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## Leadership development of physician-trainees

Julie Robinson

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Pepperdine University  
Graduate School of Education and Psychology

LEADERSHIP DEVELOPMENT OF PHYSICIAN-TRAINEES

A dissertation submitted in partial satisfaction  
of the requirements for the degree of  
Doctor of Education in Organizational Leadership

by

Julie Robinson

May, 2023

Laura Hyatt, Ed.D. – Dissertation Chairperson

This dissertation, written by

Julie Robinson

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF EDUCATION

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## DEDICATION

This dissertation is dedicated to my husband and best friend, Michael Robinson, who knew the time and perseverance required to complete this undertaking and supported me anyway; to my adult daughters, Emily and Megan, who challenge, inspire, and sharpen me as a mother and human; and to our beloved family dog, Charley, who was a steadfast companion to my husband on his dissertation journey over a decade ago, and passed in the middle of mine. This dissertation is also dedicated to my parents, Steve and Carol, who never waived in modeling the importance of life-long learning, the application of new knowledge to the world around us, and most importantly, the profound scaffolding that comes from the simple words, “I love you, and I’m proud of you.”

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## VITA

Julie Robinson provides leadership in design, implementation, and evaluation of graduate medical education programs at a community hospital on the central coast of California. Toward the goal of advancing health equity by equipping the next generation of physicians, Julie leads organizational change through continuous improvement, strategic planning, coaching, implementation of innovative curricula, and facilitating personal and professional growth for the team. For nearly two decades, Julie has served as Educational Specialist and Program Manager, ensuring excellence in oversight of program and institutional accreditation. Julie earned her Master of Public Health (MPH) in Community Health Sciences from the University of California, Los Angeles, and her Bachelor of Arts in Communication Studies from the University of California, Santa Barbara.

## ABSTRACT

Physicians frequently occupy leadership roles, yet training in leadership development in the medical education continuum is scarce (Angood, 2015; Dhaliwari & Sehgal, 2014; Rotenstein et al., 2018; Varkey et al., 2009). Effective leadership training can guide physician-trainees on a journey toward self- and others- awareness and management utilizing emotional intelligence (Goleman, 2006), integrity, authenticity (Erhard et al., 2010; George, 2003; Snook et al., 2012), communication, teamwork (Hackman, 2012; Larson & LaFasto, 1989), change management (Kotter, 1995; 2012), and systems thinking (Senge, 2006). The call to enhance leadership development of physicians across their education continuum is unmistakable (Blumenthal et al., 2012, Bronson & Ellison, 2015; Onyura et al., 2019; Rotenstein et al., 2018; Sadowski, 2018; Torres-Landa et al., 2021; Varkey et al., 2009). However, intentionally designed longitudinal leadership courses are rarely available in the graduate medical education continuum (Torres-Landa et al., 2021).

This study explores the development of transformational leadership (Bass, 1999; Bass & Avolio, 1993) in physician-trainees. The Becoming A Leader (BAL) course offers trainees the opportunity to learn to exercise leadership effectively (Erhard et al., 2010). The qualitative design of the study utilizes secondary narrative data with Bass' (1999) transformational leadership model as the theoretical framework. Research questions sought resident descriptions of individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence (Antonakis, 2012; Avolio & Bass, 1991; Bass & Riggio, 2006). Source documents included de-identified pre-existing written perspectives collected from residents throughout and after participation in a year-long course.

Data analysis captured rich descriptions. Residents described individualized consideration for themselves and others through the subthemes of self-awareness, self-management, others-awareness and others-management. Second, intellectual stimulation included factors such as being open-minded, challenging your own and others' beliefs, and encouraging better team performance. Third, residents described their experience with inspirational motivation through the subthemes of simple messaging, a commitment to a shared vision, and the practice of fostering community. Finally, residents described idealized influence through effective role modeling, the importance of taking responsibility, and giving praise. The results of this study indicate that longitudinal leadership training during residency, with frequent self-reflection, can be effective for developing core leadership principles.

## **Chapter 1: Introduction**

### **Statement of the Problem**

Optimizing health outcomes remains paramount in society (NASEM, 2020; Smith et al., 2012). Interdisciplinary teams facilitate health care across settings such as outpatient clinics, urgent care centers, primary care physicians' offices, hospitals, and community-based organizations. Physicians are often designated as leaders of these settings providing patient care (Carsen & Xia, 2006; Lee, 2010). Although physicians spend a considerable amount of time and money on the continuum of their education and training, these physician-leaders are frequently placed in positions of leadership without any formal training, mentoring, or assessment of leadership abilities (Rotenstein et al., 2018). Experienced physician leaders continue to declare a need for leadership development early in the medical education continuum (Angood, 2015; Dhaliwali & Sehgal, 2014; Rotenstein et al., 2018; Varkey et al., 2009). After medical school, physician-trainees enter residency where they hone their skills in patient care, medical knowledge, communication, professionalism, and life-long learning (Edgar et al., 2020; Swing, 2007).

The purpose of this study is to explore the development of transformational leadership in physician-trainees after participation in a year-long leadership course. Through the lens of transformational leadership tenets (Bass, 1999; Bass & Avolio, 1993), the researcher seeks the extent to which "idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration" (Bass & Avolio, 1993, p. 112) are present in the physician-trainees through the analysis of findings. In the instance that components of transformational leadership are not discovered, the researcher includes additional factors of the Full Range Leadership Model (FRLM) such as laissez-faire leadership, contingent reward (Podsakoff & Schriesheim, 1985),

and management-by exception (Avolio & Bass, 1991; Kuhnert, 1994). These components are considered less effective than transformational leadership but exist in organizational culture nonetheless (Bass & Avolio, 1993). This study proposes utilizing qualitative secondary analysis of existing de-identified written perspectives previously collected throughout and at the conclusion of the course.

Effective leadership training can guide physician-trainees on a journey toward self- and others- awareness and management utilizing emotional intelligence (Goleman, 2006), integrity, authenticity (Erhard et al., 2010; George, 2003; Snook et al., 2012), communication, teamwork (Hackman, 2012; Larson & LaFasto, 1989), change management (Kotter, 1995; 2012), and systems thinking (Senge, 2006). Residents who train in hospital settings routinely interact with co-residents, faculty, social workers, nurses, pharmacists, and discharge planners. By integrating leadership skills development into their training experience, residents may be able to offer enhanced potential for sustainable outcomes (Onyura et al., 2019; Rotenstein et al., 2018; Varkey et al., 2009). Indeed, as residents are expertly guided to understand and embody management and leadership principles such as contingent reward (Podsakoff & Schriesheim, 1985), management-by-exception (Kuhnert, 1994), individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence (Antonakis, 2012; Avolio & Bass, 1991; Bass & Riggio, 2006), they will be able to challenge cultural norms, foster organizational change, and empower others to align around a shared vision (Bass & Avolio, 1993).

The call to enhance leadership development of physicians across their education continuum is unmistakable (Blumenthal et al., 2012, Bronson & Ellison, 2015; Onyura et al., 2019; Rotenstein et al., 2018; Sadowski et al., 2018; Torres-Landa et al., 2021; Varkey et al., 2009). However, intentionally designed longitudinal leadership courses are rarely available in the

graduate medical education continuum (Torres-Landa et al., 2021). Furthermore, the branding of “leader” among physician-trainees may be negatively associated with “administrator” (Dhaliwal & Sehgal, 2014). The call is not necessarily toward administrator, but collaborator (Fagin & Garelick 2004; Hirpara & Taylor, 2020; Xyrichis & Lowton, 2008), to advocate for patients, contribute to a positive workplace culture, and deliver efficient quality of care. Since physicians are routinely placed in leadership roles, the researcher seeks to discover leadership learning through a residency program in the United States and identify best practices for implementing effective experiential medical education in leadership development.

### **Background of the Problem**

The American Medical Association declares that health care teams should always be led by physicians (Berg, 2022). Indeed, Berg’s (2022) article includes the heading “physicians must lead the health care teams” because the physician possesses the “highest skill level, the most education, the one who is most capable of taking care of that patient and ensuring quality and safety” (para. 1). Investigating the veracity of that statement is outside the scope of this study; however, one must consider that just because someone has the highest educational attainment in the room, if that person lacks leadership skills (i.e., integrity, authenticity, emotional intelligence, ability to point to a shared vision), then perhaps having the physician lead every aspect of the healthcare team will not be in the best interest of the workgroup or patient. Fagin and Garelick (2004) argue that in the psychiatric inpatient environment, for example, doctors, as opposed to nurses, “are probably less able to make appropriate judgements because of their more distant contact with in-patients, and yet deference is paid to their ‘expertise’” (p. 278). Furthermore, physician led teams with poor leaders experience adverse effects on financial, clinical, and well-being of team members (Torres-Landa et al., 2021). If the American Medical Association and

other organizations want to protect the physician-as-leader dogma, then the call to action is raising the bar on the expected level of leadership development training throughout the medical education continuum.

Indeed, Fagin and Garelick (2004) conclude their article on the nurse-doctor relationship by suggesting pathways to pave the way toward true collaborative clinical work. The suggestions include specifics in engagement, clinical management, and help and support. Not surprisingly, these tenets mirror components of transformational leadership (Bass & Avolio, 1993; Bass & Riggio, 2006). Both nursing and medicine are traditionally hierarchical (Edmonson & Zelonka, 2019; Fagin & Garelick, 2004). Overcoming the negative consequences of a hierarchical effect can lead to improved collaboration and outcomes. This is the crux of the call to transformational leadership development of physician-trainees.

Formal leadership training is not currently required or regularly offered during medical residency. Recent studies support the notion of incorporating leadership training in residency programs (Baird et al., 2012; Jardine et al., 2015; Kumar et al., 2020; Rotenstein et al., 2018; Saravo et al., 2017; Stoller, 2009; Torres-Landa et al., 2021). True (2020) suggests that the Accreditation Council for Graduate Medical Education (ACGME), the accrediting agency for residency and fellowship programs, introduce leadership training as a new requirement. The ACGME regulates the industry of residency education. The “customers” are the residents, the “suppliers” are teaching hospitals, and competitors are other residency programs. Programs compete for the brightest trainees, while the ACGME sets the rules, regulations, and expectations for the clinical learning environment.

The ACGME has set forth competencies and milestones, grounded in continuous quality improvement and innovation philosophy, by which programs and faculty are to assess their

trainees (Edgar et al., 2020). Competency-based medical education is designed to be learner-centered and focused on outcome-knowledge application, where the path of learning is non-hierarchical and the timing of assessment is formative, formulated by direct observation (Edgar et al., 2020). The ACGME (2022b) requires six competencies to be taught and measured across all specialties. These include (a) patient care, (b) medical knowledge, (c) professionalism, (d) interpersonal and communication skills, (e) practice-based learning and improvement, and (f) systems-based practice (ACGME, 2022b).

Examples of the expectations and requirements for four of the six ACGME competencies is delineated here. The first two competencies, patient care and medical knowledge, are not discussed because they do not relate directly to leadership specifically, but rather the realm of clinical reasoning and individual knowledge base. Expectations for (a) professionalism, (b) practice-based learning and improvement, (c) interpersonal and communication skills, and (d) systems-based practice, overlap with typical leadership development training, such as emotional intelligence, integrity, communication, conflict resolution, inspiring a shared vision, and change management. First, professionalism includes multi-pronged deliverables such as demonstrating “competence in compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; [and the] ability to recognize and develop a plan for one’s own personal and professional well-being” (ACGME, 2022b, p. 25). Second, practice-based learning and improvement involves “identifying strengths, deficiencies, and limits in one’s knowledge and expertise, setting learning and improvement goals, ... [and] systematically analyzing practice using quality improvement methods, and implementing changes with the goal of practice improvement” (ACGME, 2022b, p. 27). Third, the broad requirement for interpersonal and communication skills across all specialties is that residents demonstrate capabilities “that

result in the effective exchange of information and collaboration with patients, their families, and health professionals” (ACGME, 2022b, p. 28). This requirement points to the need for collaboration amongst team members as well as patients. Finally, within the interpersonal and communication skills competency list, there is one requirement that mentions leadership. Residents are expected to demonstrate competence in “working effectively as a member or leader of a health care team or other professional group” (ACGME, 2022b, p. 28). Early in the medical education continuum, perhaps during the intern and junior years of residency, membership on a health care team suffices. However, once a resident reaches senior level status, it is expected that they will demonstrate the ability to lead and teach their team, whether in the operating room, on the patient floor, or in a community setting. Chapter 2 goes into further explicit detail paralleling competency-based expectations with specific leadership development opportunities.

