The clinical experience of residents comprises most of their preparation to become ready to enter practice and achieve certification. After successful completion of medical school, anesthesiology residents are trained over a minimum of four years. One year is spent in clinical-base rotations (e.g., medicine, pediatrics,

surgery), and three years are dedicated to clinical anesthesia training. The ACGME and anesthesiology residency review committee (RRC) dictate many of the requirements that are to be fulfilled during the four years of clinical education (ACGME, 2019). These requirements specify patient care and procedural skills, medical knowledge areas, and a wide array of other competencies that residents must demonstrate in order to graduate. Program directors have latitude to design many of the clinical experiences for their residency programs. For example, program directors have flexibility in deciding the order of clinical rotations and establishing unique elective rotations, such as global health opportunities during which residents practice anesthesiology in underserved parts of the world.

Didactic education. Although crucial, clinical education alone is not sufficient for anesthesiology residents to learn all of the knowledge needed to be fully competent and safe practitioners. A large body of medical knowledge is also expected to be taught through didactic education, which takes many forms in anesthesiology. Although traditional lectures are still a mainstay, active-learning techniques are gaining momentum. New generations of learners, continually increasing demands upon time, and increasing awareness in medical education about the benefits of active learning and blended learning have brought additions to traditional lectures (Kurup & Hersey, 2013). Many programs are now incorporating the flipped-classroom technique, problem-based learning, and case-based learning as well as blended learning with web-based modules, podcasts, and videos to supplement in-class sessions. Program faculty (i.e., physician anesthesiologists) are charged with both the creation and delivery of educational content, and the residency program director is responsible for overseeing the curriculum

(ACGME, 2019). No standardized national curriculum for anesthesiology training programs exists; thus, each program director is charged with overseeing the development and delivery of core content, evaluation of resident acquisition of knowledge, and provision of faculty development on sound teaching principles and techniques.

Simulation education. Traditional modes of education in anesthesiology have included hands-on experience in clinical education and acquisition of additional knowledge through didactics. Recently, anesthesiology education has also included simulation as a key component, following in the tradition of aviation simulation training (Howard, Gaba, Fish, Yang, & Sarnquist, 1992). The 2019 ACGME program requirements for anesthesiology specify that residents must participate in at least one simulated clinical experience annually. The use of high-fidelity mannequins for simulation has increased the realism of these sessions because many mannequins are programed to simulate realistically such functions as heartbeats, pulse, breath sounds, and seizures and to respond realistically to injected drugs or inhaled anesthetics. Residents use mannequins in mock operating rooms or pre- or post-anesthetic care settings in order to simulate either common or rare anesthesiology care situations. In addition, residents use task-based simulators to practice discrete skills such as intubation of a patient with a difficult airway or ultrasound-guided placement of a needle for regional anesthesia. Practice with the simulators allows residents to learn both basic and advanced skills in a controlled environment with no potential for patient harm and provides many opportunities for formative feedback (Okuda et al., 2009). Like didactic education, no national standardized anesthesiology simulation curriculum exists. The program faculty

are responsible for its creation and delivery, and the program director is responsible for ensuring its availability and oversight of the educational experience.

Accreditation Requirements

Residency training programs in the United States are reviewed by the ACGME. This accrediting body sets the basic requirements for all medical residencies (common program requirements) as well as requirements specific to each specialty.

Resident wellness. The 2019 additions and updates to the ACGME common program requirements place a new and major focus on resident wellness and a positive learning and working environment The philosophical basis behind these accreditation requirements is that the type of environment present during residency training affects residents' functioning long into their professional careers (Asch et al., 2009). The new accreditation requirements place tremendous emphasis upon this component of training and include an entirely new set of requirements related to resident wellbeing. Accreditation requirements addressing resident wellness include specifying that residency education must occur in an environment emphasizing commitment to the wellbeing of the residents (along with all of the other members of the health-care team). Following are the ACGME requirements that place responsibility on the residency program for wellness-related components of resident training and well-being:

- Enhancing the meaning that residents find in the experience of being a physician.
- Being attentive to issues around scheduling and the intensity of work that may impact resident well-being.

- Developing and enforcing policies that encourage both resident and faculty well-being.
- Giving residents opportunities to attend their own medical, dental, and mental health appointments.
- Devoting attention to resident and faculty burnout, depression, and substance abuse.
- Evaluating and addressing the workplace safety of residents.
- Providing a mechanism for clinical coverage for a resident who is unable to work due to issues such as fatigue, illness, or family emergencies. Policies for providing this clinical coverage must be implemented without causing residents to fear negative consequences or retaliation for not being able to work.

Management of resident fatigue is also subject to new specific standards in the 2019 ACGME program requirements. There has long been recognition within the medical community that excessive work hours lead to potentially dangerous conditions both for residents and their patients. Duty-hour restrictions have been included in the common program requirements since 2003; however, a recent study illustrated that an increased and compressed workload within work hours also has a negative effect on both residents and patients (Philibert, Nasca, Brigham, & Shapiro, 2013). To maintain compliance with ACGME (2019) accreditation requirements related to fatigue, residency programs must

- Educate faculty and residents to recognize signs of fatigue and sleep deprivation,

- Educate faculty and residents about alertness management and fatigue mitigation,
- Encourage residents to use fatigue mitigation strategies to minimize negative effects of fatigue on patient care and learning, and
- Ensure coverage of patient care in the case that a resident cannot perform duties due to fatigue.

Each individual residency training program is further charged with working in concert with its sponsoring institution (i.e., university, teaching hospital, medical center, health system) to provide additional resources and oversight for resident wellness. This standard appropriately recognizes that residency training programs need the support of the larger institution in order to provide adequate resources and oversight. The 2017 ACGME Clinical Learning Environment Review (CLER) pathways to excellence publication delineates the expectations for sponsoring institutions. These requirements include

- Ensuring adequate sleep facilities and safe transportation for residents who are too fatigued to get home safely;
- Providing education to residents and faculty about identification (including self-identification) of symptoms of burnout, depression, and substance abuse, including mechanisms to assist those who experience these issues;
- Encouraging residents and faculty to alert the program director immediately when they are concerned about a colleague who is displaying signs of burnout, depression, substance abuse, suicidal ideation, or the potential for violence;

- Providing access to tools for self-screening for the aforementioned potential issues; and
- Providing access to confidential mental health assessment and treatment including emergency treatment 24 hours a day, 7 days a week.

Program directors. Program directors are the faculty-physician leaders of residency training programs. The program director role is acknowledged by the ACGME, and obligations for individuals assuming this role are detailed in both common program requirements and specialty specific requirements (ACGME, 2019). Each anesthesiology residency training program must have identified a single program director charged with authority and accountability for the operation of the program.

According to the 2019 ACGME accreditation requirements, all program directors must possess certain qualifications including expertise in their medical specialty, educational and administrative experience, current medical licensure, and a medical staff appointment. Additional qualifications specific to anesthesiology program directors include current certification from the American Board of Anesthesiology, faculty experience, leadership skills, organizational skills, administrative qualifications, and documented academic work in anesthesiology education including publications, educational program development, or research. The importance of continuity of program directors to the training program is acknowledged by the requirement that the program director should continue in the position for a length of time adequate to maintain leadership continuity and stability of the program. However, a minimum length of time is not specified in the program requirements.

Roles and responsibilities of the program director are mandated by the 2019 ACGME program requirements. The program director is responsible for maintaining an educational environment for the residents conducive to educating them in the six general competency areas: (a) medical knowledge, (b) patient care, (c) interpersonal and communication skills, (d) practiced-based learning and improvement, (e) systems-based practice, and (f) professionalism. The program director must oversee and maintain the quality of both the didactic and clinical education for the residents, approve and evaluate faculty teachers, monitor the clinical supervision of residents, prepare and submit forms and updates to the ACGME, and implement policies and procedures.

Program directors are charged with direct oversight of several components of residency training directly related to resident wellness. This oversight includes responsibility for (a) closely monitoring resident duty hours according to the standards specified by the ACGME, (b) making adjustments to resident schedules to mitigate potential fatigue, (c) providing residents with back-up clinical support systems when patient-care responsibilities are unusually challenging or lengthy, (d) ensuring that the program has a policy and educational program for substance-abuse prevention and awareness addressing the specific risk-factors and needs of anesthesiologists, and (e) ensuring that resident service commitments are not so excessive as to compromise their ability to achieve educational goals (ACGME, 2019).

Program directors are provided with resources to facilitate their management of the residency program. First, the ACGME (2019) mandates that residency programs maintain a program coordinator, a non-physician staff person who provides the clerical administrative support for the program director and the residents. Second, the ACGME

mandates that program directors have non-clinical time provided by their department so that they may fulfill the multitude of duties required by their role. Depending upon the size of the residency program (defined by the number of residents), this would translate to approximately 1 to 2 days per week on average away from clinical duties to manage the residency program. The remainder of the program director's time is spent working clinically as an anesthesiologist, and much of this time is spent teaching and mentoring residents in the clinical setting.

A major complicating factor in the role of program directors in supporting resident wellness is that program directors themselves experience a high level of burnout. For example, de Oliveria and colleagues (2011) reported a high level of burnout (21%) among the 100 anesthesiology program directors participating in their study. Further, their self-reported scores on the validated Maslach Burnout Index revealed that 52% of the responding program directors were at high-risk for burnout. The same group also indicated that they felt less effective in their role as program director, were more dissatisfied with their position, were dissatisfied with the balance between their personal and professional life, and indicated a likelihood of resigning from their program director position within the next couple of years. Burnout among these program directors was also associated with emotional exhaustion and job-related stress including administrative duties (de Oliveria et al., 2011). A study by Adams and colleagues (2019) provided some encouraging data, suggesting that academic anesthesiology faculty did at least report a higher level of well-being than their residents on the ACGME well-being survey.

Program Directors as Leaders in the Healthcare System

Healthcare systems are complex and multi-faceted. As leaders, mentors, and role models for the physicians of the future, residency program directors help medical residents navigate this complex environment. To understand the program director leadership role, it is important to provide context for the healthcare learning and working environment.

Residents are trained and educated within teaching hospitals called academic medical centers (AMCs). AMCs are charged with the triple-aim of clinical excellence (i.e., taking care of patients), educational excellence (i.e., training medical students, residents, and fellows), and research excellence (i.e., developing new medical knowledge, devices, procedures, and practices). The pursuit of these aims has transformed AMCs into environments of innovation where clinically complex patients are served (Dyrbye et al., 2017).

The landscape of healthcare continues to change rapidly with an expectation of increased productivity and less time spent with patients, expanded regulatory requirements coupled with decreasing reimbursements, and continual growth in medical knowledge needing to be gained (Shanafelt, 2011; Shanafelt & Noseworthy, 2017). A significant component of the changing landscape of healthcare is adoption of electronic medical records. The acquisition and implementation of electronic health records represents a significant cost to hospitals, and a significant clerical burden for physicians (Shanafelt & Noseworthy, 2017).

Graduate medical education for residents is funded in part by Medicare; however, the institution shoulders the majority of the direct costs for training residents (Dzau, Cho,

& Ellaissi, 2013). These expenses include resident stipends and benefits, purchase of simulation and other training equipment, and salaries for administrative staff to support the residency program. The majority of AMCs are not-for-profit and provide an invaluable service to the most vulnerable populations of society (Grover, Slavin & Wilson, 2014). According to Dzau and colleagues (2013), although teaching hospitals represent only 5% of all hospitals in the USA, these environments serve a disproportionate number of underserved populations including 26% of Medicaid hospitalizations and 37% of charity care where no payment to the hospital is available. Teaching hospitals operate the vast majority of standby services needed in emergencies, representing greater than 80% of Level 1 trauma centers and burn centers. Serving a high-need and critically ill population drives up the average cost of service at AMCs, which are under increasing pressure to meet their economic challenges. This pressure manifests in many ways including additional service demands, pressure for increased funding for research, and even suggestions that resident training time be shortened to decrease costs (Dzau et al., 2013).

Another economic factor at play is that although the ACGME continues to increase accreditation requirements for individual programs and their sponsoring institutions, there is no funding provided to offset the additional costs. For example, requirements include such measures as providing (a) access to counseling services and emergency mental health services, (b) clinical coverage when residents need to attend their own health appointments, and (c) access to screening tools for burnout (ACGME, 2019). Meeting these requirements comes with considerable cost to a sponsoring institution, but there is no additional funding provided to meet the requirements. In

theory, cost savings will be realized from physicians being mentally and physically healthy and better able to provide the highest level of care to their patients.

Program Director Leadership Qualities

Leading a residency program in an AMC is a multi-faceted and challenging role. In addition to coordinating high-demand residency training, program directors must navigate the complexity of the healthcare environment and its economics, address issues and frustrations related to the adoption of electronic health records, meet clinical demands of caring for underserved populations and critically ill patients, assure compliance with a multitude of accreditation requirements associated with residency training programs, and protect themselves from their own risk of burnout.

While the leadership by anesthesiology program directors may help to assure an optimal clinical learning environment for residents in training, specific leadership qualities may benefit program directors in their quest to oversee, train, educate, and secure the wellness of residents. Spears (2010) outlines several characteristics of effective, caring leaders that illuminates major ways program directors can positively impact anesthesiology residents:

1. *Awareness*: Program directors can use their leadership position to bring awareness within the department and institution to issues related to resident burnout and depression. For example, program directors can use the knowledge that residents early in their first year of training are at an increased risk for suicide (Yaghmour, 2017) in order to bring increased support during this time. Increasing awareness may also help struggling residents to feel less isolated.

2. *Empathy*: Program directors are well positioned to provide genuine empathy to anesthesiology residents because they have also completed residency training and as practicing physicians may likewise be experiencing many of the same stressors as the residents.
3. *Listening*: Program directors can adopt an open-door policy for residents, inviting them to share and being willing to listen. Listening may take the form of both individual discussions and small-group discussions with residents to discuss concerns. Program directors may be able to help residents seek additional help when they are in psychological distress.
4. *Persuasion*: Program directors may be able to effectively persuade and negotiate for further wellness resources for residents, such as increased access to medical and mental health services. The program director may be often in the role of liaison between the residency program and the institution, advocating for policies and facilities that support resident well-being.
5. *Commitment*: Program directors are key in demonstrating commitment to resident wellness by overseeing and enforcing accreditation standards such as work hour limitations.
6. *Building Community*: Program directors can help provide a supportive community for residents. People have a need for social connectedness and camaraderie, and this sense of community can be protective against developing burnout (Swensen & Shanafelt, 2017).

One Dutch study found that residents who described their relationship with their supervisors as supportive and beneficial had lower emotional exhaustion and

depersonalization than residents who felt under-appreciated by their supervisors (Prins et al., 2008). Program directors who are able to draw upon leadership lessons from business literature and build supportive relationships with residents may be well positioned to meet the leadership challenges they face (Mets, 2005).