The milestones provide specialty-specific frameworks for assessing resident development (ACGME, 2019). Surgery currently provides 18 milestones, each categorized into one of the six competencies. The milestones are based on a developmental continuum with five levels. Level 1 is appropriate for an incoming resident, Levels 2 and 3 describe behaviors expected of junior residents who are proficient and adequately progressing, and Level 4 represents behaviors appropriate for graduating residents. Level 5 delineates aspirational skills, those expected of an experienced faculty member (Edgar et al., 2020). Of the 18 milestones, approximately 14 of them describe transformational leadership behaviors in Level 5. As an example of expectations of the fourth competency, systems-based practice, the second systems-based practice milestone is presented in Figure 1.

**Figure 1***Sample Surgery Milestone Showcasing Expectations to Lead in Level 5*

Systems-Based Practice 2: System Navigation for Patient-Centered Care				
Level 1	Level 2	Level 3	Level 4	Level 5
Demonstrates knowledge of care coordination	Coordinates multidisciplinary care of patients in routine clinical situations (e.g., dressing change)	Coordinates and/or leads multidisciplinary care of patients in complex clinical situations (e.g., home parenteral nutrition, postoperative intravenous feeding, intensive care unit)	Coordinates care of patients with barriers to health care access (e.g., trauma patient with no access to care) or other disparities in care	Leads in the design and implementation of improvements to care coordination
Performs safe and effective transitions of care/hand-offs in routine clinical situations	Performs safe and effective transitions of care/hand-offs in complex clinical situations	Supervises safe and effective transitions of care/hand-offs of junior residents	Resolves conflicts in transitions of care between teams	Leads in the design and implementation of improvements to transitions of care
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b>				
Not Yet Completed Level 1 <input type="checkbox"/>				

*Note.* From *ACGME Surgery Milestones*, by the Accreditation Council of Graduate Medical Education, 2019 (<https://www.acgme.org/globalassets/pdfs/milestones/surgerymilestones.pdf>). In the public domain. Reprinted with permission. See Appendix.

As seen in Figure 1, expectations for Level 1 start at demonstrating knowledge, while levels 2 and 3 describe expected action such as coordinating, supervising, and performing. Finally, level 5 describes the expectation to lead. Explicit descriptions described in the milestones such as the one in Figure 1 cause the researcher to pause and consider the appropriate placement for leadership training in GME. As an intern, or Level 1, the resident is expected to be learning self-management, increasing their knowledge base, and learning their new role. Is this the time to include leadership training, or would it be more appropriate in the junior and senior years? These questions and more are explored in this study.

In addition to individual assessment of competencies and milestones, the aspiration toward improved collaboration, quality, and even financial outcomes remains. Ultimately, physician leadership in the organizations and communities they serve effects financial outcomes.

The healthcare sector is an enormous piece of the United States economy. The U.S. spends more on healthcare than any other highly developed nation yet lacks better health outcomes (Nunn et al., 2020). Consumer spending, government spending, and labor market share in health care remain high and continue to rise. For example, per capita health care spending in the United States rose from \$2900 per person in 1980 to \$11,800 per person in 2018 (Nunn et al., 2020). To the extent that physicians are charged with improving the health care system (Lee, 2010; Smith et al., 2012), and the population's health (NASEM, 2020), it behooves the medical profession to engage, train, and evaluate themselves on their ability to improve expenditures, system problems, and influence the social determinants of health. As residency program leaders train physicians early in their continuum, the foundation is set for their future leadership roles. Some will stay in the acute care setting taking care of patients one at a time, but some will venture into policy, advocacy, community-based, or globally focused organizations that will change health outcomes at a population level. For these reasons, the interest in physician leadership development early in the continuum with appropriate follow-up, continues.

### **Purpose and Importance of Study**

The purpose of this research study is to explore resident experiences and perceptions toward their own leadership identity as a result of participating in a year-long leadership course. How do they describe their identity and development in their own words? Are residents able to grow from transactional leaders to transformational leaders? There is a paucity of literature exploring resident leadership development utilizing secondary analysis of qualitative data after a year-long course with residents. This study answers the call in the literature (Frich et al., 2015; Sadowski et al., 2018) for qualitative analysis of leadership identity in residency. This study focuses on qualitative analysis and on the robust tenets of transformational leadership and

examines linkages to discover if residents display transformational leadership style characteristics.

### **Becoming a Leader Course**

A community teaching hospital in California trains physicians in residency programs. In the five-year surgical residency program, there are three to four surgical residents in each cohort, for a total of 15-20 surgical residents. As previously mentioned, residency training is the crucial step between medical school and independent practice where trainees learn to provide optimal patient care while honing their medical knowledge, professionalism, and interpersonal skills.

Recently, through anonymous program surveys, individual meetings, end-of-rotation surveys, and evaluation of peers, residents identified a need for additional professionalism training. The unique training conditions for surgery residents include long hours and stressful traumas. In an effort to bolster their skill set and treat themselves and each other with respect despite the long hours, the residents suggested the implementation of formal leadership training as a potential remedy. With plummeting intern and junior resident morale, the implementation of formal leadership training intends to provide hope towards a positive future by creating an inspiring vision of a residency program led by authentic, empathetic, transformational leaders (Bass & Riggio, 2006).

In response to the problem identified by residents, and the call throughout the literature to implement leadership training in residency, program leadership decided to introduce a novel leadership course developed by Erhard et al. (2010). Although the course has not been taught in residency programs before, the Becoming a Leader (BAL) course, alternatively known as the ontological-phenomenological model for creating leaders, has enjoyed success in the military, business school, law school, and health care environments (Erhard et al. 2010). The ontological-

phenomenological model for creating leaders aims to teach leadership in a way that informs students about leadership and transforms them into “actually being leaders and exercising leadership effectively as their natural self-expression” (Erhard et al., 2010, p. 2). Ontologically, the course assists learners in revealing the “*nature* of being when one is being a leader” (Erhard et al., 2010, p. 2). Phenomenologically, learners explore the “actionable pathway to the *being* of being a leader and the actions of the effective exercise of leadership” (Erhard et al., 2010, p. 2). The underlying components presented, explored, and practiced throughout the course include “integrity, authenticity, being committed to something bigger than oneself, and being cause in the matter” (Erhard et al., 2010, p. 14-16). See Table 1 for course foundation component descriptions.

**Table 1**

*Becoming a Leader Course Foundation Component Descriptions*

Foundation	Description
Integrity	<ul style="list-style-type: none"> <li>• Do what you say you are going to do</li> <li>• A matter of your word being whole and complete</li> <li>• Required to create maximum opportunity for performance</li> <li>• Builds trust</li> </ul>
Authenticity	<ul style="list-style-type: none"> <li>• Be who you say you are going to be</li> <li>• Leaves you grounded and able to be straight with others without the use of force</li> </ul>
Being committed to something bigger than oneself	<ul style="list-style-type: none"> <li>• The source of charisma required to lead and to develop others as leaders</li> <li>• The source of persistence when the path gets tough</li> </ul>
Being cause in the matter	<ul style="list-style-type: none"> <li>• A declaration you make, “I am cause in the matter of everything in my life”</li> <li>• You are never a victim in life when you view it from this perspective of power</li> </ul>

The BAL course has not been implemented in a residency program before; however, the hospital under study employs a physician trained to educate others in this model. The course aims are in line with the current literature. For example, Hopkins et al. (2015) identified key

leadership competencies demonstrated by physician leaders as “empathy, initiative, emotional self-awareness, and organizational awareness” (p. 566). Also, Stoller (2009) suggests that physicians may be less inclined to collaborate and do not typically see themselves as followers. Given the need for self- and others-awareness, the surgery program decided to focus on self-leadership first, with the hope that this approach will lead to more effective team-leadership, teamwork, and patient care (Neily et al., 2010; Rosenman et al., 2019; Stoller, 2009).

Program leaders recognize that creating and sustaining long-term culture change takes time. The curriculum was custom-designed to be implemented in one-hour sessions approximately every other week; this allowed for approximately 25 hours of face-to-face experiential learning over a year. To achieve leadership as one’s natural self-expression takes practice, self-reflection, courage, and time. Senior residents will graduate before the goals of the intervention have time to take full effect. However, if program leadership is willing to play the long game, they will succeed in fostering surgeons who are well-adapted to lead themselves, others, organizations, and the communities they serve.

An important aspect of the BAL course is that it was implemented longitudinally, with continuous follow-up and coaching by the instructor. This recommendation was garnered from John Kotter’s (2012) writings. Although Kotter is most known for his world-renowned 8 step model for change (Kotter, 1995), in a more recent piece, he mentions the importance of providing the experience and information needed to become a leader in today’s hierarchical organizations (Kotter, 2012). He says, “the solutions available – courses on leadership, for example – are wholly inadequate, because most development of complex perspectives and skills happens on the job, not in the classroom” (Kotter, 2012, p. 58). Therefore, the intent of

implementing the BAL course in a surgical residency, was to provide situated learning of leadership.

In addition to what Erhard et al. (2010) refer to as the four foundational factors of leader and leadership (integrity, authenticity, being cause in the matter, and being committed to something greater than oneself), the BAL course introduces four distinct aspects of the contextual framework for being a leader and for the exercise of leadership. When the foundation factors and the contextual framework come together as a whole, they create a situation that offers “power in any leadership situation to shape and color the way the circumstances you are dealing with occur for you such that your naturally correlated way of being and acting is that of being a leader and exercising leadership effectively” (Erhard et al., 2010, p. 13). In summary, the BAL course offers learners an opportunity to learn to exercise leadership effectively. This study aims to explore changes in resident leadership style and identity through the lens of transformational leadership.

### **Research Questions**

The following research questions are directly tied to the study’s purpose. To reiterate, the purpose of this qualitative research study is to explore transformational leadership tenets in residents after participation in a year-long leadership course. At this stage in the research, the tenets of transformational leadership will be generally defined as “inspirational motivation, intellectual stimulation, individualized consideration, and idealized influence” (Bass & Avolio, 1993, p. 112). Therefore, the questions are intentionally open-ended yet specific:

- RQ1: How did residents describe individualized consideration?
- RQ2: How did residents describe intellectual stimulation?
- RQ3: How did residents describe inspirational motivation?

- RQ4: How did residents describe idealized influence?

### **Definition of Terms**

In order to construct a lexicon for common understanding of terms, this section defines the vocabulary surrounding graduate medical education and leadership. The terms defined include (a) ACGME, (b) attending physician/faculty, (c) clerkship, (d) continuing medical education, (e) graduate medical education, (f) intern, (g) PGY, (h) physician, (i) resident, (j) undergraduate medical education.

#### ***ACGME***

The ACGME is the accrediting body for graduate medical education (residency and fellowship programs) in the United States (ACGME, n.d.b.). The ACGME sets standards for programs and the institutions that sponsor them. Through a voluntary process of evaluation and review, the ACGME assures the public and the profession that programs and institutions are upholding standards of the specialty or subspecialty practice(s) for which they prepare graduates (ACGME, n.d.b.).

#### ***Attending Physician/Faculty***

The attending physician is the provider ultimately responsible for an individual patient's care. Additionally, attending physicians may or may not supervise the care of interns, residents, and fellows (ACGME, 2020).

#### ***Clerkship***

Clerkships in the United States are typically conducted during the third and fourth years of medical school. These rotations offer hands-on experience for the medical student in the clinical setting. Certain clerkships are required, like internal medicine and surgery, whereas

others may be selected by the student as an elective (Lamb & Rajasekaran, 2021; Wojtczak, 2002a).

### ***Continuing Medical Education***

To ensure the attainment of lifelong physician competencies, doctors must continue to acquire new knowledge and skills beyond medical school, residency, and fellowship training. Requirements vary by specialty, but a certain amount of continuing medical education (CME) training hours per year is required for physicians to maintain certification (Wojtczak, 2002a).

### ***Graduate Medical Education***

After medical school, physicians (M.D. or D.O.) continue their education in a medical specialty of their choosing. Graduate medical education (GME) refers to this period of clinical, didactic, and experiential learning in a particular specialty (residency) such as internal medicine or surgery, or subspecialty (fellowship), such as interventional cardiology. According to the ACGME (n.d.a), for the academic year 2021-2022, there were over 12,000 accredited residency and fellowship programs in the United States offering training in 182 accredited specialties and subspecialties (para. 3). Furthermore, 871 sponsoring institutions (i.e., hospitals) housed accredited programs involved in the training of over 150,000 residents and fellows (para. 3).

### ***Intern***

A first-year resident is typically referred to as an intern. During this first postgraduate training year interns practice medicine under supervision (Wojtczak, 2002b). The first year of residency introduces the trainee to an increased volume of patients. Interns practice developing patient care plans in congruence with fellow physicians, nurses, consultants, and other members of the health care team (Lamb & Rajasekaran, 2021).

### ***PGY***

PGY stands for post-graduate-year and refers to the number of years a physician is post medical school. For example, a PGY1 is in their first year of training post medical school, a PGY2 in their second, and so on. Residency programs vary in length. PGY designations give hospital staff and program leadership an idea of where a physician is in their training. For example, surgical residency is 5 years, and each year comprises competencies and expectations, which must be met before promotion to the next PGY. In surgery, the PGY1 year is the intern year, PGY2-3 are junior years, and PGY4-5 are senior years.

### ***Physician***

A physician is one who has earned a medical degree (M.D. or D.O) by completing medical school (see definition for undergraduate medical education). During residency (see definition for graduate medical education) the physician gains a training license. Before practicing medicine, the physician needs a state license. Although the timelines vary, physicians may choose to become board certified in their chosen specialty after residency, or subspecialty after fellowship. This process can take 7-15 years.

### ***Resident***

After medical school, during the GME phase of training, resident physicians engage in hands-on learning supervised by attending physicians. Residents are typically assigned to their program through a match system, which may involve moving across the country. In their GME training program, residents are taught and assessed on professionalism, patient care, medical knowledge, interpersonal and communication skills, practice-based learning and improvement, and systems-based practice (ACGME, n.d.b). In practice, and for the purposes of this study, the

term resident is synonymous with trainee. Residents may be further delineated by PGY, defined earlier in this section, as either an intern, junior, or senior.

### ***Undergraduate Medical Education***

In the United States, undergraduate medical education (UME) refers to medical school, typically attended after graduation from a college or university. Medical school takes about four years. The first two years involve learning about science, innovations in the field of medicine and the technology enabling progress, as well as communication, problem-solving, ethics, and patient care. The final two years involve clerkships, defined previously in this section, as the scholar chooses a specialty in which to apply for residency.

### **Summary**

Chapter 1 began by introducing a need for optimizing health care outcomes through interdisciplinary teams. Historically, these teams have been led by physicians, although increasingly, and in appropriate settings, the multi-disciplinary work of health care requires robust collaboration across various disciplines. As a result of the heightened need for effective physician leaders coupled with a distinct lack of leadership training, the statement of the problem described the unmistakable call for leadership training development across the medical education continuum.

After briefly introducing a history of leadership study and the conceptual framework of transformational leadership, Chapter 1 described aspects and requirements of residency training including the ACGME competencies and milestones. The components of the BAL course were presented including the four foundational elements of integrity, authenticity, being committed to something greater than oneself, and being cause in the matter (Erhard et al., 2010). Finally, Chapter 1 concluded by presenting the research questions for the study and definitions of various

terms. The research questions are directly tied to the study's purpose of exploring transformational leadership development in residents as a result of participating in the BAL course.

The next chapters of the dissertation cover a comprehensive literature review, a summary of methods for the study, and finally, findings and discussion. Ahead, Chapter 2 (a) reviews the relevant literature across the medical education spectrum regarding leadership training and development, (b) presents the conceptual framework of transformational leadership, and (c) weaves a synthesis of the concept of transformational leadership in the specific context of graduate medical education.

## **Chapter 2: Review of Relevant Literature**

### **Overview**

The following literature review (a) explores the current status of leadership development efforts across the medical education continuum, (b) introduces and describes primary sources for the transformational leadership theoretical framework, and finally, (c) synthesizes the current literature from the specific conceptual framework of transformational leadership development with the specific context of GME. The scope of the review aims to inform the reader about past and current studies in medical education leadership, moving from a broad focus spanning across the entire medical education continuum to a narrow concentration coupling GME and transformational leadership. The strategy for the review includes investigating primary and secondary sources, analyzing existing systematic reviews, and incorporating suggestions from researchers who contribute significant, thoughtful groundwork and exploration in these topics. The literature review concludes by reviewing current recommendations for research in the stated areas, highlighting gaps in previous research methods, and presenting a rationale for the proposed qualitative research study.

### **Section One: Review of the Literature in Context – Leadership in Medical Education**

The first section of the literature review explores the current status of leadership development efforts across the medical education continuum differentiated by sub-sections in UME, GME, and CME. Since the purpose of this study is to explore transformational leadership tenets in residents after implementation and participation in a year-long leadership course, this section introduces the context of medical education and the current literature surrounding leadership curricula therein. The second section introduces the conceptual framework of the full range of leadership model, which includes transformational leadership (Bass, 1999; Bass &

Avolio, 1993; Bass & Riggio, 2006). Management and leadership concepts such as contingent reward, management-by-exception, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration are presented (Bass & Riggio, 2006). Section Three narrows the focus and synthesizes issues and recommendations specific to GME and resident transformational leadership development efforts. Gaps in the literature are presented and point to the rationale for this study. Starting with the end in mind, Section One systematically reviews literature that points to a common goal: Not only does GME leadership want to develop physicians that utilize expert medical knowledge to care for patients, but residency curriculum designers also aspire to shape physicians that will be able to challenge cultural norms, foster organizational change, and empower others to align around a shared vision (Bass & Avolio, 1993).

### ***Leadership Curriculum Development in UME***

**Introduction.** The continuum of medical education in the United States starts on the first day of medical school and continues through clerkship, residency, fellowship, and practice. In order to survive and thrive in new situations, students, trainees, and practitioners must learn to perform and adapt as they encounter challenges, opportunities, and expectations. Experienced physician leaders continue to passionately declare a need for leadership development early in the medical education continuum (Angood, 2015; Dhaliwari & Sehgal, 2014; Varkey et al., 2009).

**Current State.** Medical school, commonly referred to as undergraduate medical education (UME), has limited efforts at incorporating leadership training (Abbas et al., 2011; Varkey et al., 2009). Webb et al. (2014) conducted a systematic review of the literature to understand best practices in leadership training in UME. Only 24 curricula met their inclusion criteria. Although most of the curricula was implemented longitudinally, they rarely indicated

quantifiable results or behavior change. In addition, the 24 curricula varied across geographic location (worldwide), educational formats (classroom vs. online), learner level (pre-clinical vs. clinical), type of instructor (clinical faculty vs. other instructor), leadership competencies, and outcome measures (Webb et al. 2014). Understandably, leadership intervention outcomes can be hard to measure, and these outcomes fall into categories pre-determined by the curriculum objectives. In their systematic review, Webb et al. found that some curricula focused on quality improvement, while others focused on developing community leaders, and still others focused on patient outcomes. Webb et al. chose the Medical Leadership Competency Framework (MLCF) developed by the National Health Service in the United Kingdom as their framework for classifying curricula. Specific components of the MLCF include setting direction, demonstrating personal qualities, working with others, managing services, and improving services (Academy of Medical Royal Colleges, 2010). A potential critique of utilizing the MLCF in medical school contends that the UME setting is too early to expect students to “manage” services or even “improve” them when they are largely shadowing experienced physicians. The MLCF may be more appropriate for use in GME or CME, or perhaps as an expected continuum across an entire career.

In another study from the UME context, Schmidt et al. (2018) took baseline surveys of first-year medical students’ “predictor traits of leadership emergence and effectiveness” (p. 281). These included transformational leadership, motivation, humility, and the big five personality traits (Antonakis, 2011). Schmidt et al.’s (2018) purely quantitative study found several significant correlations in their regression models. For example, from the motivational sources inventory, intrinsic process and internal self-concept positively predicted transformational leadership (Schmidt et al., 2018). This means that first year medical students scoring high on

transformational leadership are “motivated by finding enjoyment in their life and work (intrinsic process) and high personal standards and achievement (internal self-concept)” (Schmidt et al., 2018, p. 283). Schmidt et al. (2018) admit that medical students are typically high-performing, and the important notion here would be to track their scores over time, throughout the medical education continuum and into their careers. The authors aim to utilize their findings to assess existing leadership curriculum as well as shape new curricula toward common goals such as professionalism, engagement, excellence in patient care and elevated quality outcomes.

Although both faculty and students in UME perceive a need for increased management and leadership training (Abbas et al., 2011; Varkey et al., 2009), barriers such as lack of time, funding, and the hierarchy of medicine have been identified (Mokshagundam et al., 2019). According to Mokshagundam et al.’s (2019) study, medical students prefer formal curriculum coupled with hands-on opportunities to hone leadership skills. As the imperative for leadership training amongst physicians grows, the development of practical opportunities and consensus for development remains. Although there may be agreement that leadership training should begin in UME, there is no consensus regarding methods of teaching, specific content, or evaluation framework (James et al., 2021). In a recent review of leadership interventions in UME, James et al. (2021) conclude that most interventions include traditional components of leadership development, such as general leadership, change agency, and teamwork. The authors reflect on gaps in those interventions, such as “interprofessionalism, evidence-based medicine and practice, and professionalism and ethics, as they related to, and define, leadership” (James et al., 2021, p. 1506). Table 2 shows a summary of concepts, barriers, and recommendations in the UME leadership development literature.