Servant Leadership

The original concept of servant leadership was developed by Greenleaf (1977) who defined it as actions by persons who understand they are servants first and then develop a conscious choice to lead. Servant leaders make sure that high-priority needs of other people are served first. Greenleaf further asserted that those who are led grow personally as a result of the leadership by a servant leader. Servant leadership is not rooted in the ego but rather in the selfless regard for others. Servant leaders voluntarily take on this role. Additionally, Greenleaf describes the servant leader as one who supports and develops a healthy community.

For this study, anesthesiology program directors are considered servant leaders due to the healthcare context in which they work and specifically through their leadership of anesthesiology programs. The program director serves first as a physician and over time develops the desire to lead as the residency program director. Because program directors assure priority needs of the residents are met during training, including their wellness, and because they voluntarily assume this role, their actions evidence servant leadership. Program directors advocate for residents' success and well-being to department faculty and institutional members, and they monitor residents' training and growth as a physician while protecting their physical and mental health. Further, the program director helps to maintain a healthy learning community by providing

educational opportunities, mentoring residents and other program faculty, and ensuring that the learning community meets the standards for residents to ultimately become board certified anesthesiologists.

Conceptual Framework

Previous research and literature has acknowledged the role and value of the servant leadership concept in healthcare (Allen et al., 2016; Aij & Rapsaniotis, 2017; Boden, 2014; Cottey & McKimm, 2019). Healthcare organizations are still largely dominated by a transactional, top-down, hierarchical, managerial style (Schwartz & Tumblin, 2002; Smith, 2015). However, at its heart, the business and core mission of healthcare is to serve patients. Leadership styles often found to be most effective in the business world are transformational, situational, and servant leadership, which healthcare leaders must adapt as the health care industry changes (Schwartz & Tumblin, 2002).

One of the first studies exploring the concept of servant leadership in the healthcare environment was conducted by Garber, Madigan, Click, and Fitzpatrick (2009). Their research explored the dual concepts of collaboration and servant leadership as related concepts with a focus on relationships between physicians and nurses. In Chestnut's (2017) essay on professionalism in anesthesiology, he specifically identifies those that demonstrate servant leadership characteristics as an ideal example. He discusses the mix of personal humility and professional leadership present in servant leaders that is well-suited to anesthesiology as a profession.

Lean leadership is a philosophy originally developed in the automobile industry by Toyota and is focused on improving processes and eliminating waste (Liker & Convis, 2012). Lean leadership philosophy is often applied to the healthcare setting due to the

need for ongoing improvements in quality and efficiency, while controlling healthcare costs (Toussaint & Berry, 2013). A systematic review of the literature comparing lean leadership and servant leadership was conducted by Aij and Rapsaniotis (2017). They found multiple overlaps in the two leadership styles and concluded that servant leadership could serve as an effective way to strengthen lean leadership implementation in health care settings and facilitate process improvements. Further, the utility of servant leadership specifically in the intensive care unit environment was discussed by Savel and Munro (2017). The common thread in studies examining the role of servant leadership in healthcare organizations is that the characteristics and actions of servant leaders are core to the way healthcare leaders should ideally function.

Like servant leadership, transformational leadership moves beyond traditional styles of supervision, organization, and group performance to emphasize that people work more effectively together when they have a sense of mission. Transformational leaders communicate vision and mission in a way that is meaningful to followers, creates unity, and helps motivate people to work towards a common cause for mutual benefit (Gabel, 2012). As explained further by Gabel, both transformational and servant leadership have a moral component in which the two leadership styles raise the level of conduct and ethical aspirations of those who are led. Transformational leadership is appropriate for and applicable to healthcare leaders in many roles, including that of the program director who leads the educational mission of the department and the residents in training (Saravo, Netzel & Kiesewetter, 2017).

Characteristics and Actions

Characteristics of servant leaders include functioning in a way that builds trust, having intuitive insight, displaying honesty, acting in a way that displays social responsibility, and relating to others in a manner that is creatively supporting rather than coercive. Servant leaders initially emerge with their having a feeling that they want to serve, and then they make a conscious choice that drives them to lead. This leadership awareness is markedly different from the individual whose main motivation and desire is simply to lead. Servant leaders make choices based upon what serves the highest needs of others, and they are open to inspiration. They are trusting individuals who elicit trust from others without striving for it. Followers trust in multiple dimensions of servant leaders, including both the competence and the spirit of these leaders to move the group towards achievement of goals. Because servant leaders are goal directed, they are able to communicate effectively an overarching purpose and keep followers motivated to work towards a big dream or visionary concept. These leaders can discern what is important from what is less important, while having reserve energy to deal with emergencies. Those who are led depend upon the leader due to heightened judgement and heightened creativity (Greenleaf, 1977).

According to Greenleaf (1977), servant leaders possess high levels of both awareness and perception. A servant leader is simultaneously capable of maintaining three perspectives all at once: (a) historian, (b) contemporary analyst, and (c) prophet. Servant leaders possess a sense about the unknowable and have foresight for what is not evident to others. Foresight is actually the *lead* that a leader possesses. A servant leader

maintains two levels of consciousness, both the current real world and foresight of what may come, while helping those who are led to move forward in the right direction.

Further, servant leaders typically remain close to those being led rather than being separated from people in a hierarchical manner. Through this closeness, a servant leader hears, sees, and knows things by being not only physically but also emotionally present. Their intuitive insight makes others perceive servant leaders as both dependable and trusted. They are able to care for individuals and institutions while ensuring that all parties have adequate power and resources for their roles. Thus, servant leaders help those who are led to be healthier, wiser, freer, more autonomous, and more likely themselves to become servants. The servant leader, in essence, helps people to become the best version of themselves (Boden, 2014; Parris & Peachey, 2013).

Further, a servant leader provides creative ideas and is not afraid to risk failure when in the pursuit of a worthy cause where a possibility of success exists. By modeling this, they simultaneously raise the spirit of those that are led, helping them to build their confidence, working with them to find their direction, and helping them obtain the competencies they need to acquire to achieve their highest potential. Although the emotional impact of leaders is rarely discussed in the workplace, inspirational, empathetic leaders can have a tangible positive impact upon organizational performance (Goleman, Boyatzis, & McKee, 2001).

An essential action of a servant leader is listening. Through listening, the leader receives insights from others, which helps to strengthen the team. Building strengths of others is one of the actions of a servant leader, which is enabled by the intentional habit of listening. Servant leaders accept others and display empathy. However, it should be

noted that although a servant leader always accepts the person, the person's effort or performance may not necessarily be assessed as acceptable or proficient. In other words, if a servant leader perceives that the individual is not performing as expected or up to their potential, the leader will address the issue. This is done, however, out of a desire to help the individual achieve her or his full potential. The acceptance can also be characterized as tolerance of imperfections, an empathetic approach by a servant leader who seeks to build trust. The servant leader at times carries the burdens of others and goes ahead to show the way towards progress (Allen et al., 2016; Aij & Rapsaniotis, 2017; Cottey & McKimm, 2019). This is often the role of medical program directors as they carry the emotional and psychological burdens of struggling residents and show them that they can reach their full potential as physicians and members of society.

Anesthesiology Program Director Survey

Multiple iterations of surveys designed to measure servant leadership have been developed and tested within a variety of professions ranging from business to education (Green, Rodriguez, Wheeler, & Baggerly-Hinojosa, 2015; Laub, 1999; Sendjaya, 2003). The self-assessment instrument incorporating numerous characteristics and actions most closely related to the role of the program director is the Servant Leadership Profile-Revised (SLP-R) developed by Wong and Page (2003). Eight domains of servant leadership are included in this self-assessment instrument, with multiple questions on the instrument corresponding to each domain. Respondents to the instrument are asked to rate each question on a scale of *strongly disagree* to *strongly agree* in terms of what he or she believes or normally does in a leadership situation. Sixty-two questions are included in the SLP-R. Positive qualities measured by the instrument include (a) servanthood, (b)

leadership, (c) visioning, (d) developing others, (e) empowering others, (f) team-building, (g) shared decision making, and (h) integrity. Negative qualities measured include (a) abuse of power and control and (b) pride and narcissism. An outline of each domain and how the domains relate to the specific leadership role of anesthesiology program directors is included in Table 2.1.

Table 2.1

SLP-R Self-Assessment Domains and Sample Associated Program Director Responsibilities

Domains	**Related Program Director Roles Responsibilities**
Developing and Empowering Others	Provides abundant opportunities for residents to learn new skills Encourages residents to come up with new ideas
Expressing Vulnerability and Humility	Considers and learns from the views and opinions of residents Refrains from continually criticizing residents for mistakes
Demonstrating Authentic Leadership	Is open with the residents about true feelings Is open with the residents about self-perceived limitations and weaknesses
Practicing Participatory Leadership	Recognizes and celebrates successes of the residents Helps residents develop their own leadership skills
Inspiring Leadership	Communicates enthusiasm and confidence in residents' abilities Helps bring out the best in the residents
Displaying Visionary Leadership	Emphasizes to residents the societal responsibility of their work Expresses a long-term vision to residents
Modeling Courageous Leadership	Takes risks to do what needs to be done to support resident wellness

Summary

Anesthesiology residency program directors are charged with the responsibility of overseeing the education, training, and development of new generations of anesthesiologists. Their role includes the difficult task of protecting the wellness of the residents, a cohort of medical personnel at high-risk for burnout, depression, and suicide. The difficulty of this task is compounded by the reality that program directors are themselves also at risk for experiencing these same issues while managing this demanding job. However, substantial hope lies in the fact that program directors are well positioned to serve as empathetic role-models and mentors for residents and as administrative leaders of initiatives to enhance the clinical learning environment. New accreditation requirements specific to the well-being of both residents and faculty provide a regulatory basis for protection of physicians' wellness and the role of the program director in leading these initiatives. Leadership qualities of program directors may provide a supportive environment for anesthesiology residents to thrive personally and professionally.

Servant leadership in the healthcare context appears to be an appropriate construct to measure characteristics and actions of residency program directors in relation to their role in ensuring a healthy clinical learning environment and the well-being of residents. Servant leadership is conceptually valued as a means to improve the healthcare learning environment on both individual and organizational levels. On the organizational level, servant leadership enacted by program directors can help lead change as the health care industry evolves and can facilitate the improvement of processes. Much within this organizational level is driven by the personal-level impact of servant leadership. Servant

leaders in a healthcare setting can model professionalism, improve relationships among colleagues, and help others identify areas of strengths and weaknesses. Servant leadership is explored in the context of the organizational level (i.e., chair of anesthesiology resident program) to advocate for and design interventions and supports for the well-being of residents. On the individual level, program directors serve as an empathetic, guiding mentor to the residents as they navigate the complexities of residency training.

Currently, it is unknown how anesthesiology program directors perceive themselves as servant leaders, and it is unknown how program directors perceive their leadership role in relation to resident wellness. Although physicians display characteristics of transformational and servant leaders, they may not be familiar with the specific terminology of leadership or the literature on leadership and organizations (Schwartz & Tumblin, 2002). Neither the current state of wellness initiatives in anesthesiology residency programs nor the existence of future plans for development by program directors is known. This study seeks to explore these concepts and in the process provide a self-assessment of servant leadership characteristics designed for residency program directors.

The next chapter describes the methodology used for this study. Chapter Four presents survey results and interview findings. The final chapter includes a discussion of the findings as well as implications and recommendations for further research and practice.

CHAPTER THREE

METHODOLOGY

The purpose of this study was to explore the state of wellness initiatives for anesthesiology residents and how anesthesiology program directors perceive themselves as servant leaders in the context of supporting such initiatives. The target population for this study was anesthesiology residency program directors who serve as the educational leaders in universities and medical centers within the USA. This study (a) extends previous research by describing the wellness programs currently in place for anesthesiology residents and (b) illuminates the role of educational leaders in supporting anesthesiology resident wellness initiatives. This study used a mixed-methods study design combining survey and interview procedures. The following research questions guided the study:

1. How do program directors perceive themselves as servant leaders in the context of supporting anesthesiology resident wellness initiatives?
2. What are the top five challenges to wellness faced by anesthesiology residents as reported by their program directors?
3. What common components of wellness initiatives in anesthesiology residencies currently exist?
4. What barriers to current wellness initiatives do anesthesiology program directors identify?

This chapter presents the research design, relevant past works using this methodological approach, a detailed description of the methods for the survey and interview components of the study, the role of the researcher, and potential limitations.

Rationale

Mixed-methods research combines both qualitative and quantitative approaches, and one way to accomplish this is through the use of the use of both survey and interview methods in a single study. Combining survey methods and interview methods allows a researcher to draw upon the strengths of both procedures so that the overall strength of the study is greater than either the quantitative (survey) or qualitative (interview) method alone (Creswell, 2009). A major strength of combining these methods is that it permits a researcher to explore complex issues in greater depth and increase confidence in the data collected (Driscoll, Appiah-Yehboah, Salib, & Rupert, 2007). The qualitative data complement the survey responses by providing deeper understanding of information gathered. According to Creswell (2009), the many benefits to using mixed-methods include (a) providing a way to help answer complex research questions associated with social and health science research, (b) bringing together research teams with diverse methodological approaches, and (c) allowing opportunities for additional insights into research questions through using both qualitative and quantitative approaches.

Techniques have been developed to combine effectively the results of mixed-methods studies to maximize the information that this type of study generates. One such technique called a *triangulation protocol* is described by O'Cathain, Murphy, and Nicholl (2010). When using this technique, a researcher lists the findings from each component of the study (i.e., the survey and the interviews) and determines where the findings (a) converge or agree, (b) provide complimentary information, and (c) reveal discrepancies or contradict each other. Exploration of the seemingly contradictory areas may provide insights into the research questions not yet considered (O'Cathain et al., 2010).

Combining the qualitative and quantitative procedures and using appropriate techniques for integrating the data provides an effective method to explore the research questions in this study.

Review of Relevant Works

Review of studies conducted using mixed methods, both in the healthcare professions and in educational leadership studies, informed the design of this research. A recent study by Hargett and colleagues (2017) utilized a concept-mapping approach to understand the competencies of effective leadership among healthcare professionals. In this study, the investigators first conducted face-to-face focus groups (qualitative method) with faculty and residents in order to generate a list of important healthcare leadership attributes. The researchers then administered an online survey containing forced-response prompts that asked participants to sort and rank order the leadership attributes in order of their perceived priority. The researchers were able to develop a graphic representation of the most highly rated physician leadership attributes, which could be utilized in leadership training in their institution.

A mixed-methods study using a survey with emergency medicine medical educators (quantitative method) followed by iterative group discussions within an emergency medicine educator workgroup (qualitative method) was conducted by Wolf and colleagues (2018). The goal of this research was to gather opinions of emergency medicine educators on resident work-hour standards and formulate recommendations for the accrediting body. A significant strength of this study was the multi-institutional design. Because the survey for this study includes program directors from across the nation, it shares a similar strength in gathering representative data. In addition, this

mixed-methods study in healthcare leadership includes an interest in the resident work environment similar to that of the study conducted by Wolf and associates.