**Table 2***UME Leadership Development: Summary of Concepts, Barriers, and Recommendations*

Author(s)	Concept(s) Measured	Barriers	Recommendations
Webb et al. (2014) (Systematic review)	MLCF Setting direction Personal qualities Working with others Managing others Improving services	Hard to measure	Measure behavior change Show quantifiable results Find consensus for content, delivery, and evaluation
Schmidt et al. (2018) (quantitative)	Transformational leadership Motivation Humility Big 5 personality traits		Track scores over time Improve assessment of curriculum Track professionalism, engagement, patient care outcomes, and quality improvement
Mokshagundam et al. (2019) (review)		Lack of time Lack of funding Hierarchical nature of medicine Competing requirements	Initiate training early in UME Involve students in formal curriculum development Include hands-on component Establish student leadership positions Support interprofessionalism Support non-hierarchical culture
James et al. (2021) (review)	Content delivered Method of delivery Outcome assessment methods	Crowded curriculum Wide variety	Address gaps such as: Interprofessionalism Evidence-based medicine/practice Professionalism and ethics Focus on student engagement Involve community settings

Upon review of the UME leadership development literature, one concludes that there are widely varying efforts in place to meet the demand for formal and experiential learning in the development of the medical student. While these efforts are well-intentioned and provide rigor at the individual-curriculum level, consensus on their effect is lacking. This researcher believes these findings are appropriate. A medical student is typically just out of college, still a student, young in their career. Although their experiences are slowly moving from the classroom to the clinic, it is not until they leave medical school and engage in supervised and ultimately unsupervised practice that their true leadership skills, or lack thereof, will be on display. Once

the student enters residency and encounters stress related to patient care decision making, demanding co-workers, in-training exams, and presentations to prepare, often with little sleep, then their ability to manage themselves and others will manifest.

It is the opinion of this researcher that self-assessments and foundational elements of leadership training are appropriate in the UME setting. However, GME is the context where physician-trainees are truly exposed to new stressors such as patient care plan development and clinical decision-making in real time. Although GME environments are supervised, resident autonomy is provided as soon as the resident is capable. Autonomy in decision-making, and new, stressful interactions with the multi-disciplinary team offer the ideal moment to teach and train the new physician in leader and leadership development. This study focuses on physician leadership development in the GME context, discussed in the next section.

In summary, this section introduced recommendations and gaps in leadership curriculum development in UME. Systematic reviews by Webb et al. (2014) and James et al. (2021) revealed a lack of consensus on content, delivery method, and evaluation. However, Schmidt et al. (2018) make several aspirational statements worth repeating. The overarching vision for their study reflects the vision for this study as well:

This study is based on the premise that medicine is a leadership profession. Given that leadership is the dynamic process of achieving positive outcomes through people and tasks (Yukl, 2013), patients deserve doctors who understand and are motivated to master this process. If the healthcare team lacks leadership and fails in the communication, coordination, and delivery of medical care (the process), therapeutic interventions may be for naught and patient outcomes will suffer. (Schmidt et al., 2018, p. 281)

## *Physician Leadership Curriculum in GME*

**Introduction.** As in UME, the teaching and intentional development of trainee leadership in GME has not equaled the teaching and development of academic and technical competencies such as medical knowledge and patient care. After medical school (UME), students enter residency in their chosen specialty and begin their GME journey. The first year of residency is typically called internship, or PGY1, followed by promotion to junior and senior resident status. If desired, a resident can pursue further subspecialty training in a fellowship and take board exams in both their specialty and subspecialty. Residency represents the pivotal time-period encompassing the transition from student to resident to practicing physician, the journey from medical school to autonomous practice.

**Current State.** Formal leadership training is not currently required or regularly offered during medical residency. Recent studies support the notion of incorporating leadership training in residency programs (Awad et al., 2004; Baird et al., 2012; Jardine et al., 2015; Kumar et al., 2020; Rotenstein et al., 2018; Saravo et al., 2017; Stoller, 2009). True (2020) suggests that the ACGME introduce leadership training as a new requirement. The ACGME regulates the industry of residency education. The “customers” are the residents, the “suppliers” are teaching hospitals, and competitors are other residency programs. Programs compete for the brightest trainees, while the ACGME sets the rules, regulations, and expectations for the clinical learning environment.

**ACGME Requirements.** The ACGME has set forth competencies and milestones, grounded in continuous quality improvement and innovation philosophy, by which programs and faculty are to assess their trainees (Edgar et al., 2020). Competency-based medical education is designed to be learner-centered and focused on outcome-knowledge application, where the path of learning is non-hierarchical and the timing of assessment is formative, formulated by direct

observation (Edgar et al., 2020). The ACGME (2022b) requires six competencies to be taught and measured across all specialties. These include (a) patient care, (b) medical knowledge, (c) professionalism, (d) interpersonal and communication skills, (e) practice-based learning and improvement, and (f) systems-based practice (ACGME, 2022b). The last four competencies, professionalism, interpersonal and communication skills, practice-based learning and improvement, and systems-based practice, are considered the non-technical competencies. The opportunity for leadership development training overlays effortlessly across these categories. However, as was stated in the initial problem statement, leadership of patient care teams is desired and expected. Therefore, the call for explicit leadership in patient care (competency (a) is warranted as well.

Examples of the expectations and requirements for three of the six ACGME competencies are delineated in this section. Expectations for professionalism, practice-based learning and improvement, and interpersonal and communication skills overlap with typical leadership development training, such as emotional intelligence, integrity, communication, conflict resolution, inspiring a shared vision, and change management. First, as mentioned in Chapter 1, professionalism includes multi-pronged deliverables such as demonstrating “competence in compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; [and the] ability to recognize and develop a plan for one’s own personal and professional well-being” (ACGME, 2022b, p. 25). Second, practice-based learning and improvement involves “identifying strengths, deficiencies, and limits in one’s knowledge and expertise, setting learning and improvement goals, ... [and] systematically analyzing practice using quality improvement methods, and implementing changes with the goal of practice improvement” (ACGME, 2022b, p. 27). Third, the broad requirement for interpersonal

and communication skills across all specialties is that residents demonstrate skills “that result in the effective exchange of information and collaboration with patients, their families, and health professionals” (ACGME, 2022b, p. 28). This requirement points to the need for collaboration amongst team members as well as patients. Finally, within the interpersonal and communication skills competency list, there is one requirement that mentions leadership. Residents are expected to demonstrate competence in “working effectively as a member or leader of a health care team or other professional group” (ACGME, 2022b, p. 28). Early in the medical education continuum, perhaps during the intern and junior years of residency, membership on a health care team suffices. However, once a resident reaches senior level status, it is expected that they will have the ability to lead and teach their team, whether in the operating room, on the patient floor, or in a community setting.

The ACGME competency expectations are explicit, often pointing to the need for self-leadership, others-leadership, and ultimately, systems-leadership. Table 3 details a selected example of the ACGME professionalism competency language aligned with aspects of the BAL course and transformational leadership components.

**Table 3**

*ACGME Competency Alignment with BAL Course and Transformational Leadership Factors*

ACGME competency (Selected text)	Becoming a leader (BAL) course component	Transformational leadership factor
Professionalism		
– Compassion	Integrity, Authenticity	Individualized consideration
– Integrity	Integrity	Idealized influence
– Respect for others	Integrity, Authenticity	Individualized consideration
– Responsive to patient needs that supersedes self-interest	Committed to something greater than oneself	Idealized influence, Inspirational motivation, Individualized consideration
– Ability to recognize and develop a plan for one’s own personal and professional well-being	Integrity, Authenticity, Cause in the matter, Committed to something greater than oneself	Intellectual stimulation, Idealized influence

The milestones provide specialty-specific frameworks for assessing resident development (ACGME, 2019). Surgery currently provides 18 milestones, each categorized into one of the six competencies mentioned above. The milestones are based on a developmental continuum with five levels. Level 1 is appropriate for an incoming resident, levels 2 and 3 describe behaviors expected of junior residents who are proficient and adequately progressing, and level 4 represents behaviors appropriate for graduating residents. Level 5 delineates aspirational skills, those expected of an experienced faculty member (Edgar et al., 2020). Of the 18 milestones in surgery, approximately 14 of them describe transformational leadership behaviors in Level 5. As examples, the second systems-based practice milestone was presented previously in Figure 1, and the second interpersonal and communication skills milestone is presented here in Figure 2.

**Figure 2**

*Sample Surgery Milestone Showcasing Trajectory from Self- to Others- to Systems- Leadership*

Interpersonal and Communication Skills 2: Interprofessional and Team Communication				
Level 1	Level 2	Level 3	Level 4	Level 5
Respectfully requests and receives a consultation	Clearly and concisely requests and responds to a consultation	Verifies understanding of recommendations when providing or receiving a consultation	Coordinates recommendations from different members of the health care team to optimize patient care, resolving conflict when needed	Coaches flexible communication strategies that value input from all health care team members
Uses language that values all members of the health care team	Communicates information effectively with all health care team members	Uses active listening to adapt communication style to fit team needs	Maintains effective communication in crisis situation	
	Solicits feedback on performance as a member of the health care team	Communicates concerns and provides feedback to peers and learners	Communicates constructive feedback to superiors	Facilitates regular health care team-based feedback in complex situations
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Comments:</b> <div style="text-align: right;">Not Yet Completed Level 1 <input type="checkbox"/></div>				

*Note.* From *ACGME Surgery Milestones*, by the Accreditation Council of Graduate Medical Education, 2019 (<https://www.acgme.org/globalassets/pdfs/milestones/surgerymilestones.pdf>). In the public domain. Reprinted with permission. See Appendix.

From the literature, ACGME competencies, and ACGME milestones, cognitive dissonance exists in the forum of expected leadership for residents. The call for leadership training in residency may be unwarranted. Indeed, the expectations from the ACGME lean toward self- and others-leadership, and less toward systems-leadership. Residents are only expected, but not required, to reach Level 4 on any of the milestones. Level 5 is depicted as an aspirational goal, one that even attendings may not achieve. Perhaps leadership training at the GME level should focus on self- and others-leadership, leaving systems-leadership for the CME, or continuing medical education section of the continuum, physicians in practice.

**Systematic Review Findings.** Frich et al. (2015) and Sadowski et al. (2018) conducted systematic reviews of leadership education programs for physicians, mainly in GME. First, as with some of the sweeping reviews in UME, Frich et al. (2015) sought to “systematically review published medical literature on physician leadership development in order to characterize the settings, educational content, teaching methods, and learning outcomes achieved” (p. 657). Frich et al. (2015) chronicled 45 peer-reviewed articles, describing the studies and reporting evaluation outcomes of physician leadership development programs in GME and in professional practice. As in UME, the authors found “considerable heterogeneity concerning conceptual frameworks, teaching and learning methods, educational content, evaluation design, and outcomes measured” (Frich et al., 2015, p. 671). The programs in their review targeted either resident physicians with “no formal leadership roles or physicians in mid-level management positions” (Frich et al., 2015, p. 671). According to the authors, most programs provided skills training, technical, and conceptual knowledge, while few provided exercises on personal growth and awareness. Although all 45 studies reported positive outcomes, few declared system-level improvements, such as enhanced quality indicators or increased patient satisfaction. Similar to the findings from

the UME leadership program reviews, Frich et al. (2015) found that the majority of programs targeted physicians exclusively, lacking opportunities for interprofessional growth and development. The authors report that current interventions in physician leadership development focus on individual skill development, as opposed to enhancing capacity for collaboration.

Findings from the Frich et al. (2015) study informed the selection, design, and evaluation of the BAL course reviewed in this dissertation. The BAL course includes personal growth and self-awareness, self-management, a multi-source feedback mechanism, and a focus on “knowing,” “doing,” and “being” (Erhard et al., 2010; Snook et al., 2012), methods that were lacking in most studies reviewed by Frich et al. (2015). Content delivery in the BAL course was not limited to lectures and group work, but rather incorporated mentorship and one-on-one coaching by the instructor throughout the workday, assignments, and written self-reflections. These course-enhancements augment traditional physician leadership development which has focused on individual knowledge gain through lectures alone. The development of self-awareness and self-leadership may be more appropriately advanced by coaching, practice, and reflection.

Moving beyond self- and others- leadership, the aspirational goal of improving organizational outcomes remains elusive to measure. Frich et al. (2015) suggest that the few studies that accomplished this incorporated multiple learning methods and action projects in multidisciplinary teams. Of note, these studies were not implemented in residency programs, but in professional practice (Dannels et al., 2008; Green & Plsek, 2002; Korschun et al., 2007).