Doctoral dissertations with an educational leadership focus and mixed-method design were helpful in informing the design of this research study. In her 2009 doctoral dissertation, Robertson examined superintendents' leadership styles and how they impacted their implementation of legislative mandates on student wellness policies. The researcher used a mixed-methods approach using the Multifactor Leadership Questionnaire, semi-structured interviews with superintendents, and interviews with district committee members. This research was helpful and relevant to the design of this study because it explored the construct of the wellness of learners and the impact that educational leaders may have upon this aspect of their life. A strength of Robinson's research was her use of purposeful sampling to select the superintendents for interviews: She chose them based upon demographic descriptions of their school districts in order to select a small but meaningful sample to answer her research question. The sampling strategy of this study was designed in a similar manner. In order to minimize the potential limitation of self-reporting leadership style in this study, I used validated, well-designed questions, and explored self-perceptions of leadership in greater depth during the interview conversations.

Research Design

The following section provides context for the study including a description of the mixed-methods design and an explanation of Phase 1 and Phase 2 of the research. Details presented include the study participants, instrument descriptions, data collection methods, and data analysis.

In an effort to evaluate all aspects of the phenomena that potentially challenge anesthesiology resident wellbeing, a two-phase mixed-methods research design was chosen that combines characteristics of both quantitative and qualitative research approaches. This study utilized a sequential explanatory design (Creswell, 2009) including qualitative research questions to provide explanations for the findings elicited from quantitative questions posed on a survey. Data collection was implemented in two phases with the quantitative survey method followed by the qualitative interview method.

The sequential explanatory design model is outlined by Creswell (2009) on page 209 and is illustrated below in Figure 3.1:

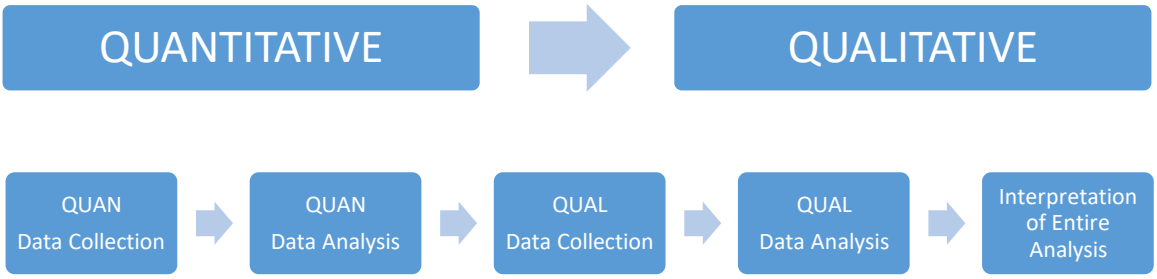

Figure 3.1. Sequential explanatory design model.

This figure illustrates the sequential explanatory design model utilized in this study.

The sequential explanatory strategy was designed with the first phase of the research involving the quantitative data collection and analysis of the quantitative data, which was comprised of the program director responses to an online survey. The second phase of the research involved collection and analysis of the qualitative data comprised of responses by program directors during semi-structured interviews. The qualitative data helped to explain and clarify the results of the quantitative data analysis, which was particularly helpful in exploring surprising results that arose in the quantitative data analysis (Creswell, 2009).

Study Design Phase 1

The following section outlines Phase 1 of the study design. Included is information on the study participants and their recruitment, survey instrument, and the data collection and analysis.

Participants

To be included in the survey portion of the research study, individuals were current anesthesiology residency program directors of anesthesiology programs accredited by the ACGME. Currently, there are 151 accredited anesthesiology residency programs in the USA. Each residency program has one designated program director; thus, the potential research population included 151 individuals. The program director is the individual identified in each program as having authority and accountability for oversight of the educational training program. Qualifications of the program director include current certification by the American Board of Anesthesiology, current medical license and medical staff appointment, experience including prior leadership roles, organizational expertise, and administrative qualifications, and academic achievements including publications, educational program development, and research (ACGME, 2019).

Instrument

The survey instrument used in Phase 1 of the research included both closed- and open-ended response items divided into three sections (see Appendix A). Section 1 included 62 questions on self-reported leadership characteristics that asks respondents to rate themselves on seven domains of servant leadership using a 7-option Likert scale. The domains were developed by Wong and Page (2003) in their process of developing

the validated Servant Leadership Profile-Revised (SLP-R) and are listed below in Table 2 along with the corresponding survey items.

Table 3.1

Survey Items Targeting Domains of Servant Leadership

Servant Leadership Domains	**Corresponding Survey Items**
Developing and Empowering Others	16, 21, 23, 27, 31, 37, 38, 39, 42, 46, 48, 49, 53, 59, 61, 62
Power and Pride (Expressing Vulnerability and Humility)	9, 14, 15, 18, 28, 29, 56, 60
Demonstrating Authentic Leadership	6, 17, 30, 44, 45, 47, 50, 51, 52, 57, 58
Practicing Participatory Leadership	2, 5, 7, 8, 10, 11, 12, 34, 35, 36
Inspiring Leadership	1, 13, 19, 20, 22, 25, 26
Displaying Visionary Leadership	40, 41, 43, 54, 55
Modeling Courageous Leadership (Integrity, Authenticity)	3, 4, 24, 32, 33

Three of the questions in the survey instrument (i.e., 5, 39, 42) were modified for this study from the original questions by replacing the words “workers” and “employees” with the word “resident” in order to be more specifically relevant to the program director role.

Section 2 of the survey included questions regarding current and desired resident wellness initiatives and program director perspectives on issues leading to decreased resident wellness. Question content was guided by the requirements and expectations related to resident wellness as outlined in the ACGME (2019) common program requirements. Section 3 included demographic questions about the program director (respondent) and his or her anesthesiology residency training program. Demographic items included length of time serving as program director, number of residents in the

program, and gender of respondent. Finally, respondents were asked if they would like a copy of the survey results and if they would like to participate in a follow-up phone interview; both questions required respondents to provide their contact information.

The survey was tested for clarity of the items and design by conducting a pilot at my institution. I asked five program directors and associate program directors at the University of Kentucky across multiple specialties (e.g., surgical, medicine, hospital-based specialties) to pilot the web-based survey. This cohort of individuals have responsibilities within their own training programs similar to those directing anesthesiology programs, are leaders in graduate medical education, and charged with developing wellness initiatives for their own residents. I analyzed their survey responses and talked with each of them individually (i.e., cognitive interviews, think-aloud prompts) to gain insight on issues with wording of directions, question construction, survey layout, and online administration. The survey instrument was revised based upon this feedback.

Data Collection and Analysis

During Phase 1 of the study, survey data were collected via Qualtrics, a secure, web-based program designed to collect data for research studies available to scholars affiliated with the University of Kentucky. This survey-administration platform has the capability to optimize the survey for mobile devices, per the design guideline recommendations of Dillman, Smyth, & Christian (2014). An initial email was sent to each of the all potential study participants that described the study and invited their participation. The email addresses for anesthesiology program directors were available

through the Society for Academic Associations of Anesthesiology and Perioperative Medicine.

Multiple methods were utilized in this study to enhance the rate of return and minimize errors due to non-response. Because non-response error is the result of survey respondents being different from the non-respondents in ways that are relevant to the survey questions and study aims (Dillman, 2007), it may prevent the data from being generalizable to the total target population. Methods to improve the return rate and minimize non-response error in this study included constructing the survey design carefully, sending reminder electronic mail messages to non-respondents, and offering to provide a summary of data to the respondents.

The survey design may be the most important element in improving the rate of return, and attention to details is worthwhile (Fowler, 2014). The layout of the survey tool was clear, and it is evident how the respondent should proceed. Questions, which were clearly and succinctly worded, were numbered and presented one at a time with the option for respondents to go back and change answers if needed. Question types were selected carefully in order to eliminate unnecessarily complex prompts that may discourage responses. An indicator letting the respondent know how many of the questions have been completed was included, which is an option more subtle and more accurate than using a progress bar and perceived to be more effective in encouraging completion of the survey (Dillman et al., 2014).

The timing of all contact with the participants was strategically planned for administration to the specific population (anesthesiology program directors) in mind. Dillman and colleagues (2014) recommend sending web-based surveys early in the

morning. This strategy worked well for the study target population because anesthesiologists typically begin their work day very early before surgeries begin. Survey administration was staggered to the participants in each time zone to assure invitation to reply was received at approximately 6:00 am in each respective time zone. The original due date provided was three weeks from the date of initial administration. An email reminder was provided at two-week intervals before the due date, one week before the due date, and finally, one day before the due date. The surveys were administered directly to recipient email addresses to assure that reminder emails only went to those who had not yet responded. This targeted reminder method served two purposes: First, it provided the ability to remind those who had not yet taken the survey while not providing unnecessary reminders to those who already took it. Second, it eliminated the possibility of a subject taking the survey more than once.

The content of reminder emails varied somewhat from the first email administration of the survey, a recommended technique used to improve the response rate by generating interest in the survey (Dillman et al., 2014). Although the Institutional Review Board (IRB) required elements of the survey introduction remained the same, the reminder emails contained additional content including an update on how many people had responded in order to provide a more personalized and interesting experience.

The cover letter for the survey indicated that respondents may request an aggregate copy of the survey results, offered as a technique to encourage responses. The survey topics regarding anesthesiology resident wellness and program director leadership were likely of interest to the respondents, which generated interest in responding and having the opportunity to view the results. According to social exchange principles,

many people feel a sense of satisfaction in showing a positive regard for others, and answering these survey questions may have provided that benefit to respondents (Dillman et al., 2014). Respondents were informed that their request for the survey results would be kept separately from their own data, ensuring that their contact information would not be attached to their survey results and thus maintaining confidentiality.

Analysis of survey data was conducted using the Statistical Package for the Social Sciences (SPSS) Software for Microsoft Windows and includes descriptive and inferential statistics. Themes that emerged from analysis of the survey data were used to develop and refine the interview questions for Phase 2 of the study. This process enabled further exploration of the survey themes with the interview participants.

Study Design Phase 2

The following section outlines Phase 2 of the study design. Included is information on the study participants, the interview protocol, and the data collection and analysis.

Participants

To be included in the interview portion of the study, individuals were current anesthesiology residency program directors. Program directors who participated in the survey had the option to volunteer to be interviewed by answering the last survey question, which served as the initial recruitment strategy. Program directors chosen to participate in the interviews were selected based on the diversity of program size to include both smaller (less than 20 residents) and larger (20 or more residents) anesthesiology residency training programs, both males and females, and diverse

experiences as program director. All willing participants were interviewed until content saturation was reached with 15 interviews.

Interview Protocol

Interviews in Phase 2 of the study were conducted using a semi-structured interview script (see Appendix B). The semi-structured interview tool was fully developed after analysis of the survey component (Phase 1) of data collection. As the second phase of the sequential explanatory design model, data gathered from diverse program directors helped to explain and clarify the results of the quantitative data analysis (Creswell, 2009).

Data Collection and Analysis

To collect the data for the interview portion of the study, I sent electronic-mail invitations to the list of volunteers selected from those who responded to the last question on the survey. Interviews were conducted as soon as possible after survey completion based upon the recommendations of Harris and Brown (2010). The phone interviews were audio-recorded and conducted at convenient time for both the interviewee and interviewer. I transcribed the recorded commentary.

After completion of all interviews with program directors and transcription of their responses, I analyzed interview commentary to identify major themes and unique conditions or events that support the well-being of anesthesia residents. A coding process recommended by Stake (1995) was utilized. While listening to each recording, important quotes ware highlighted and then coded electronically. Analysis of the interview transcriptions was completed using qualitative strategies (Merriam, 1998; Yin, 2011). Software for qualitative research was used for coding and comparing text.

All interview recordings and transcriptions were stored on my password-protected computer. Only participants' first and last initials and interview date were recorded on the interview transcriptions to protect confidentiality of study participants. The audio-recordings and transcriptions will be saved on my password-protected computer for six years after the conclusion of the study and thereafter destroyed.

Ethical Considerations

In order to protect the rights of study participants, I completed the required human subject's protection training and obtained approval from the University of Kentucky IRB (Appendix C) to ensure compliance with all ethical considerations regarding informed consent, participant interaction, data collection, and data analysis. For the quantitative component of the research, the first page of the electronic survey explained the purpose of the study and the rights of the participants and other required information. Consent was implied by the participant completing and submitting the survey. Prior to the beginning of each phone interview, I explained the study and requested verbal consent to participate. No names or other personally identifying information were collected during the survey or interview procedures in order to protect the confidentiality of the respondents.

Role of the Researcher

As the principal investigator, I actively led all aspects of the methodological process. With assistance from my advisory committee members, the study was designed to ensure scholarly rigor. While expert committee members provided guidance, I assume all responsibility for data collection through survey administration and interviews and data analysis and interpretation of results and findings.

Researcher Background

I have an educational background in secondary education, rehabilitation counseling, and medical education. I have spent the past 12 years as the education specialist for the University of Kentucky College of Medicine Department of Anesthesiology working closely in this capacity with both the residents and the program director, including serving as the chair of the department wellness committee. National committee work and collaborative research has also allowed me to interface with residents and program directors at multiple additional anesthesiology residency programs, thus making me familiar with many of the potential research participants. This combination of my education and experience was instrumental in the design and conduct of this study.

Potential Researcher Bias

My role as the researcher introduced a potential bias particularly in the interview phase of the study. Although not a physician, anesthesiologist, or program director, I have worked in the anesthesiology education field for more than a decade and have met, attended conferences with, and worked on research projects with many of these program directors over the years. With the reality that these professional relationships may have generated potential bias during interviews, I strove to minimize bias by utilizing the script and minimizing any additional discussion off the topic of the study. In addition, I did not know or have a previous relationship with the majority of the program directors I interviewed.

Limitations

The selected research design presented some potential limitations. This section discusses limitations that may be present with survey research and interview research and outlines methods used to minimize these potential issues.

Limitations of Survey Methods

Despite the multiple benefits of surveys, their administration has limitations. One limitation to consider is the potential for error. Ideally, carefully designed surveys minimize error in the data collected. One of the fundamental premises of a survey is that it will produce data from a sample that is representative and can be used to describe accurately the characteristics of the sample population and ideally the larger target population (Fowler, 2014). This premise introduces the possibility of two types of potential errors: an error associated with who answers (i.e., sampling error or the sample drawn from the larger population may not accurately represent the total population) and an error associated with the answers to the survey questions themselves (i.e., measurement error). Dillman (2007) defines measurement error as occurring when a respondent's answers are incorrect, imprecise, or cannot be compared meaningfully to the answers of other respondents. This typically arises from poorly worded questions or questions being presented in a way that generates inaccurate responses. Dillman explains that completion of a survey involves both cognition (a clear understanding of what is being asked) and motivation to take the time and effort to do so. Measurement error is reduced through careful question design and thoughtful construction of the survey tool. Fowler (2014) explains that survey errors can be caused by many factors such as the participant not understanding the question (and not having a way to ask the researcher for

clarification), the question not being a valid measure for a subjective quality, or the participant distorting an answer in an attempt to choose what he or she believes is the most desirable response. If the sample is not chosen wisely and the survey is not crafted carefully to produce valid results, the errors may be of such magnitude that the survey results may not be considered an accurate representation.

Another limitation of surveys surrounds the ability of researchers to adequately gather information about nuanced, sensitive, controversial, or emotionally charged topics (Dillman, 2007). Some respondents may choose to skip questions or abandon the survey altogether if they become uncomfortable with the content of the questions. Such topics may be better explored in an interview format where a relationship between the interviewer and interviewee can be established.

Although technology is enabling growth in the use of web-based surveys, technological limitations and cautions are also present. Dillman and colleagues (2014) describe some of these limitations including the issue that a survey may appear visually different depending upon the type of browser and device being used by the respondent. For example, a lengthier survey, or one requiring a large number of open-response questions, may be arduous to complete on a mobile phone due required scrolling through the questions and the possible difficulty of writing lengthy open-ended responses on this type of device.

Despite careful plans to minimize nonresponse error in the described survey study, this is still a potential limitation. Residency program directors, like many professionals, tend to receive a large number of surveys from their departments, institutions, accrediting bodies, medical societies, and professional organizations, which

may lead to survey fatigue and a reluctance to complete yet one more survey. An additional possible limitation is that the survey may be subject to measurement errors associated with respondents answering leadership questions in a manner that they think is socially desirable rather than with an authentic response.

Limitations of Interview Methods

Interviews present their own set of limitations and areas of caution for the researcher. Some of the limitations of interviews discussed by Nardi (2014) include:

- They are time consuming to construct, to transcribe, and to code.
- They are typically limited to smaller samples than surveys due to time constraints.
- The characteristics of the interviewer (e.g., race, age, gender) may potentially generate biased responses.
- They are more difficult to replicate with fidelity than survey methods.
- Due to the lack of confidentiality or anonymity in interviews, some respondents may be hesitant to discuss personal or sensitive subjects.

Another interesting potential drawback to interview methods is that recently people have become less and less patient with the time it takes to be interviewed for a study (Dillman et al., 2014). People now expect brief, direct communications (e.g., texting versus phone calls) that can be completed at their convenience and thus may tend to prefer a web-based survey over a longer interview session.

Although there is the possibility of limitations with mixed-methods design, all available strategies were utilized in this study to minimize errors and enhance validity of the study outcomes. Measurement error was reduced through careful question design and

thoughtful construction of the survey tool. Dillman and colleagues (2014) discuss multiple important aspects of question design utilized in the development of this survey that include

- Selecting the appropriate question format for each question (e.g., open-ended and closed-ended questions).
- Ensuring that the questions apply directly to the target population (e.g., questions that are reasonable for the program director to answer accurately).
- Asking only one question at a time (e.g., eliminating double-barreled questions that contain more than one concept in a single question).
- Using words familiar to the target population and clarifying ones that they may not be familiar with (e.g., providing definitions of terms related to leadership concepts).
- Using a minimal number of words to express the questions clearly in order to keep the survey succinct.
- Organizing questions so that respondents easily comprehend the response task (e.g., grouping like question types together rather than mixing them throughout the survey tool).

Use of a mixed-method study design including both survey and interview procedures presented both benefits and limitations for this research. Through careful attention to research design, instrument development, and multiple modes of reducing error, the benefits of this approach have the potential to far outweigh the limitations. Thorough planning based upon the knowledge base of survey design, research design, and semi-structured interview procedures helped to ensure the research questions were

answered effectively with this methodology. I was aware of the potential limitations and used caution to minimize any issues.

Summary

This mixed-methods study used two phases to gather data used to describe the wellness resources provided to anesthesiology residents and to explore program directors' self-concept as servant leaders in supporting resident wellbeing. In the next chapter, the survey results and interview findings are described in detail and used to identify themes that emerged from the data. The final chapter provides a discussion of the findings and recommendations for further research and practice.

CHAPTER FOUR

RESULTS AND DISCUSSION

The purpose of this study was to explore the state of wellness initiatives for anesthesiology residents and how anesthesiology program directors perceive themselves as servant leaders in the context of supporting such initiatives. This was accomplished through administering an electronic survey and conducting semi-structured interviews with a subset of survey respondents. This chapter presents the results of this study, including survey findings and perspectives gained from anesthesiology residency program directors through semi-structured interviews. The chapter concludes with a discussion of the study's results and a summary of findings.

Quantitative Findings

A survey (Appendix A) was administered electronically to anesthesiology residency program directors. The overarching purposes of the survey were to gather information on the current state of anesthesiology resident wellness initiatives and gain insight into how program directors perceive themselves as leaders in supporting these initiatives. Quantitative results were gathered from the surveys of anesthesiology residency program directors (Appendix A), including the surveys of the 15 program directors who were subsequently interviewed. Of 151 surveys distributed, 72 were returned, representing a 48% response rate.

Demographics

Survey respondents, including those interviewed, answered four demographic questions. Geographic location of the residency program of survey respondents, and specifically for the interviewees, are listed below in Table 4.1 and Figure 4.1. Survey

responses were received from each of the four geographic regions, and interviews were conducted with program directors from each of the four geographic regions.

Table 4.1

Geographic Location of Anesthesiology Residency Programs

Participants	Region 1	Region 2	Region 3	Region 4	Totals
Survey Respondents	18 (25%)	12 (17%)	24 (33%)	18 (25%)	72
Interviewees	3 (20%)	3 (20%)	7 (47%)	2 (13%)	15
National Totals	45 (30%)	38 (25%)	47 (31%)	21 (14%)	151

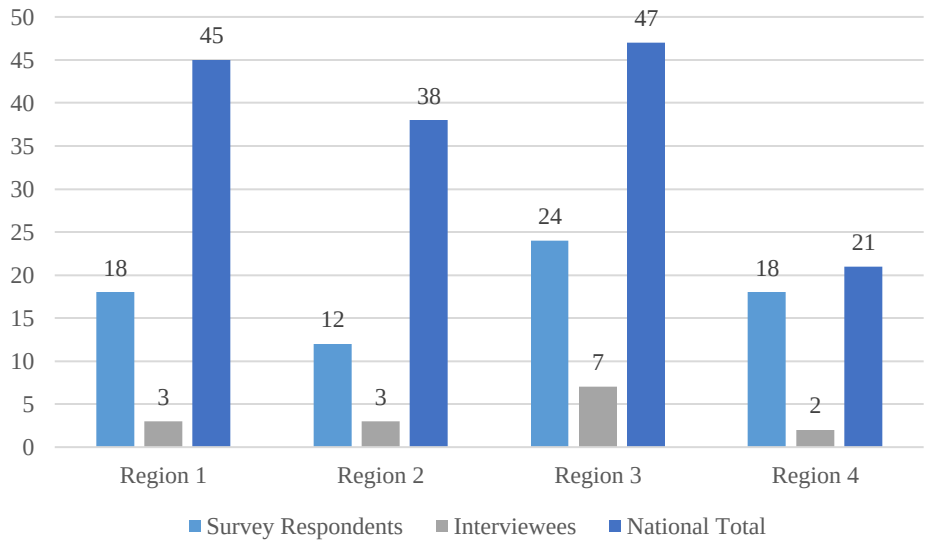

Figure 4.1. Geographic location of anesthesiology residency programs.

The total number of residents in each residency program is listed below in Table 4.2 and Figure 4.2. The number of residents in each program ranged from 20 or less to more than 80. The majority of respondents were program directors of programs with between 51 and 80 residents (36%), followed by program directors of programs with between 21 and 50 residents (31%). Nationally, the majority of programs (42%) have between 21 and 50 residents, followed by programs with between 51 and 80 residents

(27%). Likewise, the majority of program directors interviewed (40%) are at programs with between 21 and 50 residents, followed by 34% interviewed at programs with between 51 and 80 residents.

Table 4.2

Numbers of Residents in Anesthesiology Residency Programs

Participants	20 or less	21-50	51-80	Over 80	Totals
Survey Respondents	12 (17%)	22 (31%)	26 (36%)	12 (17%)	72
Interviewees	2 (13%)	6 (40%)	5 (34%)	2 (13%)	15
National Totals	33 (22%)	63 (42%)	41 (27%)	14 (9%)	151

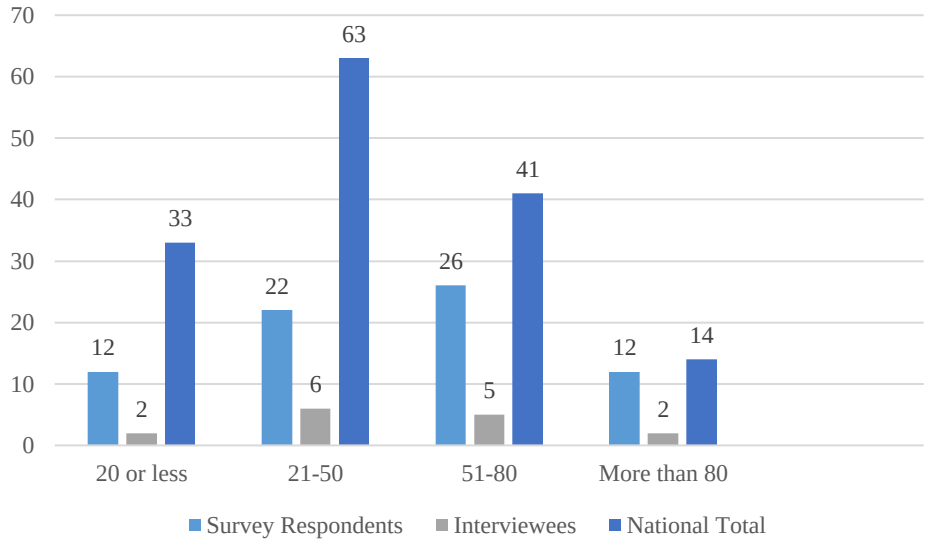

Figure 4.2. Numbers of residents in anesthesiology residency programs.

The total number of years serving as an anesthesiology program director (in any anesthesiology residency program) for survey respondents and specifically for those interviewed is listed below in Table 4.3 and Figure 4.3. The number of years served ranged from less than 1 year (11%) to more than 10 years (28%) for all survey respondents, and from less than 1 year (7%) to more than 10 years (7%) for the

interviewees. The majority of survey respondents, as well as those interviewed, had served in an anesthesiology residency program director role between 1-5 years (42% and 46% respectively). The number of years served as residency program director across programs nationally is unknown.

Table 4.3

Total Years as an Anesthesiology Program Director

Participants	**>1 year**	**1-5 years**	**6-10 years**	**> 10 years**	**Totals**
Survey Respondents	8 (11%)	30 (42%)	14 (19%)	20 (28%)	72
Interviewees	1 (7%)	7 (46%)	6 (40%)	1 (7%)	15

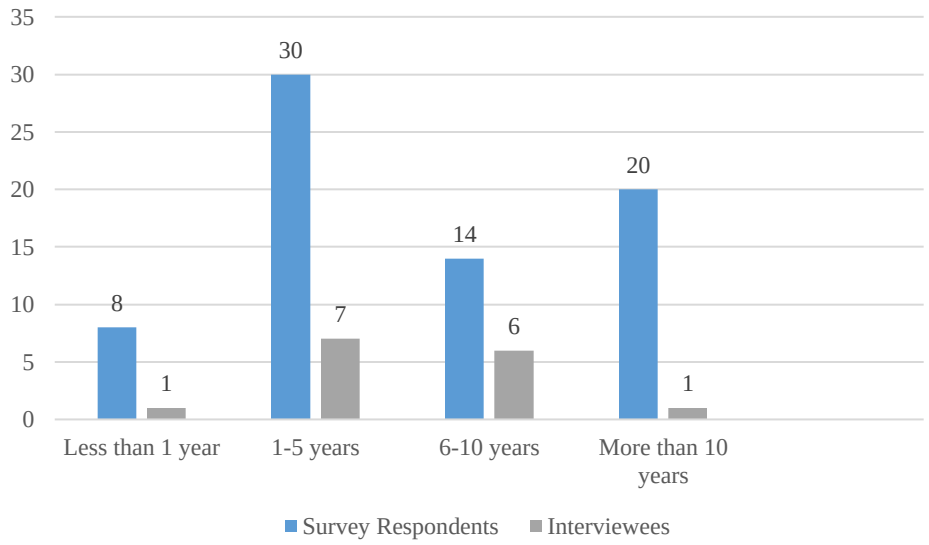

Figure 4 3. Total years as an anesthesiology program director.

The gender of anesthesiology program directors represented in the survey, specifically for those interviewed, and overall nationally is listed in Table 4.4 and Figure 4.4.

Table 4.4

Anesthesiology Residency Program Director Gender

Participants	Male	Female	Other	Totals
Survey Respondents	44 (61%)	26 (36%)	2 (3%)	72
Interviewees	8 (53%)	7 (47%)	0	15
National Totals	104 (69%)	47 (31%)	0	151

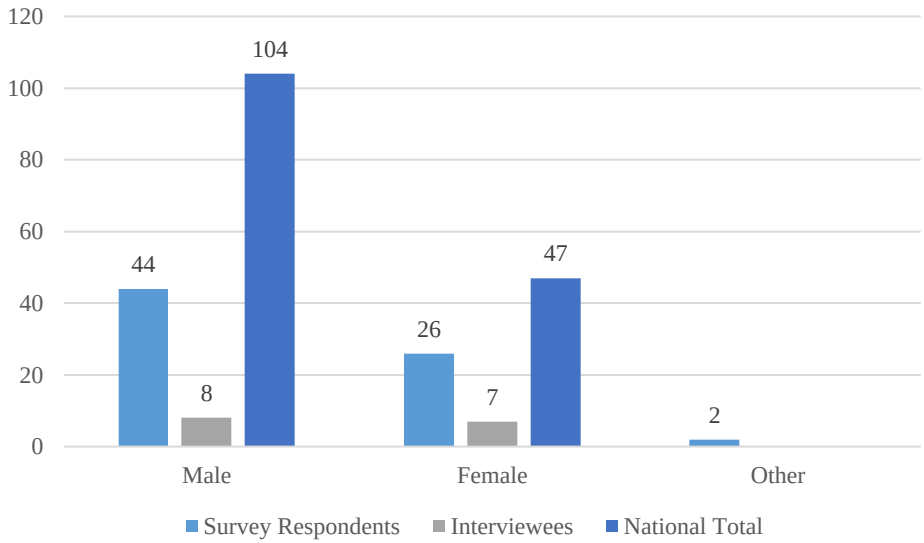

Figure 4.4. Anesthesiology residency program director gender.