This study breaks from the mold of evaluating the impact of a program based on participant satisfaction scores and self-assessed knowledge and behavior change. Instead, this review proposes secondary analysis of de-identified written perspectives from residents collected throughout the course. This study seeks to explore the mechanism by which the BAL course

fostered learning and change in surgical residents throughout the year. Strictly quantitative methods cannot explore mechanisms, or the nuances of learning and behavior change. In Frich et al.'s (2014) systematic review of 45 studies, only 12 incorporated mixed methods, and one was qualitative.

Second, Sadowski et al.'s (2018) systematic review of leadership development in GME continued the call for qualitative research. Only 12% of articles in their review utilized qualitative methods, despite the ability of narrative responses to capture rich experiences and facilitate understanding of complex topics like leadership development. Sadowski et al. (2018) echoed many of the findings from Frich et al.'s (2015) review, declaring gaps that exist in understanding and formulating the finest way to teach leadership. Similarities between the two reviews include suggestions to utilize small group teaching, project- or action-based learning, mentoring, coaching, and longitudinal curricula. Both reviews issue a call for continued reporting of design and outcomes in leadership training interventions.

**New ACGME Fellowship in Health Care Administration, Leadership, and Management.** The ACGME recently inaugurated a new fellowship, or subspecialty training, in health care administration, leadership, and management (ACGME, 2022a). This specialized training addresses system-based needs of health care environments by facilitating fellows' skill development in managing patient care operations across various settings. The training includes experiential and didactic education spanning medicine, business, public health, communication, economics, and law, to name a few. The fellowship merits mention as it is the first of its kind to adhere to accreditation requirements within the medical education continuum.

In summary, physician leadership curriculum in GME is just as varied and heterogenous as UME. One might argue that because the ACGME competency requirements and milestone

levels only expect residents to develop self- and others- leadership, perhaps their leadership development initiatives should focus there. Systems- level leadership expectations could wait until CME, or professional practice. Of note, the ACGME has created a fellowship opportunity in health care administration, leadership, and management (ACGME, 2022a), just at the end of the GME continuum. In contrast, others may argue that those who are ready to lead at a systems level should be inspired and mentored to do so, even in the GME context. Like UME, systematic reviews of the literature in GME call for more qualitative research of longitudinal curriculum (Frich et al., 2015; Sadowski et al., 2018).

### ***Physician Leadership Development in Practice***

In response to the perceived lack of available training earlier in the medical education continuum, initiatives have been launched at both the local and national levels for physicians in practice. Four examples are described here. First, the Northwest Public Health and Primary Care Leadership Institute ([nwcphp.org/training/northwest-public-health-leadership-institute](http://nwcphp.org/training/northwest-public-health-leadership-institute)) exists to equip emerging leaders in cross-sectional communities of practice. Through problem-based learning, the longitudinal curriculum addresses leadership and change management, health equity, population health, and systems thinking. Second, the Massachusetts General Physicians Organization initiated a leadership development program at an academic medical center (Gagliano et al., 2010), and third, a Michigan-based hospital system reported on their own evaluation strategy and outcomes after conducting a physician leadership academy (Throgmorton et al., 2016). Of note, the Throgmorton et al. (2016) study is one of only a few to incorporate qualitative research methods, allowing the researchers to “uncover rich themes of impact” (p. 390). Furthermore, their study shows support for interprofessional engagement throughout and after the program, an outcome either lacking or not measured in most studies. Throgmorton et al.

showcased results impacting individuals, groups, and the organization. Similarly, Fassiotto et al. (2018) conducted a long-term, mixed-methods assessment of individual and organizational outcomes associated with the Stanford Leadership Development Program for physicians. Their study found that program participants rated higher than non-participants in leadership knowledge, skills, and attitudes, and were more likely to hold leadership positions. Citing goals of individual, team, and organizational impact, leadership programs for practicing physicians abound. The focus of this study is to explore leadership identity development in GME, but, for complete context, discussions of leadership development in UME and CME were included.

In 2021, Lamb and Rajasekaran created a handbook for the American Medical Association to assist in facilitating student, resident, and fellow transitions across the medical education continuum (Lamb & Rajasekaran, 2021). At the end of the guidebook, after considerable mentions of the importance of leadership skills at each stage of UME, GME, and CME, did the authors start to describe an initial framework for a “leadership competency” (p. 68). Their recommendations include themes not mentioned elsewhere in the literature. Themes for the leadership competency include (a) lifelong learning and teaching, (b) wellness, (c) self-efficacy and time management, (d) professional growth and role adaptation, (e) community of practice, and (f) shared understanding and systems thinking. Importantly, their recommendations include specific guidance for both “early” and “late” learners. Meaning, they set intentionality to when and what type of learning should take place early in the continuum, versus later. Specific professional development leadership expectations for progression to senior resident status and beyond are included. As an example, for the community of practice theme, the early expectation is to “focus on self as an individual,” and the late expectation is to be a “change agent on a high performing team” (Lamb & Rajasekaran, 2021, p. 68). These types of specific descriptions of

leadership expectations across the continuum are relevant, timely, and necessary to assist UME, GME, and CME practitioners as they inspire, motivate, and guide their learners.

### *Summary of Section One*

Section One explored the current status of leadership development efforts in the literature across the undergraduate, graduate, and continuing medical education (UME, GME, and CME) continuum. Systematic reviews by Webb et al. (2014) and James et al. (2021) introduce gaps in leadership curriculum development and reveal a lack of consensus on content, delivery method, and evaluation in the UME context. In GME, despite specific competency language from the ACGME outlining expectations for self- and others- leadership, formal leadership training is not currently required or regularly offered during medical residency or fellowship. In professional practice, leadership courses abound at the university and private-sector environments. These courses tend to focus more on leadership to improve organizational outcomes, quality in the patient care environment, financial stability, conflict resolution, change management, team collaboration, and systems thinking.

Gaps in the GME literature include the need for continued reporting of design and outcomes in leadership training interventions, and a specific call for qualitative methods to explore resident perceptions of leadership development. The need for further research in these areas point to the rationale for this study. The two systematic reviews in the GME section reported similar findings; that future courses in resident leadership should utilize small group teaching, project- or action-based learning, mentoring, coaching, and longitudinal curricula (Frich et al., 2015; Sadowski et al., 2018). The BAL course and this research study aims to employ all those methods. Since physicians are increasingly likely to be placed in either formal or nonformal leadership roles during their career, intentional development toward mastery in a

leadership competency is just as relevant as the requirement for technical patient care and medical knowledge skills.

## **Section Two: Conceptual Framework – Transformational Leadership**

This section introduces transformational leadership as the conceptual framework guiding the research in this study. The scholarly and practical literature on transformational leadership spans over four decades (Bass, 1999). Drawing on this extensive body of research informs the theoretical and methodological foundation for this study and the analysis of findings. This section describes the historical development of transformational leadership, including the Full-Range of Leadership Model (FRLM) with descriptions of laissez-faire, transactional (management-by-exception, contingent reward), and transformational (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) components (Avolio & Bass, 1991). Section Two concludes by discussing transformational leaders' effect on organizational culture. This is important because the goal of the BAL leadership curriculum is to improve not only individual leadership skills, but also interprofessional relationships, patient interactions, patient care outcomes, and quality measures at the organizational level. These represent aspirational transformational outcomes at the organizational level.

The researcher chose transformational leadership as the conceptual framework for this study because it is thoroughly vetted in the literature (Bass, 1999), has shown effectiveness across myriad types of organizations, and embodies the hope for the physician leader; one who is attuned to the needs of others (individualized consideration), can share a compelling vision for the future (inspirational motivation), inspire creative thinking (intellectual stimulation), and lead with captivating charisma (idealized influence). The transformational leadership model does not end with these four practices. Rather, the transformational leadership model allows for other

types of leadership (i.e., transactional), described in the next section, to be present as part of the spectrum of acceptable and expected behaviors (Avolio & Bass, 1991). This allowance is important and essential in health care settings. Horwitz et al. (2008) describe an augmentation effect of transformational leadership behaviors, as they appear to be associated with enhanced levels of performance and satisfaction in followers. In essence, transformational leadership behaviors propel individuals and organizations to achieve that which was previously thought impossible. In the GME context, transformational leaders will contribute to resident well-being, excellence in patient care, and collaborative teamwork, to name a few.

### ***Transformational Leadership: Historical Development***

**Introduction.** Leadership is complex. Definitions of leadership number in the hundreds (Rost, 1991). Yet, humanity is captivated, seemingly with an endless thirst, for knowledge about what makes an effective leader. Whether it be by reading popular books, enrolling in special courses, or conducting formal research, the breadth and depth of leadership information available is striking. This section provides a brief history of the leadership theories that shaped the foundation for transformational leadership including Great Man and trait theories, behavioral theory, situational theory, and the new era of leadership theories.

**Great Man Theory and Trait Theories:** Historically, leadership theories can be categorized into four eras: trait, behavioral, situational, and new leadership theories. Prior to 1900, leadership studies emphasized intrinsic or personality characteristics of a leader (Cawthon, 1996; Dziak, 2019). The idea of the Great Man theory was that leaders were born, not made. Two popular historical figures, Julius Caesar and Abraham Lincoln, serve as examples of men who were thought to possess unique characteristics that enabled them to lead. According to Rost (1991), from 1900 through the 1930s, the focus of leadership definitions moved from the Great

Man Theory's idea of domination to traits, with a gradual emergence on the importance of leadership as influence. During this time, it was also recognized that leadership involved interactions between the leader and a group (Northouse, 2016).

**Behavioral Theory.** During the 1940s and 1950s, the focus shifted to leadership being defined as the behavior of an individual while directing group activities (Hemphill, 1949). Distinctions between leadership by persuasion versus leadership by coercion were also made during this time (Rost, 1991). Behavioral theory evolved from trait theory to include the idea that leaders can be made, rather than born. Furthermore, behaviors, or styles, can be learned to ensure group effectiveness (Johns & Moser, 1989).

**Situational Theory.** In the late 1960s and early 1970s, leadership researchers began focusing on followers and the context in which leadership occurs (Blanchard, 1985). This situational approach defined leadership as the ability to prescribe behaviors after effectively diagnosing a situation (Dugan & Komives, 2011). This perspective requires leaders to adapt their style to the demands of different situations (Northouse, 2016). It includes both directive and supportive behaviors depending on the commitment and competence of the follower (Blanchard et al., 2013). The early 1970s also saw the emergence of path-goal theory, which focused on followers' motivation to accomplish designated goals (Evans, 1970; House, 1971; House & Mitchell, 1974).

**New Leadership Theories.** Since the 1980s, a new leadership era has emerged with a plethora of new approaches that move away from top-down leadership models toward embracing the true complexity of the phenomenon. Transformational leadership (Bass, 1985), the conceptual framework for this study, is perhaps the most researched of the new approaches, but

this era also includes authentic leadership (George, 2003; Walumbwa et al., 2008), servant leadership (Greenleaf, 1970; Spears, 2002), adaptive leadership (Heifetz, 1994), and others.

The evolution of leadership theories shifting foci from natural born leaders to specific traits, characteristics, actions, and skills of leaders, to an exploration of context, exchange, inspiration, and systems, highlight the complexity of our modern world. As stated at the outset of this section, the researcher chose transformational leadership as the conceptual framework for this study because it is thoroughly vetted in the literature (Bass, 1999), has shown effectiveness across myriad types of organizations, and embodies the hope for the physician leader. Scaffolded by the theories that came before it, transformational leadership is concerned with emotions, values, and ethics, as well as followers' motives, the ability to influence them, and achieve a shared vision. The next section outlines the tenets of transformational leadership.