Servant Leadership Profile-Revised (SLP-R)

Section 1 of the survey tool included the 62-item Servant Leadership Profile-Revised (SLP-R). Survey items in this section were categorized into seven domains representing various aspects of servant leadership: (a) developing and empowering others, (b) expressing vulnerability and humility, (c) demonstrating authentic leadership, (d) practicing participatory leadership, (e) inspiring leadership, (f) displaying visionary leadership, and (g) modeling courageous leadership. Each question asked the respondent to consider their own attitudes and practices as a leader specifically in their program director role. Respondents rated their level of agreement with each statement on a 7-

point Likert scale ranging from 1 to 7, where 1 = Strongly Agree, 4 = Undecided, and 7 = Strongly Disagree (see Appendix A to view all responses options).

Developing and empowering others. Program directors tended to agree and strongly agree with all survey items related to developing and empowering others. Two statements most strongly correlated with servant leadership characteristics were: *I derive a great deal of satisfaction in helping others succeed*, and *I have great satisfaction in bringing out the best in others*. Both statements had mean scores of 1.2. Mean scores for each item within this category is listed in Table 4.5.

Table 4.5

SLP-R Items Related to Developing and Empowering Others

SLP-R Items	**Mean Score**[a]
I derive a great deal of satisfaction in helping others succeed.	1.2
I have great satisfaction in bringing out the best in others.	1.2
I consistently appreciate and validate others for their contributions.	1.3
I make it a high priority to cultivate good relationships among group members.	1.4
I consistently appreciate, recognize, and encourage the work of others.	1.4
I consistently encourage others to take initiative.	1.5
I often identify talented people and give them opportunities to grow and shine.	1.5
My ambition focuses on finding better ways of serving others and making them successful.	1.5
I invest considerable time and energy equipping others.	1.6
I willingly share my power with others, but I do not abdicate my authority and responsibility.	1.6
I invest considerable time and energy in helping others overcome their weaknesses and develop their potential.	1.7
I am always looking for hidden talents in my residents.	1.7
My leadership contributes to my residents' personal growth.	1.7
I consistently delegate responsibility to others and empower them to do their job.	2.2
I am willing to risk mistakes by empowering others to "carry the ball".	2.2
I try to remove all organizational barriers so that others can freely participate in decision making.	2.3

[a] Respondents self-assessed each statement using a 1 to 7 Likert-scale where 1 = *Strongly Agree*, 4 = *Undecided*, and 7 = *Strongly Disagree*.

Expressing vulnerability and humility. Survey items on the SLP-R related to vulnerability and humility are reverse worded so that they ask about tendencies related to power and pride. Program directors tended to disagree or strongly disagree with statements relating to power and pride, with the strongest disagreement for the statement, *I do not want to share power with others, because they may use it against me* with a mean score of 6.6. Mean scores for each of the survey items is listed in table 4.6.

Table 4.6

SLP-R Items Related to Expressing Vulnerability and Humility

SLP-R Items	Mean Score[a]
To be a leader, I should be front and center in every function in which I am involved.	4.7
I want to make sure that everyone follows orders without questioning my authority.	5.8
To be a strong leader, I need to keep all my subordinates under control.	6.2
As a leader, my name must be associated with every initiative.	6.3
It is important that I am seen as superior o my subordinates in everything.	6.3
To be a strong leader, I need to have the power to do whatever I want without being questioned.	6.4
I want to have the final say on everything, even in areas where I do not have the competence.	6.5
I do not want to share power with others, because they may use it against me.	6.6

[a] Respondents self-assessed each statement using a 1 to 7 Likert-scale where 1 = *Strongly Agree*, 4 = *Undecided*, and 7 = *Strongly Disagree*.

Demonstrating authentic leadership. Program directors tended to agree or strongly agree with all items related to authentic leadership. The statement with responses most closely aligned with servant leadership characteristics in this domain was, *I set an example of placing group interests above self-interests* with a mean score of 1.3. Mean scores for each survey item in this domain are listed in Table 4.7.

Table 4.7

SLP-R Items Related to Demonstrating Authentic Leadership

SLP-R Items	Mean Score[a]
I set an example of placing group interests above self-interests.	1.3
I work for the best interests of others rather than self.	1.4
I seek to serve rather than to be served.	1.5
I practice what I preach.	1.5
I am willing to make personal sacrifices in serving others.	1.5
I have a heart to serve others.	1.5
I always place team success above personal success.	1.6
I find enjoyment in serving others in whatever role or capacity.	1.7
I am genuine and honest with people, even when transparence is politically unwise.	1.8
When I serve others, I do not expect any return.	1.8
I regularly celebrate special occasions and events to foster a group spirit.	1.9

[a] Respondents self-assessed each statement using a 1 to 7 Likert-scale where 1 = *Strongly Agree*, 4 = *Undecided*, and 7 = *Strongly Disagree*.

Practicing participatory leadership. Program directors tended to agree or strongly agree with all survey items relating to practicing participatory leadership. Responses to three statements were most closely aligned with servant leadership characteristics with mean scores of 1.1 and were, *I promote tolerance, kindness, and honesty in the workplace*, *Whenever possible, I give credits to others*, and *I genuinely care about the welfare of people working with me*. All survey items related to this domain and mean scores for each are listed in Table 4.8.

Table 4.8

SLP-R Items Related to Practicing Participatory Leadership

SLP-R Items	**Mean Score[a]**
I promote tolerance, kindness, and honesty in the workplace.	1.1
Whenever possible, I give credits to others.	1.1
I genuinely care about the welfare of people working with me.	1.1
I want to build trust through honesty and empathy.	1.2
I am willing to accept other people's ideas, whenever they are better than mine.	1.2
I am willing to share my power and authority with others in the decision making process.	1.2
My leadership effectiveness is improved through empowering others.	1.5
I listen actively and receptively to what others have to say, even when they disagree with me.	1.6
I grant all my residents a fair amount of responsibility and latitude in carrying out their tasks.	1.6
I create a climate of trust and openness to facilitate participation in decision making.	1.8

[a] Respondents self-assessed each statement using a 1 to 7 Likert-scale where 1 = *Strongly Agree*, 4 = *Undecided*, and 7 = *Strongly Disagree*.

Inspiring leadership in others. Program director respondents tended to agree or strongly agree with items related to inspiring leadership. The survey item scored most closely to servant leadership characteristics was, *I devote a lot of energy to promoting trust, mutual understanding, and team spirit* with a mean score of 1.5. The mean score for each item in this domain is listed in Table 4.9.

Table 4.9

SLP-R Items Related to Inspiring Leadership in Others

SLP-R Items	Mean Score[a]
I devote a lot of energy to promoting trust, mutual understanding, and team spirit.	1.5
To inspire team spirit, I communicate enthusiasm and confidence.	1.7
I am able to inspire others with my enthusiasm and confidence in what can be accomplished.	1.9
I am able to rally people around me and inspire them to achieve a common goal.	2.2
I am able to present a vision that is readily and enthusiastically embraced by others.	2.3
I am able to bring out the best in others.	2.4
I am able to transform an ordinary group of individuals into a winning team.	2.6

[a] Respondents self-assessed each statement using a 1 to 7 Likert-scale where 1 = *Strongly Agree*, 4 = *Undecided*, and 7 = *Strongly Disagree*.

Displaying visionary leadership. Survey respondents tended to agree or strongly agree with all items related to visionary leadership. The responses most closely aligned with servant leadership characteristics was, *My leadership is based on a strong sense of missions* with a mean score of 1.4. Items in this domain are listed with mean scores in Table 4.10.

Table 4.10

SLP-R Items Related to Displaying Visionary Leadership

SLP-R Items	Mean Score[a]
My leadership is based on a strong sense of missions.	1.4
I take proactive actions rather than waiting for events to happen to me.	1.7
I am able to articulate a clear sense of purpose and direction for my organization's future.	2.1
I have a good understanding of what is happening inside my organization.	2.3
I am usually dissatisfied with the status quo and know how things can be improved.	2.6

[a] Respondents self-assessed each statement using a 1 to 7 Likert-scale where 1 = *Strongly Agree*, 4 = *Undecided*, and 7 = *Strongly Disagree*.

Modeling courageous leadership. Program directors tended to respond agree or strongly agree to all survey items related to courageous leadership. The item with responses most closely aligned with servant leader characteristics, with a mean score of 1.2, was, *I have the courage to assume full responsibility for my mistakes and acknowledge my own limitations*. All items in this domain with mean scores are listed in Table 4.11.

Table 4.11

SLP-R Items Related to Modeling Courageous Leadership

SLP-R Items	Mean Score[a]
I have the courage to assume full responsibility for my mistakes and acknowledge my own limitations.	1.2
I always keep my promises and commitments to others.	1.4
I have the courage and determination to do what is right in spite of difficulty or opposition.	1.4
I practice plain talking - I mean what I say and I say what I mean.	1.7
I have the moral courage to do the right thing, even when it hurts me politically.	1.7

[a] Respondents self-assessed each statement using a 1 to 7 Likert-scale where 1 = *Strongly Agree*, 4 = *Undecided*, and 7 = *Strongly Disagree*.

Open-Ended Responses Concerning Resident Wellness

Section 2 of the survey included questions related to residency wellness initiatives at each respondents own training program. Responses to these diverse, open-ended questions provided information specific to preparing anesthesiology residents.

Major challenges to wellness. In response to the survey question, *What do you perceive as the major challenges to wellness faced by anesthesiology residents?*, program directors provided a variety of responses. Responses are listed in order of frequency in Table 4.12.

Table 4.12

Major Challenges to Wellness Faced by Anesthesiology Residents

Major Challenges	**Frequency of response**
Resident perspective (i.e., conflict between resident expectations and reality)	20
Clinical responsibilities coupled with other professional demands	18
Long hours, demanding call schedule	18
Lack of funding or resources to support mental, emotional, and physical health	8
Systems issues (slow EMR, uncertainty in the healthcare system)	6
High stakes examinations	2
Personnel shortages	2
Lack of respect and appreciation	2
Culture of criticism	2
High acuity of patient care	2
Lack of autonomy, control, and predictability	2
Personal and family stressors	1
Archaic system of graduate medical education	1
Steep learning curve of residency training	1
Increasing need to master knowledge outside clinical medicine	1

The most frequent response to the survey question regarding challenges to resident wellness (n = 20) concerned issues related to unreal or confused expectations by residents. One program director asserted, “Residents have false expectations and a belief that working hard and achieving excellence is at odds with being well.” Other responses related to resident misconceptions were related to the burden of clinical responsibilities coupled with other professional demands such as documentation requirements (n = 18) and lengthy work hours and demanding call schedules (n = 18), which are a reality of many anesthesiology residency programs. One respondent described this situation as a result of misconceptions among hospital administrators and department chairs concerning resident work responsibilities.

> There is a perception by our hospital and department chair that residents are first and foremost a clinical workforce to help the hospital's and department's bottom line financially. Resident events or initiatives are perceived as an inconvenience at best and a detriment at worst.

Lack of funding to support wellness initiatives and healthcare-system issues were also frequently cited within program directors' responses (n=8 and n=6 respectively). Funding availability in one department was described by one respondent: "All our feedback sessions and journal clubs and activities are paid for by the faculty. It would be nice to see this hospital truly put their money where their mouth is and support teaching."

Additional issues related to supporting resident wellness included a culture of criticism within the department or hospital, a perceived lack of appreciation for residents, and a lack of autonomy for residents were coupled with the stresses of high acuity clinical work and family and personal stressors. One program director described these issues succinctly: "Residents have chronic fatigue, a lack of autonomy, and a large amount of responsibility without respect or the power to change things."

Residency wellness initiatives. Program directors responded to the prompt, *Please describe what your residency program is doing to promote and support resident wellness (e.g., wellness initiative, programs).* Below are the most common responses listed in order of frequency in Table 4.13.

Table 4.13

Program Initiatives to Support Resident Wellness

Wellness Initiatives	**Frequency of response**
Didactics and curriculum on wellness topics	28
Modifications to schedule to allow for academic/wellness days	26
Social events	24

Wellness courses (e.g., mindfulness, resilience, yoga, sleep, nutrition, pet therapy)	20
Faculty mentorship	20
Counseling and mental health resources	8
Resident recognition (e.g., Resident of the Month, appreciation week)	7
Modified call schedules (e.g., no 24 hour call)	7
Supportive group sessions to talk about issues in the residency	6
Peer support programs	5
Wellness committee	5
Providing snacks in resident lounge	5
Coverage for residents to go to appointments during the workday	5
Team building activities outside the hospital	4
Dinners outside the hospital	4
Resident retreat	4
Culture - looking out for one another	4
Faculty member specifically assigned to wellness leadership	4

The most frequently listed wellness initiatives were lectures and curriculum provided to residents on various wellness topics (n = 28). Modifications to resident clinical schedules to allow wellness or academic days were the second most commonly cited wellness initiative (n = 26). The provision of resident social events to support wellness was listed by 24 of the 72 responding program directors. Two wellness initiatives listed by 20 respondents were courses (e.g., meditation, resilience, yoga) and faculty mentors' support for resident wellness. One program director described specific wellness initiative efforts as well as the department culture necessary to support those efforts.

> We try hard to remove systems barriers whenever we can (schedule/hours arrangements, flexibility for family needs with leave, etc.). We promote resilience via the basics (education and encouragement of healthy exercise, sleep, and diets) and via resources such as mind-body medicine courses and mental health resources. We have a culture of leadership in the residency and department that we need to be our best selves to care for our patients and we watch out for impairment (whether it's physical, illness, distraction, or substance abuse) and rally to take care of that individual when they are not fit for patient care.

Several additional wellness initiatives were listed by program directors three or fewer times on the survey. These included diverse responses such as appreciation breakfasts and lunches provided at the hospital, philanthropic events, housing stipends, an anesthesia family experience day, and department health challenges. Several responses included various ideas implemented to adjust resident schedules to support wellness including flexible vacation schedules and having clinical responsibilities end at a standard time every day to allow for education and study time.

Barriers to wellness initiatives. Program directors also responded to the survey question, *What do you perceive as being the biggest barriers (if any) to implementing resident wellness initiatives in your department?* Responses are listed in order of frequency in Table 4.14.

Table 4.14

Barriers to Implementing Wellness Initiatives in Residency Programs

Barriers to implementing wellness initiatives	**Frequency of response**
Residents needed for clinical coverage (lack of time for wellness initiatives)	36
Lack of financial support for wellness initiatives	20
Wellness activities viewed negatively by faculty	8
Lack of resident interest in wellness activities	4
Faculty burnout	4
None	4

The general themes of *lack of time* (36 responses) and *lack of funding* (20 responses) were the top issues cited as barriers to implementing desired wellness initiatives. This situation was described by one program director as financial: “We have no money so it is very difficult to support residents with even the basics such as conference fees for presentations.” The other issues mentioned within the open-ended

survey responses were related to hospital and department culture and to negative perceptions regarding wellness initiatives among faculty and the residents. Resident lack of interest was described by one respondent as residents needing to be away from the hospital: "People would rather do something on their own rather than show up for a wellness activity." In regards to faculty burnout, another program director wrote, "Our faculty wellbeing is an issue. They are feeling more pressure from unstable contracts and uncertainty about deployments, and it is difficult for that not to trickle down to the residents." Eight respondents write that wellness activities were viewed negatively by the faculty. One asserted that the well-being of residents is simply not a faculty priority:

> Some of the faculty view wellness as a fluffy subject to be addressed by the weak. Besides wellness being a taboo-ish subject, I also think that we as faculty haven't fully figured out our own wellness and then we try to go teach it to the residents. How can you teach it if you don't know it?

Four program directors indicated there were no barriers to implementing resident wellness initiatives in their department. One proudly asserted, "The barriers have been lifted and what I used to do and be accused of coddling and spoiling the residents is now recognized as important wellness initiatives."

Desired wellness initiatives. In the final survey question on wellness initiatives, program directors were asked to imagine their program without the existing barriers. Respondents were asked, *If the barriers you described above were not present, what is one initiative to support resident wellness that you would like to implement (i.e., something that you do not currently have in place, but you believe would have a great positive impact upon resident wellness)?* Responses are listed in Table 4.15 in order of frequency.

Table 4.15

Desired Wellness Initiatives if Barriers Were Not Present

Desired wellness initiatives if barriers were not present	**Frequency of response**
Additional time out of the OR for wellness, teambuilding and professionalism activities	24
Annual resident retreat	20
Expanded educational time	12
Additional residents available to provide redundancy for clinical demands	12
Protected study time	4
Childcare for children of residents funded by department or institution	2
Changes in resident attitudes and perceptions	2

The most frequent response (n = 24) was a desire for additional time away from the operating room and clinical duties for a variety of wellness, team building, and professionalism activities. An annual resident retreat was listed by 20 respondents as a desired wellness activity. Additional time for educational activities and the provision of additional residents to provide clinical back-up and redundancy were both listed by 12 respondents. One respondent expanded on this idea: "Having extra residents available as a bit of redundancy to everyday clinical demands has huge downstream positive effects in terms of satisfaction for the institution, workday, job commitment, professionalism, and high quality patient care." Another program director described that having additional residents would support giving residents random days off: "These small acts of kindness and relief can be remembered by a resident many months later and would be a great addition to what we already do." Additional desired wellness initiatives listed by the program directors included omission of 24 hour call, later OR starts, having healthy food

available at all times, providing residents more control over their individual schedules, and having enough funding to send residents to educational conferences.

Although not an initiative in the traditional sense, two program directors discussed their desire to see a change in resident attitudes and perceptions, which they believed would result in enhanced wellness. One program director described some residents as "Entitled millennials." Another wrote, "If I could get everyone to stop worrying so much about themselves and start worrying about others, I feel the ship could be righted with well-being."

Qualitative Findings

Qualitative data were gathered through interviews conducted with a subset of program directors who completed the survey and volunteered to participate in a follow-up phone interview. In total, 20 individuals volunteered to participate in a phone-conducted interview by submitting their contact information on the survey, and a total of 15 volunteers agreed to serve as study participants for this phase of the research. Among this volunteer group were 8 men and 7 women whose experience as a program director ranged from less than one year to more than twelve years. The group worked in programs located across the United States and included both large and small programs. A copy of the interview protocol appears in Appendix B.

During analysis of the interview transcriptions, themes emerged related to both program director self-perceptions of leadership and anesthesiology resident wellness. The following section presents a description of the major findings emerging from these interviews.

Leadership Definition

Interviewees were asked to provide their personal definition of leadership as it relates to their role as a program director. Commonly, responses included their being able to pull a team together to work towards deliverables and achieve a shared goal and their ability to be an effective role model who demonstrates high values. Program directors expressed the importance of having genuine concern for a team, protecting the team, and removing potential obstacles to goal achievement. Several program directors talked about the importance of inspiring the residents and creating a shared vision. For example, one program director specifically mentioned servant leadership as part of his practice:

> I see my primary obligation as being in the service of those I am supposed to be leading. My primary obligation is to their wellbeing mentally, physically, professionally, helping with their career advancement, and putting them at the top of my list right after patient care in terms of how I make my decisions.

Another program director expressed his views on program director leadership differently.

> The way we think of leaders traditionally is command and control . . . who see themselves at the top of the pyramid and telling the people below them what to do. That style also has its place. In a patient code [emergency], obviously you're not going to sit there gently coming to slow consensus. You need someone to take charge and issue orders. But a serving leader inverts that pyramid and sees [himself] at the bottom supporting and empowering people in the organization so they can remove barriers and help give them the support they need to be successful in their personal goals and careers. I see myself as doing this especially for the residents to give them some control and empowerment so they can be successful.

Leadership Self-Identity as Program Director

Program directors were asked to explain how they viewed themselves as a leader. Interviewees frequently described their style as leading by example and as a resident advocate. According to one interviewee, it was important that he makes "sure they know I see myself and my role as being an advocate for them and their success, their career,

and their wellbeing." Other program directors described a style inclusive of providing clarity about expectations and the resources needed for the residents to accomplish their personal and professional goals. Descriptive terms used by program directors to describe their own leadership styles included "innovative," "positive,", "able to lead through changes," and "personally invested" in resident success. Several program directors described the intrinsic rewards of the position similar to this comment: "I think anesthesia is the field of the unsung hero. Nobody goes into anesthesia for the glory. And nobody becomes a PD for the glory. So when you choose those options, you like to be part of a team that functions well."

When asked how they believed their residents would describe them as a leader, Several respondents frequently talked about their role as an advocate, a support person, and a responsive listener to residents' concerns. For example, "They know I will fight for them. They know I will go to bat for them on just about anything." Many program directors also told stories about how they had assisted residents with issues even outside of work responsibilities, similar to this comment:

> One of my residents wound up in a real pickle where his wife needed some intense daytime care and they were at a loss as to what to do with their kids—and I actually figured out childcare for them. He felt like he could come to me with that problem and wanted me to know that he was struggling and wasn't just not doing his job.

Part of their approachability as a program director was creating opportunities for their residents to provide feedback and express concerns and ideas. Many program directors described systems to actively seek feedback similar to this interviewee comment: "We have an anonymous suggestion box, and I always respond to any questions and concerns. There are multiple different avenues for residents to raise

concerns whether they want to do it anonymously or face to face." In addition, some program directors explained that they thought their residents would consider them leaders by example and that they would never ask the residents to do something that they would not do also.

Evolving Leadership Practice

Interviewees were asked to talk about how their leadership approaches had changed over time. One program director at a mid-sized program in the South described how her leadership style shifted from an authoritarian stance to one that serves others.

> I was raised in a more authoritarian version of what a leader is like, but now I have to blaze my own trail. Authoritarian leadership style is the easiest one, but it is not successful. I'm trying to teach myself to be more open minded, to actually generate a team around me . . . and this is not about me. It is more about others and me becoming more of a servant in my leadership role.

Another program director in the Northeast described learning, growing, and changing due to difficulties she experienced recently.

> I'm learning a lot. This has been a huge year of growth for me. I have made a lot of mistakes and bumbles. I have been called to task on many occasions and taken my beatings, but that is part of it too. Everyone takes their beatings. When I look at the people at the top, it is not about never having gone wrong. It is about getting back up and starting again.

Some interviewed program directors received formal training in leadership and through other careers and experiences that helped to shape their approach. Background experiences among the 15 program directors that influences their practice of leadership today included working as an attorney, completing graduate studies in business administration, serving in leadership positions within the military, and playing competitive sports at a high level. One interviewee had completed a year-long course in servant leadership. During their interviews, several recounted how prior experiences

contributed to important and pivotal development of their leadership approach and skills over time and how those experiences and skills were applied to their current role as program director.

Importance of Leadership Mentors

Many program directors pointed out the importance of having leadership mentors who guided them in developing and refining their own actions and approaches. Although some of those interviewed had support from formal mentors, most learned through informal observations of others whom they respected. Below is a reflection about that informal mentoring by a current program director.

> One of my professors from medical school was such a serving leader. He is always looking out for the people in the organization and looking for ways he can put their ideas forward and give them the credit and help them be successful. Watching him and watching how he does that has been a very powerful experience for me.

Program directors also described learning from former program directors and emulating the parts of their leadership styles that they most admired. For example, one interviewee explained, "She was someone who was very engaging and accomplished, and driven, and motivated. I've tried to take some of her energy and take it into my role once I took over."

Leadership Methods

Program directors were asked to describe the methods they commonly use to lead, motivate, and inspire the residents in their program. Many program directors recounted methods they use to help model and reinforce the importance of their roles in patient care. One interviewee explained,

> I take moments with residents to reinforce the importance of what we do. I stress to them that when they are feeling stressed or resentful about being at work, to

> look down at their patient and realize that this is someone's sister or mother or daughter and they are waiting anxiously in the recovery room for the patient and they love them. So take your job seriously and take a little moment to realize that what we do is a privilege to take on this role in people's lives.

Several program directors talked about providing their residents with examples from their own life that they could relate to their situations. For example, one interviewee stated, "I want them to know that I'm human too and [that] we all screw things up. It's okay to be human and make mistakes, but they also need to learn from them."

Some program directors described methods utilized to lead during difficult times in their programs. For example, a program director who had taken over the position when the program was on a probationary status had to work to find ways to improve morale.

> A program on probation is an awful thing. It has to be worse than a divorce or at least in the same ballpark. I mean you feel like everybody is upset and scared. Faculty are terrified that they are losing their jobs and residents are afraid that they are never going to graduate.

Approaches used by interviewed program directors to improve comradery and morale included planning philanthropic events, such as the Life Box Challenge, and hosting an "Anesthesia Jeopardy" game event where they host other programs to test the residents' anesthesia knowledge in an environment of fun competition.

Wellness Definition

Program directors described *wellness* as a multifaceted construct including the notion of balance and incorporating diverse aspects such as physical, mental, emotional, spiritual, financial, and professional components of life. Program directors related wellness to the need to be healthy and physically fit in order to function well as a physician. According to one interviewee, "The way I understand wellness is taking care

of oneself, so that one can dedicate oneself to the practice of medicine." Other definitions of wellness included concepts related to feeling calm, satisfied, and fulfilled, such as the one expressed by one program director:

> Wellness is being satisfied with what you are doing from day to day both in your personal life and your work life and being able to enjoy at least part of every day. And not fulfilling any of the classic definitions of burnout. So you can still be empathetic and you can still find a lot of value in the work you are doing and still feel like you have a lot of energy for other endeavors other than just working.

Leadership Impact on Resident Wellness

Interviewees were asked to reflect on their thoughts about how their leadership as a program director had specifically impacted resident wellness. Many responses focused on the program director's ability to have a positive effect on the program culture which has important implications for resident wellness. For example, one interviewee described that his strategy to impact resident wellness requires "developing a culture in the residency where people will let me know if a resident is having a very hard week or if they heard that a resident had a very difficult case." Similarly, another program director described the importance of "working hard to demystify and destigmatize the concept of any type of psychotherapy or medications or other types of help for mental health problems, so that people will seek out help." Creating a program culture of support was also described by a program director who stated, "We need to support them when they make mistakes or when they have had bad patient outcomes, and helping them get through that because that is very, very difficult."

On a very practical level, program directors described their role in protecting and advocating for residents. Making sure that work-hour limitations are maintained, leave

policies are created and supported, and education is prioritized along with patient care were other examples cited for assuring resident wellness.

Some program directors also expressed a desire to do more to help with resident wellness but felt constrained by various systems and cultural issues. One program director described the challenge of residents not taking the initiative to assure their health and wellbeing.

> I have found the number one hurdle in wellbeing is cultural [created by] a growing sense people have that the determinants of their wellbeing are external and they absolve themselves of the internal drivers of their own wellbeing. Unfortunately, as the PD I feel less of an opportunity to talk about that insight with others because it makes me look like a victim blamer. So I try to just act mostly as a role model and try to change things that are in my circle of influence.

Additionally, some program directors talked about working to have a positive effect on resident wellness not only while they are in residency training, but also throughout their life and career. Talking to the residents about emotional intelligence, treating other people respectfully and professionally, and enjoying their time in the operating room and with the people around them were also mentioned by program directors as important to develop residents' emotional and social wellness over their lifetime and career.

Challenges to Anesthesiology Resident Wellness

Program directors were asked to elaborate on their thoughts on the current challenges to anesthesiology resident wellness. Many described scenarios where residents are often overwhelmed with the stressors of the combination of work and their personal lives during residency.

Several program directors also expressed strong feelings about their view that resident perceptions and expectations for residency training do not align with reality.

That gap between expectations and reality often causes unhappiness and stress for some residents. One program director explained the diverse forces involved:

> I really honestly think that the main thing is a combination of immaturity, unrealistic expectations, lack of resilience, and a whole bunch of people who treat residency like it is just a regular part of their life. This is completely unrealistic. And coupled with a lack of power, it [becomes] a treadmill. It is four years of accelerating obligations and responsibility.

Another interviewee explained the gap between expectations and reality:

> A lot of people think–and this is just human nature and trainee nature–they think, "When I get through university, med school will be different, and when I get through residency, my job will be different." And what they don't realize is that they may be different but they are not easier. I average the same amount of hours per week as my residents do or more. Now my hours are different, and I have more control over them, but it's the same amount of hours. And I think they also think that the stresses and strains of exams and worrying about your patients and the call schedule are going to get easier—and that's not necessarily true either.

Many program directors described the nearly ubiquitous experience of high clinical demands coupled with additional responsibilities as being a major factor in decreased resident wellness. This phenomenon was described by one program director as a "train."

> The surgical caseload. The relentless demands for increased everything, and we have to accommodate. It covers up the time for all the other things we want to do, whether it's teaching or training or downtime or whatever. That's a challenge. That's THE issue. In my 20 years of being around this, if things go bad, it's because we can't keep up with the demands of the surgical services.

With regards to the working hours and their impact on resident wellness, another program director stated,

> I don't know if I think you can have wellness if you are working 80 hours a week. I think almost by definition that leads to burnout and fatigue and compromise on sleep and other areas of life that keep you healthy. So I feel like it is disingenuous for us to say we're focusing on wellness and then asking people to work 80 hours per week.