### ***Transformational Leadership***

Transformational leadership refers to a process that changes and transforms people. The process of leaders inspiring followers to do great things is the phenomena under examination in this study. First defined by Downton (1973), the term *transformational leadership* began gaining popularity after Burns' (1978) work, *Leadership*, linked the importance of leaders adapting to the needs of followers.

Burns (1978) makes explicit distinctions between transactional and transformational leadership. Transactional leadership is ubiquitous in organizations, exemplified by exchanges that occur between leaders and followers. For example, in residency, physicians take in-training-exams and program directors are transactional when they give out scores. Similarly, transactions occur at the end of each rotation when faculty complete evaluations of resident performance. Trainees perform, faculty evaluate. Trainees take care of patients, patients either heal and go

home, or stay in the hospital receiving continued care. When compared to transactional leadership, transformational leadership transcends the exchange model and raises the level of motivation, ethics, emotions, standards, and long-term goals, not just for the individual, but for the entire team and possibly the organization or culture as a whole. For Burns, transactional leadership is task-oriented, focusing on results and revolving around a system of rewards and punishments exchanged for particular levels of performance. In contrast, transformational leadership embraces change, development, and transformation to something better.

In the mid-1980s, Bass (1985) extended Burns's work by focusing on followers' needs and describing transactional and transformational leadership as a single continuum. Additionally, Bass incorporated House's (1976) work on charismatic leadership by suggesting that the emotional elements of charismatic leadership are necessary but not sufficient by themselves for the transformational leader. Eventually, Avolio and Bass (1991) described a Full-Range Leadership Model that included not only the four components of transformational leadership, to be described in the next section, but also laissez-faire leadership, contingent reward, and management-by-exception, as elements on the leadership continuum.

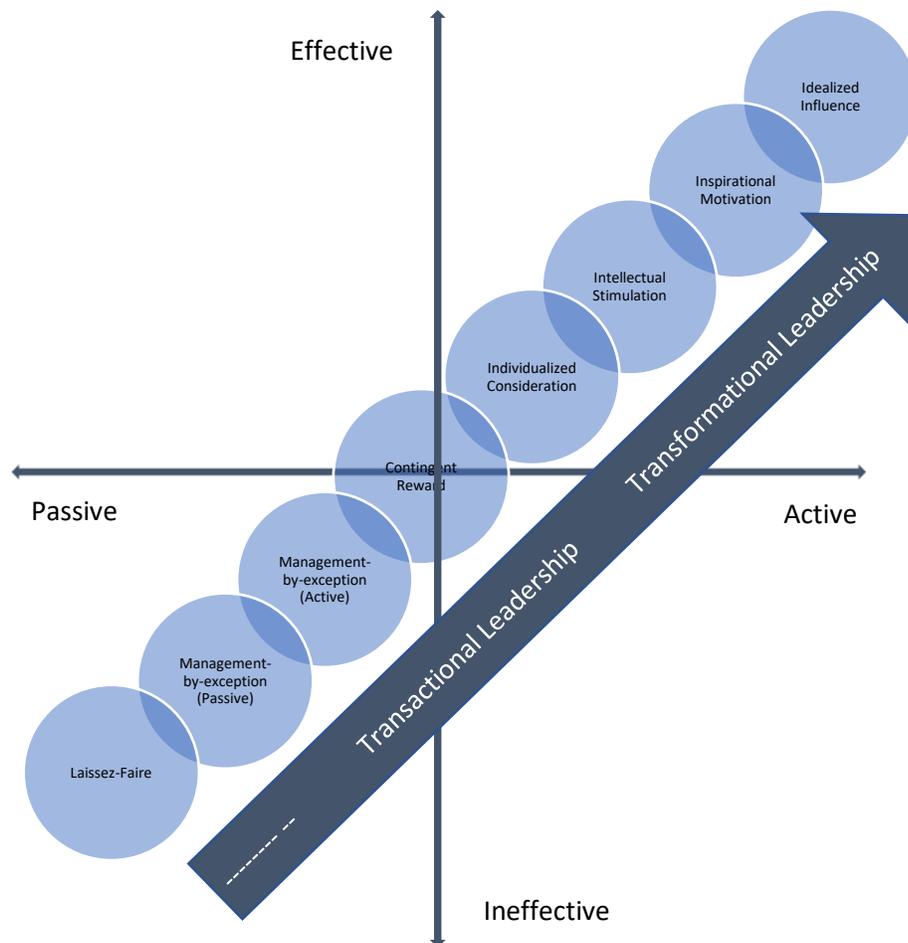
### ***Full-Range of Leadership Model***

To clearly present the transformational leadership continuum, the eight elements of the Full Range Leadership Model (Avolio & Bass, 1991) are presented in Figure 3 in ascending order of effectiveness: laissez-faire, management-by-exception (passive), management-by-exception (active), contingent reward, individual consideration, intellectual stimulation, inspirational motivation, and idealized influence. Foundational to the Full Range Leadership Model is the notion that "every leader displays each style to some amount" (Bass & Riggio,

2006, p. 9). Figure 3 offers a graphic depiction of the Full Range of Leadership Model, showing relationships between the concepts and ideas to be studied.

**Figure 3**

*Full Range of Leadership Model*



Note: Re-created based on the Full Range of Leadership Model (Bass & Riggio, 2006)

**Laissez-Faire Leadership.** The most ineffective, inactive form of leadership is laissez-faire leadership. This style is essentially non-leadership, “hands-off”, and does not represent a transaction, rather, it is non-transactional. An absent leader does not make crucial decisions or facilitate requisite actions. Laissez-faire leaders avoid getting involved, appear indifferent to what is happening, do not emphasize outcomes or results, and fail to intervene or follow-up

(Bass & Riggio, 2006). This style may work with highly skilled and experienced teams desiring complete freedom, but in surgical training, an absent leader/teacher/trainer would most certainly result in unnecessary and unacceptably poor patient outcomes.

The next three sub-sections describe elements of transactional leadership. These occur when a leader rewards or disciplines a follower, depending on the level of performance. By focusing on results, efficiency, and performance rather than motivation, people, and relationships, the transactional leader may be seen as the opposite of the transformational leader. However, these styles can be very productive, with clear structure and rules (Bass & Riggio, 2006).

**Transactional Leadership: Management-by-Exception (Passive).** Passive management-by-exception offers followers additional time or space. This leader waits and only intervenes as required, or only when mistakes or errors warrant action. In surgical training, as a resident progresses from intern to junior to senior, faculty may grant them more autonomy when their skills warrant passive management-by-exception.

**Transactional Leadership: Management-by-Exception (Active).** Active management-by-exception manifests as a corrective transaction. This leader actively seeks to “monitor deviances from standards, mistakes, and errors in the follower’s assignments” (Bass & Riggio, 2006, p. 8). When the leader intercedes and intervenes at an early stage, it may cause demotivation and decreased follower-morale. However, as in surgical training, when safety is paramount, this type of leadership may be required and effective. In both active and passive management-by-exception interventions, the outcome for the follower is typically a punishment accompanied by a negative reaction from the leader (Bass & Riggio, 2006).

**Transactional Leadership: Contingent Reward.** In contingent reward leadership, the leader sets up an agreement with the follower about what needs to be accomplished with a clear, actual reward offered as a transactional exchange for performance of the assignment. This straightforward approach “has been found to be reasonably effective in motivating others to achieve higher levels of development and performance, although not as much as any of the transformational components” (Bass & Riggio, 2006, p. 8). In surgical training, rewards may not be as tangible as a bonus or promotion. Instead, a reward for a resident’s good performance on a specific surgical case may manifest more subtly. For example, the supervising faculty member may grant enhanced autonomy to the trainee for the next case. This means that if a trainee initially performs well doing minimal aspects of a case, faculty may grant the resident increased access to perform additional portions of the next case.

For the purposes of this study, including the full range of leadership options is imperative because many decisions in healthcare, and especially surgical training, have to be managed immediately. Transactional leadership is ubiquitous in medical training. Even if it is not as effective as transformational leadership, contingent rewards and management-by-exception need to be included and represented here as they are part of the leadership continuum in healthcare. The next section describes the key elements that define the journey from transactional to transformational leadership. Transcending simple exchanges and agreements, the transformational leader motivates followers to do more than they originally intended or perhaps even thought possible (Bass & Riggio, 2006).

### ***Transformational Leadership: The Four I's***

The four factors of transformational leadership, known as the four I's, are individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence (Avolio & Bass, 1991). These components are discussed in ascending order of importance.

**Individualized Consideration.** Transformational leaders pay attention to the unique needs and aspirations of followers. By delegating opportunities in line with desired development opportunities, the leader shows concern for each follower as an individual, enabling them to fully realize their potential and secure higher degrees of principled, moral development (Bass, 1999; Bass & Riggio, 2006). In a supportive working environment, followers engage in regular, individual communication with the leader. Acting as a coach and mentor, the leader simultaneously engages in active listening to assess progress and future needs, while offering support and individual attention. Followers are more likely to perform at their best when they feel like their leader genuinely cares about them as individuals. In healthcare, the opportunity for the leader to display individualized consideration manifests on the interprofessional team (physicians, nurses, and staff) but also in the surgical team itself (faculty, senior resident, intern), and in the surgical resident program as well (program director, resident trainee).

**Intellectual Stimulation.** Transformational leaders stimulate thinking and creativity. By encouraging innovative problem solving and questioning the status quo, effective leaders can elicit transformative solutions to entrenched problems. For example, Bass (1999) posits that leaders in search of renewal for their organizations must seek to foster hospitable cultures, creativity, problem-solving, risk taking, and experimentation. Each of these requires intellectual stimulation.

**Inspirational Motivation.** Transformational leaders inspire followers toward an attractive vision of the future. To achieve the vision, the leader communicates expectations and pathways to the shared vision (Bass & Riggio, 2006). With the motivation, enthusiasm, and optimism to achieve the shared vision, followers are driven to contribute their part.

**Idealized Influence.** Transformational leaders are admired, respected, and trusted because they influence ideology, ideals, and “bigger-than-life” issues (Bass, 1999; Bass & Riggio, 2006). The magnetic, awe-inspiring leader serves as a role model, full of persistence and determination. By harnessing the previously mentioned elements, the transformational leader motivates the follower through idealized influence (charisma), inspiration, intellectual stimulation, and individualized consideration. These actions elevate “the follower’s level of maturity and ideals as well as concerns for achievement, self-actualization, and the well-being of others, the organization, and society” (Bass, 1999, p. 11).

In summary, the Full Range of Leadership Model embraces the notion that each leader displays both transactional and transformational tendencies. However, individuals typically exhibit more of either transactional or transformational factors. According to Avolio & Bass (1991), leaders who are more effective and satisfying to their followers are more transformational and less transactional.

The transactional and transformational rubric is particularly applicable to surgical residents because of their needs as individual learners (followers), their participation on various healthcare teams, and their contribution to the organization in which they train. According to Bass (1999), transformational teams are high performing. If or when a trainee is able to move beyond their own needs and self-interest, guided by a transformational leader, the aspiration is that they will co-create a highly functioning team that cares for each other, intellectually

stimulates each other, inspires each other, and identifies with the team's goals (Bass, 1999). In surgery, this team may have several transformational leaders (residents and faculty), and the goal is to develop them while they are still in training so that they then graduate and go on to their next position and organization as an equipped, experienced, transformational leader. These leaders will then change healthcare as we know it. The transformational leaders' potential effect on organizational culture is described in the next section.