Fatigue and additional systems issues was described by many program directors. The most compelling comment about the current reality was the statement below:

> Physician wellness is going to be a problem as long as the US Healthcare system is the way it is. There is a systemic problem across the country in the way we practice medicine. If you talk to people internationally, the whole concept of burnout and wellness isn't talked about as much as it is in the US. Expectations for physicians and the EMR, and RVUs, and productivity pressures, and time constraints. All those things together really make for a disengaged, burned out physician. All these things we're doing for wellness, I think they are great and necessary, but they are Band-Aids. Until there is a seismic shift in the way we administer health care in the US, it is not going to change.

Current Wellness Initiatives

Program directors were asked to explain the current wellness initiatives they have in place to combat identified wellness issues. Many of the wellness initiatives listed on the survey are mandated in some form by accreditation requirements. For example, all programs are expected to provide didactics related to wellness topics such as fatigue management and recognition of substance abuse, provision of counseling services if needed, and a confidential way to make suggestions and give program feedback. In addition to these standard elements, program directors described the unique and special initiatives they have been able to develop to support resident wellness.

One approach discussed was promoting resident wellness by encouraging residents to engage in philanthropic events together and thereby serving others in a positive way together. Events for Special Olympics, food pantries, mission trips, and runs for charitable causes were some examples named. One program director stated, "You see that what we are doing is all worth doing. We are fortunate, and we work hard. But, we can still give more to the community and feel really good about doing that together."

Many program directors described creative approaches to resident call schedules to assure more down time and days off for wellness or academic pursuits. A few

programs described resident retreats where groups are sent on all-expense paid weekend trips to ski or to a nearby resort. Some programs allow residents to bring their spouse or significant other to the retreat. These retreats are intended primarily for resident bonding and comradery, and in some instances also include some instruction on wellness techniques. Both peer and faculty mentors are provided to the residents in several programs, with some programs providing funding for breakfasts or dinners for the mentors and mentees.

Discussion of Results and Findings

The purpose of this study was to explore the current state of emerging initiatives designed to enhance and support anesthesiology resident wellness and to investigate how anesthesiology program directors perceive themselves as servant leaders in the context of supporting these wellness initiatives. The study participants, all currently practicing anesthesiology program directors, included 72 survey respondents and from that group, 15 interviewees.

Program director responses to the 62 item SLP-R indicated a very strong alignment of program director attitudes, beliefs, and values with the seven domains of servant leadership (Wong & Page, 2003). Interviews with program directors helped to expand upon the data gathered via the survey and to explain the responses to the SLP-R as well as the wellness related questions.

Survey responses revealed threats to resident wellness, current wellness initiatives, barriers to these initiatives, and desired plans revealed several common themes to answer the research questions. The first research question was, *What are the top five challenges to wellness faced by anesthesiology residents as reported by their*

program directors? Following are the top five challenges reported by currently practicing program directors:

- Resident perspective on residency, including the conflict between resident expectations and the reality of residency training.
- Clinical responsibilities coupled with other professional demands and the stresses this combination of demands places on residents.
- Long work hours including demanding call schedules.
- Lack of funding and other resources to support mental, emotional, and physical health of residents.
- Systems issues including issues such as problems with the electronic medical record system, and uncertainty in an ever-changing healthcare system.

These barriers to wellness emerged as the top five despite recent efforts by the ACGME to ameliorate their effects. These issues appear to remain significant despite the ACGME focus on programs not placing clinical service needs above educational needs, despite ACGME mandates to provide resources for resident mental health needs, and despite work hour regulations which have been in place for many years.

The second research question asked, *What common components of wellness initiatives in anesthesiology residencies currently exist?* The most commonly listed and discussed current program initiatives to support resident wellness include the following:

- Resident lectures and curriculum on a variety of wellness topics.
- Modifications to resident schedules to allow for days out of clinical work for academic pursuits and personal wellness; encouraging residents to use these

days for study time as well as their own health care appointments and other wellness needs.

- Social events with co-workers including such informal events as picnics, hikes, happy hours, and art gallery visits.
- Wellness courses, such as instruction in yoga, meditation techniques, and resilience.
- Faculty mentorship of residents to connect on both professional development and personal issues.

Programs are finding individual and geographic-specific ways to enhance resident social connectedness and wellbeing. For example, one program with easy access to snow skiing sends residents on a weekend ski retreat. Another takes residents to a minor league baseball game, while another program located close to a lake takes residents on an annual boat outing.

The third research question was, *What barriers to current wellness initiatives do anesthesiology program directors identify?* Three barriers to wellness initiatives were most commonly cited by program directors:

- Residents being needed for clinical coverage, leading to a lack of additional time for wellness initiatives and activities. In general, program directors were hesitant to plan wellness activities after or before work hours or on weekends, due to the negative perception of residents that these activities took away from their own personal time. Finding extra time for wellness activities during the usual clinical schedule is incredibly challenging for many programs.

- A lack of financial support for wellness initiatives was listed by many programs. Some programs are asking their clinical faculty to personally financially support resident activities including graduation events and holiday parties. This leaves little bandwidth for additional funds for specific wellness initiatives.
- Wellness activities are at times viewed negatively by some faculty in residency training programs. Program directors discussed that this may be due to a variety of factors including the perception of some faculty that wellness is not a worthwhile topic to devote time to in residency, the residents being away from the clinical environment for wellness activities puts additional strain on faculty, and the fact that faculty themselves may be experiencing burnout.

Program resources and program culture emerged as the two factors contributing to the barriers. Resources to provide clinical coverage and resources to provide wellness activities were ample in some programs, but markedly absent in others.

Some program directors expressed frustration with residents, and especially with the perception that resident expectations were out of line with reality. This frustration appeared to stem from program directors genuinely wanting medical students to recognize both the wonderful aspects as well as the real challenges of a career in anesthesiology. Program directors expressed belief that if people chose the specialty with correct expectations and perceptions of what it means to be a physician and an anesthesiologist, then their general sense of wellbeing and satisfaction would be improved. Some frustrations appeared to be generational with program directors

wondering if the current generation of residents is equipped with the necessary coping skills and resilience to maintain the personal wellness necessary to perform well in residency. Despite these frustrations, all program directors interviewed appeared energized about their role and continuing to find ways to reach residents and prepare them for their careers.

Program directors are intentionally utilizing leadership methods which they believe will combat resident wellness issues and break down barriers to implementing solutions. For example, program directors identified residents feeling a lack of autonomy as one of the threats to their wellness. Multiple program directors devised opportunities for residents to provide feedback and create positive changes in their residency programs. Another example commonly cited was the issue of residents' clinical responsibilities coupled with professional demands on their time. Program directors described many ways that they personally intervened to protect residents from unnecessary administrative burdens, unsustainable call schedules, and service demands that compromised their education. Not only formal initiatives, but these leadership styles and approaches themselves may have a profound impact upon resident wellness.

It is clear from all components of the study that anesthesiology residency program directors tend to identify intensely with servant leadership characteristics and also utilize servant leadership principles in their work with residents. Program directors draw upon these characteristics in order to inspire learners and faculty, persevere in the face of systems and culture issues, and move the needle of wellness by developing and empowering the residents.

Summary

This chapter presented the results of the study, collected through surveys and interviews. A discussion of the research findings was presented, including how the findings relate to the conceptual framework of the study: servant leadership. The final chapter presents an overall summary of this research study, including conclusions and implications for future practice and study.

CHAPTER FIVE

CONCLUSIONS AND IMPLICATIONS

This study examined the current state of wellness initiatives in anesthesiology residency programs and how anesthesiology residency program directors perceive themselves as servant leaders in the context of supporting resident wellness. The two phases of data collection included an online survey administered to program directors of anesthesiology residency programs across the United States and individual interviews with program directors who volunteered. The data were collected and analyzed with a sequential explanatory design in which the quantitative data collection and analysis was followed by the qualitative data collection and analysis and then concluded with an interpretation of the entire analysis.

Integration

Integration of the quantitative and qualitative analysis led to the ability to leverage the strengths of both methods into a robust overall analysis and interpretation. As described by Fetters, Curry, and Creswell (2013), the sequential explanatory design used in this study was used to achieve integration in interpreting the results to produce an analysis ultimately more cohesive and complete than either of the phases of the research alone. The quantitative data were used to guide the development of the semi-structured interview questions and then identify the emerging themes within the data sets. The final interpretation is thus not simply the sum of the quantitative and qualitative parts of the research, but rather provides an expanded understanding of the themes that emerged.

Results from the integrated analysis of this mixed methods study indicate that anesthesiology residency program directors embody the personal traits of servant

leadership. Data collected on the 62 item SLP-R indicated a strong self-identification with all facets of servant leadership characteristics. In addition, the integrated analysis revealed that leadership by a program director has the potential for a direct and profound effect upon resident wellness. Many of the characteristics of the SLP-R most strongly identified with by the program directors were also those that relate to their role in protecting resident wellness. For example, the survey prompts *"I genuinely care about the welfare of people working for me"* and *"I promote tolerance, kindness, and honesty in the workplace"* (both with a mean score of 1.1 where 1= strongly agree) relate to this aspect of their work. Combining these results with the data gathered in the semi-structured interviews allowed for an expanded understanding of their role.

Moving beyond self-assessment on the quantitative Likert scale, program directors identified many examples embodying those characteristics in the semi-structured interviews. Multiple stories were told regarding the ways in which program directors are functioning in a servant leadership capacity by carefully designing wellness curricula, providing unique social events, and making schedule changes to protect the residents' time and ability to learn. However, moving farther in the analysis beyond these overt examples, it was clear that the program directors were embodying servant leadership principles on an even deeper level beyond what was required of them in accreditation standards. For example, program directors described scenarios of going above and beyond their job requirements to advocate for the residents' needs, trying to change the culture in their own departments and hospitals to destigmatize the need for mental health support and even counseling individual residents to leave the specialty of anesthesiology if it was felt to be in the residents' best personal interest. At times these

efforts could be viewed as being at odds with the organization's staffing and financial goals, since maximizing the use of a resident physician workforce tends to be a cost-effective option for providing care. These efforts and approaches were illustrative of program directors' emphasis on serving the needs of the residents even before serving the needs of the organization.

An integrated analysis of data revealed that approaches based on a servant leadership lens are used widely by program directors to guide their programs and specifically to break down barriers and enhance resident wellness. Inspirational and empathetic leaders can have a positive impact upon employee performance (Gabel, 2012). Likewise, factors within the work environment can be major drivers of burnout (Eckleberry-Hunt et. al, 2017). The results of this study illustrate that the program director, as the singular person directly responsible for the learning and working environment, is well positioned with a servant leadership approach to have a positive impact upon the wellness of residents.

Conclusions

Based on the policy changes recently implemented by the ACGME, the literature reviewed to frame this study, and the results from administration of a national survey and subsequent interviews with select program directors, four conclusions emerged from this research. First, new program director training, offered by the ACGME, should include a discussion of leadership principles and practices, including focused discussion of servant leadership. Specific leadership training is not provided to most physicians unless they have additional training such as a graduate degree in business or healthcare administration. As pivotal leaders in the healthcare system, all new program directors

could benefit from learning leadership basics, and specifically, the servant leadership paradigm as it has broad application to their work.

Second, program directors are subject to many of the very same stressors and issues that impact the wellness of the residents. For example, systems issues stemming from hospital reorganizations, production pressures, and paperwork requirements were all cited as issues having a negative impact on resident wellness. These are all issues that may impact faculty, and program directors specifically, more intensely than residents. In addition, commonly cited stressors such as clinical demands, high-patient acuity, and long working hours are just as applicable to program directors as to residents. While attention, funding, and support of resident wellness is essential - faculty wellness - and specifically program director wellness, is also an area of need. If faculty and program directors have reduced wellbeing and resilience, they will be less able to support and serve as role models to resident physicians.

Third, program directors are a diverse group with a wide variety of experiences and levels of support. It is clear that while some programs have ample resources for resident wellness initiatives and hospital staffing, and are thus able to minimize threats to wellness, many more are struggling in one or more areas. Decreased levels of support may put both residents and their faculty at risk for burnout and other associated consequences.

Fourth, setting realistic expectations for medical students and residents is important. As false perceptions and expectations for anesthesiology residency training were the most commonly cited barrier to resident wellness, this issue deserves special attention. The discussion of the realities of the career and lifestyle of anesthesiologists

cannot wait until new resident orientation. These conversations should be held in undergraduate medical school while students are considering and selecting electives and choosing which specialty training to pursue. These conversations are complex and will require careful consideration. The realities of residency training that some faculty experienced 20 to 30 years ago are not the same as the realities of today. Many conditions have evolved and changed drastically including work environments, work-hour expectations, educational expectations, and the healthcare system itself. However, professionalism and dedication to the profession and patients are enduring values to be communicated in the context of the current training landscape.

Implications for Practice

Findings from this study suggest that the health and wellness of program directors are at risk along with that of their residents because they work under many of the same conditions and stressors. In fact, stressors may be multiplied in residency program directors because they are also working within the limitations of departmental budgets and hospital bureaucracy and because they are charged with the significant role of both educating and protecting resident physicians as they lead them through the training program.

The amount and type of support provided to program directors appeared to be a major factor in their ability to implement wellness initiatives successfully. Examples included both objective measures of support (e.g., financial resources, ability to have resident educational time outside of the operating room) as well as subjective measures of support (e.g., departmental culture, faculty attitudes supportive of wellness initiatives). When future anesthesiology program directors consider taking on this leadership role in a

department, they should discuss these factors and negotiate for resources to be available in order to help ensure their success.

Despite the enduring and new challenges to wellness on multiple fronts, program director leadership is serving residents faithfully as evidenced in the joyful words of one program director who was interviewed:

> I want to help my residents understand that this is a beautiful profession and there is no other like it. We have the power to save lives and there is literally nothing more beautiful than that. I love anesthesia and I will love it for the rest of my life!

Anesthesiology residency program directors are entrusted with a monumental task of teaching, supporting, and guiding the next generation of anesthesiologists, all while taking care of their own patients and engaging within the culture of their department and healthcare system complexities. A servant leadership approach may help bolster program director leadership effectiveness and help to support both their own and resident wellbeing.

Implications for Research

Information gathered from this study helps to inform our understanding of the current landscape of anesthesiology resident wellness initiatives and the barriers to achieving them. In addition, it informs our understanding of anesthesiology program director leadership characteristics and how they perceive themselves as servant leaders in their role. Because no previous studies have considered anesthesiology program directors as servant leaders in the context of supporting resident wellness, this research provides a framework for future investigation.

The response rate to the electronic survey tool used in this study was high (48%). Multiple efforts were taken in the current study to ensure a robust and meaningful

response. Survey items on the SLP-R were revised slightly to include language meaningful to program directors by use of the word *residents* rather than *employees*. The survey was designed to ensure the best possible response through the time of administration (6:00 a.m. in the time zone of the recipient) and the inclusion of interesting updates (current survey response rate) in the survey reminder electronic mail messages. A similar approach may be helpful in future studies of program directors; however, the time of administration may need to be adjusted according to the specialty of the target physicians. Some physician specialties may have a somewhat later traditional beginning time to their work day than do the surgical specialties and anesthesiology.

Future Research

Future studies are needed to investigate several additional aspects related to this research. First, a parallel study exploring resident perceptions of wellness issues and barriers would complement the program director perspective. In addition, research investigating resident perceptions of program director leadership would be helpful to explore in concert with the present study's data on program director self-perceptions. In light of the realization that program director wellness is also at risk, studies are needed to explore barriers to wellness and protective factors for this professional group. An exploration of how the differences in available resources and differences in residency culture affect resident wellness across programs would also be beneficial.

Data collection for the current study was completed on the cusp of the outbreak of the COVID-19 pandemic. Early investigations of the impact of COVID-19 reveal unprecedented levels of significant psychological stress on the frontline medical workforce including fear, anxiety, post-traumatic stress reactions, and depression (Bansal

et al., 2020; Lu, Wang, Lin & Li, 2020). Albott and colleagues (2020) suggest that health care workers are facing a situation similar to battlefield conditions including uncertainty about resources and risks as well as exposure to suffering, death, and personal safety concerns. An urgent call for additional psychological support to manage the mental health care needs of frontline workers in response to the pandemic was issued (Zaka, Shamloo, Fiorente & Tafuri, 2020). The pandemic may serve as a watershed moment to widely illuminate through research the wellness needs of the healthcare workforce and bring additional resources to their aid. The extent of the impact of the pandemic upon resident wellness is unknown as well as are the implications for program director leadership during this uncertain time. Although outside of the scope of this study, the current context of the pandemic offers multiple avenues for research in the domains of physician leadership and its short and long term impact on physician wellness.

Concluding Reflections

The purpose of this mixed-methods study was to examine the current state of anesthesiology resident wellness initiatives and how program directors perceive themselves as servant leaders in the context of supporting resident wellness. The analysis and triangulation of quantitative and qualitative data indicated that although significant challenges to resident wellness exist, their educational leaders are leveraging servant leadership traits to help residents achieve their professional and personal best. Four significant recommendations emerged from this study.

First, leadership training, specifically including servant leadership principles and practices, should be provided to new program directors. Second, attention, funding, and support of faculty wellness, and specifically program director wellness, should become a

priority action area. Third, hospital administrations should work to provide equitable support of residency program wellness initiatives, in order to broadly provide a more robust environment of wellness for residents across the country. Fourth, frank discussions of the career and lifestyles of physician anesthesiologists, as well as other specialties, should occur early and often in medical training to close the gaps between expectations and reality that may lead to dissatisfaction and burnout.

Although much progress has been achieved, more must be done to serve and protect the wellness of both the learners and the leaders in healthcare. A culture of physician wellness ultimately provides the safest environment for those being served at the heart of healthcare, the patients. The findings in this study may prove useful to residency program leaders, hospital administration, and the accrediting body for graduate medical education.

APPENDIX A

SURVEY

Dear Anesthesiology Program Director:

You are invited to take part in a survey about anesthesiology resident wellness initiatives at your institution and your self-perceived leadership traits. This survey is part of a study titled, *Leading Well: Anesthesiology Program Director Servant Leaders and their Development of Resident Wellness Programs*. You are receiving this request to complete the survey because you currently serve as an anesthesiology program director. If you have received this communication in error or are no longer the program director, I respectfully request that you forward the communication to the appropriate person in your program.

Although you may not gain personal benefit from taking part in this research study, your responses may help us understand more about both anesthesiology residency wellness initiatives as well as the leadership attributes and attitudes of anesthesiology program directors. In addition, as a token of appreciation for completing the survey, at the end you will have the opportunity to provide your information so that you may receive a copy of the aggregate results.

The survey will take about 15 minutes to complete. There are no known risks to participating in this study.

Your response to the survey will be kept confidential to the extent allowed by law. When the study is written and published, you will not be identified.

I hope to receive completed questionnaires from all 151 ACGME accredited anesthesiology program directors, so your answers are very important.

Please be aware that while we make every effort to safeguard your data once received from the online survey company, given the nature of online surveys, as with anything involving the Internet, we can never guarantee the confidentiality of the data while still on the survey company's servers or while en route to either them or us. It is also possible the raw data collected for research purposes will be used for marketing or reporting purposes by the survey/data gathering company after the research is concluded, depending on the company's Terms of Service and Privacy policies.

If you have questions about the study, please feel free to ask me. My contact information is provided below. If you have complaints, suggestions, or questions about your rights as

a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428.

Thank you in advance for your assistance with this important project. To ensure your responses/opinions will be included, please complete the survey by _____.

Sincerely,

Amy DiLorenzo, MA
Doctoral Candidate, Department of Educational Leadership Studies
Assistant Dean, Graduate Medical Education
Education Specialist, Senior Lecturer, Department of Anesthesiology
University of Kentucky College of Medicine
859-218-0084
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Faculty Advisor: Tricia Browne-Ferrigno, PhD
Professor, Department of Educational Leadership Studies
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Program Director Survey

Leadership

Please use the following scale to indicate your agreement or disagreement with each of the statements in describing your own attitudes and practices as a leader in your Program Director Role.

1	2	3	4	5	6	7
Strongly Agree			Undecided			Strongly Disagree

For example, if you strongly agree, you may select 1; if you mildly disagree, you may select 5. If you are undecided, select 4, but use this category sparingly. There are no right or wrong answers. Simply rate each question in terms of what you really believe or normally do in leadership situations.

1. To inspire team spirit, I communicate enthusiasm and confidence.
2. I listen actively and receptively to what others have to say, even when they disagree with me.
3. I practice plain talking – I mean what I say and I say what I mean.
4. I always keep my promises and commitments to others.
5. I grant all my residents a fair amount of responsibility and latitude in carrying out their tasks.
6. I am genuine and honest with people, even when such transparency is politically unwise.
7. I am willing to accept other people's ideas, whenever they are better than mine.
8. I promote tolerance, kindness, and honesty in the workplace.
9. To be a leader, I should be front and center in every function in which I am involved.
10. I create a climate of trust and openness to facilitate participation in decision-making.
11. My leadership effectiveness is improved through empowering others.
12. I want to build trust through honesty and empathy.
13. I am able to bring out the best in others.
14. I want to make sure that everyone follows orders without questioning my authority.
15. As a leader, my name must be associated with every initiative.
16. I consistently delegate responsibility to others and empower them to do their job.
17. I seek to serve rather than to be served.
18. To be a strong leader, I need to have the power to do whatever I want without being questioned.
19. I am able to inspire others with my enthusiasm and confidence in what can be accomplished.
20. I am able to transform an ordinary group of individuals into a winning team.
21. I try to remove all organizational barriers so that others can freely participate in decision-making.

22. I devote a lot of energy to promoting trust, mutual understanding, and team spirit.
23. I derive a great deal of satisfaction in helping others succeed.
24. I have the moral courage to do the right thing, even when it hurts me politically.
25. I am able to rally people around me and inspire them to achieve a common goal.
26. I am able to present a vision that is readily and enthusiastically embraced by others.
27. I invest considerable time and energy in helping others overcome their weaknesses and develop their potential.
28. I want to have the final say on everything, even areas where I do not have the competence.
29. I do not want to share power with others, because they may use it against me.
30. I practice what I preach.
31. I am willing to risk mistakes by empowering others to "carry the ball."
32. I have the courage to assume full responsibility for my mistakes and acknowledge my own limitations.
33. I have the courage and determination to do what is right in spite of difficulty or opposition.
34. Whenever possible, I give credits to others.
35. I am willing to share my power and authority with others in the decision-making process.
36. I genuinely care about the welfare of people working with me.
37. I invest considerable time and energy equipping others.
38. I make it a high priority to cultivate good relationships among group members.
39. I am always looking for hidden talents in my residents.
40. My leadership is based on a strong sense of missions.
41. I am able to articulate a clear sense of purpose and direction for my organization's future.
42. My leadership contributes to my residents' personal growth.
43. I have a good understanding of what is happening inside my organization.
44. I set an example of placing group interests above self-interests.
45. I work for the best interests of others rather than self.
46. I consistently appreciate, recognize, and encourage the work of others.
47. I always place team success above personal success.
48. I willingly share my power with others, but I do not abdicate my authority and responsibility.
49. I consistently appreciate and validate others for their contributions.
50. When I serve others, I do not expect any return.
51. I am willing to make personal sacrifices in serving others.
52. I regularly celebrate special occasions and events to foster a group spirit.
53. I consistently encourage others to take initiative.
54. I am usually dissatisfied with the status quo and know how things can be improved.
55. I take proactive actions rather than waiting for events to happen to me.
56. To be a strong leader, I need to keep all my subordinates under control.
57. I find enjoyment in serving others in whatever role or capacity.
58. I have a heart to serve others.

59. I have great satisfaction in bringing out the best in others.
60. It is important that I am seen as superior to my subordinates in everything.
61. I often identify talented people and give them opportunities to grow and shine.
62. My ambition focuses on finding better ways of serving others and making them successful.

Wellness

The following questions relate to anesthesiology resident wellness and resident wellness initiatives in your program. Please record your response in the space provided.

63. What do you perceive are the major challenges to wellness faced by anesthesiology residents?
64. Please describe what your residency program is doing to promote and support resident wellness (e.g., wellness initiatives, programs).
65. What do you perceive being the greatest barriers (if any) to implementing resident wellness initiatives in your department?
66. If the barriers you described above were not present, what is one initiative to support resident wellness that you would like to implement (i. e., initiative or program that you currently do not have but believe would have a significant positive impact on resident wellness)?
67. Please share any additional thoughts you have about resident wellness.

Demographics

68. How long have you served as an anesthesiology residency Program Director (total years as PD in any program)?
    _____ Less than 1 year
    _____ 1-5 years
    _____ 6-10 years
    _____ More than 10 years

69. How many residents are currently in your program?
    _____ 20 or less
    _____ 21-50
    _____ 51-80
    _____ More than 80

70. What is your gender?
    _____ Female
    _____ Male
    _____ Other
    _____ Choose not to answer

71. What is the geographic location of your program?

_____ Region 1 (Northeast): Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, New Jersey

_____ Region 2 (Midwest): Wisconsin, Michigan, Illinois, Indiana, Ohio, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa

_____ Region 3 (South): Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Mississippi, Alabama, Oklahoma, Texas, Arkansas, Louisiana

_____ Region 4 (West): Idaho, Montana, Wyoming, Nevada, Utah, Colorado, Arizona, New Mexico, Alaska, Washington, Oregon, California, Hawaii

Request to Receive Survey Results

Provide your email address in the space below if you wish to receive an aggregate copy of the survey results.

Interviewee Volunteer

If you are willing to participate in a brief telephone interview to share your thoughts about program director leadership and anesthesiology resident wellness, then please provide your name and contact information (i.e., email address, phone number). Thank you in advance for considering this request.

APPENDIX B

INTERVIEW GUIDE

Introduction

Hello! This is Amy DiLorenzo. I am contacting you from the University of Kentucky. I am the education specialist in the Department of Anesthesiology, and a doctoral candidate in the UK Educational Leadership program. Thank you for completing the survey on leadership and wellness and agreeing to an interview! The purpose of this study is to understand more about both anesthesiology residency wellness initiatives as well as the leadership attributes and attitudes of anesthesiology program directors. I am conducting this study as part of my doctoral research. I will be audio-recording this interview and transcribing it in order to discover themes. Your name will never be connected to this recording, and neither you nor your program will be identified in the data. All themes will be written about in aggregate. You may skip any question you do not wish to answer. The interview will take approximately 30 minutes. Do you wish to participate in this interview and do I have your permission to record it?

Leadership Questions

1. How would you describe yourself as a leader? (Leadership self-identify)
2. Do you think your leadership style has changed over time, and if so, how? (Leadership self-identity)
3. How do you think your residents would describe you as a leader? (Leadership character)
4. Why do you want to be a leader? (Leadership motives)
5. What methods do you use most often to lead others, specifically the residents in your program? (Leadership methods)
6. What effects do you believe your leadership has on the residents in your program? (Leadership impact)

Resident Wellness Questions

7. What do you perceive as the major challenges to wellness faced by anesthesiology residents?
8. Please describe what your residency program is doing to promote and support resident wellness (e.g. wellness initiatives, programs)?
9. What do you perceive as being the biggest barriers (if any) to implementing resident wellness initiatives in your department?
10. If the barriers you described were <u>not</u> present, what is one initiative to support resident wellness that you would like to implement (i.e. an initiative/program that you do not have currently, but believe would have a great positive impact upon resident wellness)?

Conclusion

- Discuss any other points of clarification needed which are related to the interviewee's survey results

Do you have any further comments or questions about the study or anything we have talked about today? Thank you again so much for participating in this interview! You may contact me at any time if you have follow-up questions. I can be reached at Amy.DiLorenzo@uky.edu or 859-218-0084.

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

XP Initial Review

Approval Ends:	IRB Number:
1/8/2021	45852

TO: Amy Dilorenzo,MA Anesthesiology
PI phone #: 859323595680084

PI email: amy.dilorenzo@uky.edu

FROM: Chairperson/Vice Chairperson
Nonmedical
Institutional Review Board (IRB)

SUBJECT: Approval of
Protocol

DATE: 1/9/2020

On 1/9/2020, the Nonmedical Institutional Review Board approved your protocol entitled:

Leading Well: Anesthesiology Program Director Servant Leaders and their Development of Resident Wellness Programs

Approval is effective from 1/9/2020 until 1/8/2021 and extends to any consent/assent form, cover letter, and/or phone script. If applicable, the IRB approved consent/assent document(s) to be used when enrolling subjects can be found in the "All Attachments" menu item of your E-IRB application. [Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.] Prior to the end of this period, you will be sent a Continuation Review (CR)/Administrative Annual Review (AAR) request which must be completed and submitted to the Office of Research Integrity so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol. It is the principal investigator's responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. Protocol changes made without prior IRB approval to eliminate apparent hazards to the subject(s) should be reported in writing immediately to the IRB. Furthermore, discontinuing a study or completion of a study is considered a change in the protocol's status and therefore the IRB should be promptly notified in writing.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" available in the online Office of Research Integrity's IRB Survival Handbook. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at 859-257-9428.

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Professional Honors and Awards

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Educational Leadership and Administration

Abraham Flexner Master Educator Award 2015
Educational Innovation and Curriculum Development

Journal of Graduate Medical Education 2016, 2017,
Top 10% Reviewers Honor 2018, 2019

Selected Peer Reviewed Publications

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