Transformational leadership is not without its critics. Of note, criticisms of transformational leadership include how it is measured (Michel et al., 2011), that it may be mistaken for a personality trait instead of a set of behaviors (Northouse, 2016), that it does not actually transform organizations (Antonakis, 2012), that it suffers from a *heroic* leadership bias (Yukl, 1999), and that it can be abused (Northouse, 2016). For example, Michel et al.'s (2011) critique emphasizes perceived missing components of the FRLM. Heavily influenced by Yukl (1999), Michel et al. (2011) declare that components such as task-, relations-, and change-oriented behavior are not measured by the MLQ, and therefore, the FRLM is not all-inclusive. Diaz-Saenz's (2011) chapter on transformational leadership echoes some of these criticisms and adds that transformational leadership may idealize the leader too much, leaving out the importance of the contributions of followers.

### ***Transformational Leaders' Effect on Organizational Culture***

Founders of transformational leadership declare its positive effects on organizational culture. In Bass's (1999) review of two decades of transformational leadership research, he defends the notion that transformational leadership is more effective than transactional leadership across military, hospital, educational, and business settings. This is of particular interest because, as Frich et al. (2015) mention, assessments of organizational culture and

organizational outcomes are rarely included in most studies. The goal of the intervention under review in this dissertation is to improve not only individual leadership skills, but also interprofessional relationships, patient interactions, patient care outcomes, and quality measures at the organizational level. These represent aspirational transformational outcomes. Bass and Avolio (1993) assert that, although organizations will likely have cultures that are characterized by both transactional and transformational leadership, they should aspire to move in the direction of acquiring transformational qualities while maintaining a base of effective transactional qualities.

A surgery residency develops and maintains its own sub-culture within the hospital that houses it. The leadership of the hospital, transactional or transformational, cascades down to each department, and, in the case of a surgery training program, trickles down from the program director and faculty. Continuing the cascade from the program director and faculty, who maintain their own leadership styles, the hierarchy continues from the chief residents on down through the juniors and interns. In a purely transactional organizational culture, all job assignments are explicitly stated through the rules and regulations (Bass & Avolio, 1993; Bass & Riggio, 2006). Trainees focus on their own self-interest, and commitments are short-term. In a purely transformational organizational culture, there is a sense of purpose and a feeling of family (Bass & Avolio, 1993; Bass & Riggio, 2006). Trainees in this culture focus their commitment for the long-term and show awareness of the interdependence of all members of the hierarchy (residents, faculty, program director, other professional staff, hospital leadership). This study seeks to explore transformational leadership in surgical resident identity after implementation of a year-long leadership course.

In summary, Section Two introduced transformational leadership as the conceptual framework guiding the research in this study. The robust and extensive scholarly and practical body of research on transformational leadership informs the theoretical and methodological bases for this study and the analysis of findings. This section described the historical development of transformational leadership, including the FRLM with descriptions of laissez-faire, transactional (management-by-exception, contingent reward), and transformational (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) components. Section Two included critiques of the FRLM and discussed transformational leaders' effect on organizational culture. Again, the goal of this study is to explore not only individual resident leadership identity, but the hope of the BAL course is to see improvement in interprofessional relationships, patient interactions, patient care outcomes, and quality measures at the organizational level, if possible. These aspirational goals are designed to produce transformational organizational outcomes.

### **Section Three: Synthesis of Context and Concept**

This section synthesizes current literature combining the specific context of graduate medical education with the conceptual framework of transformational leadership. A brief review of methods and findings from Horwitz et al. (2008), Saravo et al. (2017), and Dominguez et al. (2021, 2022), are explored. Gaps left by these studies illuminate the way for addressing openings in the literature.

#### ***Transformational Leadership in Graduate Medical Education***

Literature combining studies of transformational leadership in the GME context is sparse yet poignant. Horwitz et al. (2008) conducted a quantitative study with 65 surgical residents to identify leadership areas most in need of training. The authors used the Multifactor Leadership

Questionnaire (Bass & Avolio, 1995), an instrument developed to study transformational, transactional, and passive-avoidant (*laissez-faire*) leadership styles. Each of the nine leadership components previously described in the Full Range of Leadership Model is measured to identify key leadership and effectiveness behaviors. As described in the previous section, these leadership and effectiveness behaviors have been linked with individual and organizational success (Bass, 1999). Interestingly, Horwitz et al. reported that residents had significantly higher management-by-exception active and passive scores than those of the national norm, and significantly lower individualized consideration scores than the norm. These findings suggest that residents may lean, at least initially, toward behaviors in the center of the FRLM eight-component spectrum (See Figure 3). Horwitz et al. also report that residents in the PGY3-5 group scored significantly lower in *laissez-faire* leadership, indicating that as they gain competence and clinical experience, they may adopt more transformational leadership styles. This finding may highlight the appropriateness of “early” versus “late” training goals as described by Lamb and Rajasekaran (2021). The Horwitz et al. (2008) study claimed to be the first to utilize the MLQ in a surgical residency. The study proposed herein aims to follow-up their purely quantitative study with a solely qualitative study investigating leadership development utilizing written narratives from residents as they experience leadership training.

In another quantitative study, Saravo et al. (2017) recruited 57 residents from (PGY1-4) across multiple specialties to participate in a four-week leadership training. Teaching included transactional and transformational leadership skills for the clinical environment. Researchers utilized pre- and post- self-assessment scores on the Multifactor Leadership Questionnaire, a Performance Scale developed by the research team, and a knowledge test. An external evaluator rated recorded role-plays by the participants. Scores improved significantly for the intervention

groups. In alignment with previous transformational and transactional leadership training interventions, this study echoes the credibility of this kind of teaching, as evaluated by self-assessment and an external evaluator. This study did not elicit qualitative data from residents to further explore their journey toward self-, others-, or systems- leadership. The study under review in this dissertation does elicit extensive qualitative data from participants via written perspectives.

Dominguez et al.'s (2022) study utilized a sequential explanatory mixed methods research design to explore the effects of three supervisors' leadership styles (transformational, transactional, and laissez-faire) on surgical residents' intentional job crafting in Columbia. Job crafting is defined as the ability to actively create, versus passively react to one's working environment (Dominguez et al., 2022). Their study describes the importance of increasing structural and social resources, as well as appropriately challenging demands, while simultaneously decreasing extraneous job hindrances such as conflict. Results indicate that a transformational leadership style had a positive impact on residents' job crafting, while transactional and laissez-faire leadership did not. The qualitative component of the study yielded three main themes: Supervisors with a transformational leadership style (a) positively influenced the training atmosphere by showing altruism, integrity, resilience, and trustworthiness, (b) offered more support, teaching, and feedback, and (c) served as positive role models for how to handle work demands, such as surgical complications or conflicts. In contrast, transactional and laissez-faire supervisors (a) actively searched for errors and were punitive, did not encourage autonomy, and created a hostile atmosphere for training, (b) gave poor feedback and punished residents by not allowing graduated autonomy, and (c) served as poor role models for solving conflicts (Dominguez et al., 2022).

Although this study by Dominguez et al. (2022) represents an example of a mixed-methods design in the specific context of GME coupled with the concept of transformational leadership, it focuses on the effects of supervisor leadership styles. While supervisor leadership styles may emerge from the study proposed in this dissertation, the initial focus is on the development of the resident as a transformational leader, not necessarily the effect of the supervisor's transformational (or transactional) leadership style. Furthermore, Dominguez et al. (2022) made no mention of the four I's (intellectual stimulation, inspirational motivation, individualized consideration, idealized influence), although their presence can almost be implied by the descriptions Dominguez et al. utilized. The secondary analysis of qualitative data proposed here will specifically reference the four I's and other components of the Full Range of Leadership Model (Avolio & Bass, 1991).

In a second study by Dominguez et al. (2021), surgeons who were already perceived as transformational leaders were interviewed to further identify actions that positively associate with residents' ability to intentionally craft their jobs. The authors report that transformational surgeon leaders, (a) model positive behaviors of good surgeons, (b) use an intentional, incremental approach to autonomy, (c) connect with residents as individuals, (d) support residents in handling complications and errors, and (e) coach residents to deal with competing interests. As a result of these behaviors, the surgeons influenced residents toward increased responsibilities in patient care, enhanced constructive relationships in the learning environment, decreased pressure from surgical care duties, and personal difficulties as well as errors in patient care. Again, without specific reference to the four I's, the reader is left to connect the dots, as presented in Table 4.

**Table 4***Links between Transformational Surgeon Leaders and the Four I's*

Surgeon Transformational Leaders (Dominguez et al., 2021)	The Four I's of Transformational Leadership (Bass & Riggio, 2006)
Model positive behaviors of good surgeons	Idealized influence, inspirational motivation
Use an incremental individual approach to autonomy	Individualized consideration, inspirational motivation
Connect with residents as individuals	Individualized consideration
Support residents in handling complications and errors	Individualized consideration, intellectual stimulation
Coach residents to deal with competing interests.	Individualized consideration, intellectual stimulation, inspirational motivation

***Gaps***

As previously mentioned by Frich et al. (2015) and Sadowski et al. (2018), most leadership studies in GME measured the impact of programs on a limited set of outcomes, most commonly participant satisfaction scores and occasionally self-assessments of knowledge or behavior change. Only six studies examined more intricate outcomes at the system or organizational level. Although gaps exist in determining the most effective methods to teach leadership, Sadowski et al. (2018) claim “the available evidence suggests that small group teaching, project-based learning, mentoring, and coaching are valuable components of leadership curricula” (p. 145). Furthermore, “longitudinal leadership curricula are more likely to be successful” (p.145). To fill the gap, the authors call for “enhanced reporting of curricula design and examining higher level educational outcomes [to] allow for more rigorous assessment of the value of leadership programs” (p. 145). The exploration of resident leadership development and identity after participation in the BAL course seeks to fill the gap by utilizing qualitative self-reflections to capture the rich narratives describing their experiences. The course implemented the suggested methods: a formal curriculum coupled with small group teaching, mentoring, coaching, and hands-on interactions over a year.

In Chapter 1, the background of the problem was posited with the foundation that the American Medical Association had declared that health care teams should always be led by physicians (Berg, 2022). Since physicians possess the “highest skill level, the most education, the one who is most capable of taking care of that patient and ensuring quality and safety” (Berg, 2022, para. 1) the American Medical Association would like to invest in appropriate leadership development for their physicians. The cautionary tale reads that if the physician lacks leadership skills (i.e., integrity, authenticity, idealized influence, emotional intelligence, ability to point to a shared vision), then having that physician lead every aspect of the healthcare team may not be in the best interest of the workgroup or patient. Physician led teams with poor leaders experience adverse effects on financial, clinical, and well-being of team members (Torres-Landa et al., 2021). If the American Medical Association and other organizations want to protect the physician-as-leader dogma, then the call to action is raising the bar on the expected level of leadership development training throughout the medical education continuum.

### ***Summary of Section Three: Synthesis of Context and Concept***

Section Three synthesized current literature combining the specific context of graduate medical education with the conceptual framework of transformational leadership. Reviews of methods and findings from the literature (Dominguez et al., 2021, 2022; Horwitz et al., 2008; Saravo et al., 2017) elucidate gaps and highlight opportunities for further study. Specifically, the exploration of resident leadership development and identity after participation in the BAL course seeks to fill the gaps by utilizing qualitative self-reflections to capture the rich narratives describing their experiences. The BAL course implemented the suggested content and delivery methods from the literature, and this proposed study will implement recommended research methodology.

## **Chapter 2 Summary**

The preceding literature review (a) explored the current status of leadership development efforts across the medical education continuum, (b) introduced and described primary sources for the transformational leadership theoretical framework, and finally, (c) synthesized the current literature from the specific conceptual framework of transformational leadership development within the specific context of GME. The scope of the review aimed to inform the reader about past and current studies in medical education leadership, moving from a broad focus spanning across the entire medical education continuum to a narrow concentration coupling GME and transformational leadership. The strategy for the review included investigating primary and secondary sources, analyzing existing systematic reviews, and incorporating suggestions from researchers who contribute significant, thoughtful groundwork and exploration in these topics. The literature review concluded by reviewing current recommendations for research in the stated areas, highlighting gaps in previous research methods, and presenting a rationale for the proposed qualitative research study.

## Chapter 3: Methodology and Procedures

### Overview

This chapter contains a discussion of the methodology and procedures guiding this study. First, the study purpose, general definitions, and research questions are restated. Second, the methodological approach, or inquiry paradigm, is described along with a rationale for the study design. Third, the researcher's role, research setting, participants, and data analysis methods are described. Final sections of this chapter outline methodological assumptions, quality criteria, and delimitations and limitations. Chapter 3 concludes with a summary of the methodology and procedures used in this study.

### Study Purpose

The purpose of this qualitative research study is to explore transformational leadership tenets in resident physician-trainees after participation in a year-long leadership course. At this stage in the research, the tenets, or themes, of transformational leadership will be generally defined as individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence. A review of the literature, previously discussed in Chapter 2, produced the following descriptions of the Four I's:

- Individualized consideration: This factor represents leaders who provide a supportive climate and act as coaches, paying attention to unique needs and aspirations of followers. This leader shows concern for each follower as an individual and enables them to fully realize their potential (Bass, 1999; Bass & Riggio, 2006).
- Intellectual stimulation: Transformational leaders stimulate thinking and innovation by encouraging followers to challenge the status quo and create new solutions (Bass, 1999).

- Inspirational motivation: This leader inspires followers to act by communicating high expectations and pathways to an attractive shared vision (Bass & Riggio, 2006).
- Idealized influence: This factor represents the charismatic, awe-inspiring leader who acts as a strong role model that followers want to emulate. These leaders are deeply respected, admired, and trusted to bring about change in individuals, teams, and organizations (Bass, 1999; Bass & Riggio, 2006; Northouse, 2016).

While there exists significant research on transformational leadership as a theoretical framework, there is limited literature on how medical residents utilize this leadership style. By exploring and gaining a deeper understanding of transformational leadership behaviors in residents as they are becoming leaders, organizations that collaborate with physicians (i.e., hospitals, clinics) will be better informed to partner with them to optimize health care outcomes.

### **Research Questions**

The primary research question for this study is: How did residents describe transformational leadership behaviors during and after a year-long leadership course?

The following sub questions emerged from the theoretical framework:

- RQ1: How did residents describe inspirational motivation?
- RQ2: How did residents describe intellectual stimulation?
- RQ3: How did residents describe individualized consideration?
- RQ4: How did residents describe idealized influence?

The exploration of resident experience with the Four I's seeks to fill gaps in the literature by utilizing qualitative responses to open-ended questions to capture the rich narratives describing their experiences. The findings of this study will inform the body of knowledge in the

field of graduate medical education and leadership training and serve to guide residency program leaders and policymakers in the appropriate development and implementation of effective leadership training in GME.

The BAL course implemented the suggested content and delivery methods from the literature, and this proposed study utilizes the recommended qualitative research methodology. There is a paucity of literature exploring resident transformational leadership development employing secondary analysis of qualitative data after a year-long course. This study answers the call in the literature for qualitative analysis of leadership identity in residency (Frich et al., 2015; Sadowski et al., 2018). The investigator seeks to discover if residents leave their training effectively exercising characteristics of the transformational leadership style.

### **Methodological Approach and Study Design**

This study utilizes Bass' (1999) transformational leadership model as the theoretical framework to explore resident descriptions of their development as leaders during and after a leadership course. The qualitative design uses secondary narrative data in this study. In addition to introducing qualitative research and narrative inquiry in general, this section describes the researcher's views on constructivism, and the pros and cons of secondary analysis.

Qualitative research is an approach "for exploring and understanding the meaning individuals or groups ascribe to a social or human problem" (Creswell & Creswell, 2018, p. 4). In other words, as a valued paradigm of inquiry, qualitative research is intended to produce knowledge based in human experience (Sandelowski, 2004). Unlike quantitative research, which examines relationships among variables to test theories deductively, qualitative research utilizes an inductive approach to data analysis, moving from the specific to the general (Creswell & Creswell, 2018). This study explores resident development as a leader in the specific cultural

context of surgical residency training. Therefore, a qualitative approach best fits the need for the research study at hand.

In line with Crotty's (1998) assumptions of constructivism, this qualitative study is designed to access the thoughts and feelings of study participants as they construct meaning of the social world they are interpreting. Unique characteristics of qualitative research such as the importance of a natural setting, participant views, and researcher reflexivity, to name a few, are explored in the next section.

### *Characteristics of Qualitative Research*

Since qualitative research is less well-known in the health sciences, a brief description of eight basic characteristics from Creswell and Creswell (2018) is presented in this section. First, this research is conducted in the field, or natural setting, where participants (residents) experience the issue under study (Creswell & Creswell, 2018). The Becoming A Leader course was delivered during regular didactic training hours in the middle of the week. Residents were not brought into a simulation lab or alternate setting; the course was conducted in their regular classroom in the hospital in which they train. Assignments for self-reflection and discussion were described by the instructor and then received by the instructor via email. Furthermore, the instructor offered personal mentorship, comprised of individual discussions about leadership and personal development, in the operating room, on rounds, or during one-on-one conversations. In brief, the training, and the accompanying written perspectives, occurred in the residents' natural setting.

Second, in qualitative research, the researcher acts as an instrument. Although efforts were made to remove the researcher from the study, the data itself, once de-identified, is examined and interpreted by the researcher. Third, multiple sources of data are gathered. In this

study, open-ended question responses and written perspectives are examined. Fourth, as previously mentioned, qualitative researchers work inductively, “building patterns, categories, and themes from the bottom up by organizing the data into increasingly more abstract units of information” (Creswell & Creswell, 2018, p. 181). Looking for patterns in the data allows for themes to emerge.

Fifth, participants’ meanings are paramount. The investigator makes no attempt to guide communication topics, transitions, or qualifiers (Chesebro & Borisoff, 2007). Inherent in secondary analysis, the investigator is not involved in the primary collection of data. Sixth, the research process is emergent, it may change over time as data is collected: questions may change, sites and subjects may be modified, and other shifts may occur. Seventh, reflexivity is unique to qualitative research. The investigator reflects upon and articulates their background, position, and subjectivities which carry potential for influencing the study (Sutton & Austin, 2015). Finally, qualitative researchers attempt to create a holistic account, a complex picture of a problem, by reporting from multiple perspectives to sketch the larger picture that emerges (Creswell & Creswell, 2018).

In summary, the eight characteristics of qualitative research presented here highlight the intent of the research and the appropriateness of qualitative methods to explore the research questions. The next section discusses the origin, features, procedures, and challenges involved in conducting narrative research.

### ***Narrative Approach***

Narrative research originated in social and humanitarian disciplines including history, anthropology, sociology, and education (Chase, 2005; Cortazzi, 1993; Daiute & Lightfoot, 2004; Riessman, 2008). Clandinin (2007) contributed significantly to its development as a distinct form

of inquiry and view as a methodology and phenomena. Narrative studies contain defining features (Creswell & Poth, 2018). For example, the type of data collected for this study involves documents containing written stories. Narrative stories tell lived experiences of individuals. Furthermore, they occur within a specific place and can be gathered through interviews, observations, documents, pictures, or other sources.

Strategies for analyzing narrative stories may include the development of themes (what was said), structure (the nature of the telling of the story), performance (who was the story directed towards) or visual analysis of images (Riessman, 2008). The researcher may shape the stories chronologically (Clandinin & Connelly, 2000) and highlight turning points or transitions (Denzin, 1989). Specific plans for data analysis are described in the Data Analysis Procedures section later in this chapter. Before the data analysis plan is discussed, the next section describes the unique aspects of secondary analysis. Following this, the researcher's role and reflexivity is presented, along with the research setting, sample, sources, and data management strategies.

### ***Secondary Analysis of Qualitative Data***

Qualitative analysis of secondary data involves the re-use of pre-existing data derived from a previous study (Heaton, 2008; Pajo, 2018). Since thoughtful inquiry demands considerable time and resources, secondary analysis of existing data offers an "efficient alternative to collecting data from new groups or the same subjects" (Tate & Happ, 2018, p. 308). In this case, surgical residents represent a difficult-to-reach population, therefore, utilizing existing data presents an opportunity for heightened utility. Furthermore, the research questions in this study differ from those in the original study for which the data was collected, a defining component of secondary analysis. On the whole, a secondary in-depth narrative analysis of resident perceptions of transformational leadership throughout and after the BAL course offers

the investigator the opportunity to perform additional analyses on the original data and apply a new perspective (Tate & Happ, 2018).

Heaton (2008) describes three main modes of secondary analysis of data. The first involves formal data sharing, where researchers access public or institutionally archived data. The second is by informal data sharing, where primary researchers share their data with secondary researchers. These are typically investigators who were not involved in the original research. The third mode of secondary analysis occurs when researchers re-use data “in order to investigate new or additional questions to those explored in the primary research” (Heaton, 2008, pp. 35-36). The third mode represents the situation in this study. In short, the primary researcher re-uses data (de-identified by another researcher) to explore new questions.

Secondary analysis of qualitative data possesses advantages and disadvantages (Ruggiano & Perry, 2019; Szabo & Strang, 1997). Pajo (2018) mentions four benefits applicable to this study:

- Availability of information
- Opportunities for replication
- Protection of participants
- Time effectiveness

First, as previously mentioned, the data has already been collected and is available for analysis. Second, although this study is not replicating the original study, it is utilizing the data from the original study to ask new questions. Third, protection of participants is paramount in any study. Surgical residents, who often work 80-hours per week, represent a hard-to-reach population. In this study, their time is protected by utilizing existing data as opposed to collecting new, primary data. Furthermore, their identity remains protected by the anonymity measures undertaken in the

original study. A fourth advantage of secondary analysis is time effectiveness. Collecting qualitative data takes considerable time, in this case, the data was collected over a year-long course. By using secondary data, the investigator can “move directly to cleaning, coding, and analyzing the available data” (Pajo, 2018, p. 183). To summarize, secondary analysis utilizes existing, available data, offering the opportunity for replication of the study, enhanced protection of participants, and time effectiveness.

In addition to the four advantages of secondary data, Pajo (2018) describes three disadvantages as well: uncertainty of constructs, ambiguity of measurement error, and passage of time. Fortunately, the disadvantages of secondary data that Pajo mentions do not apply to this study. Due to the qualitative approach for this study, the investigator is not concerned with measuring constructs by a validated instrument as in the original study. Similarly, measurement error is not a concern because this study seeks to explore resident leadership development, not quantify a construct. Finally, minimal time has passed since the original study was concluded. The investigator aims to complete this secondary analysis within one to three years of the conclusion of the original study.

### **Researcher’s Role and Reflexivity**

In qualitative research, the primary investigator must reflect on their own role in the study (Creswell & Creswell, 2018). Their personal background, culture, experiences, relationships to participants, bias, and values can shape the direction and meaning of the study. In this study, the author is in educational leadership at the hospital where the surgical residency is housed. As such, she works with the program director, faculty, coordinator, and resident participants. The principal investigator oversees accreditation, evaluation, curriculum, strategic planning, and policy implementation for all residency programs at the hospital. She observes and

witnesses the specific context of residency training. She regularly conducts surveys regarding resident perceptions about their learning climate, including the role of specific peer and faculty individuals. The role of the researcher has advantages such as proximity, access, trust, and a unique understanding of context and culture. For this secondary analysis, resident identities will continue to be protected, and the researcher will not be able to identify individual resident responses.

In addition to her professional role, the investigator's doctoral studies and knowledge of social learning theories influence her beliefs about the learning environment. In her view, residency programs operate like group apprenticeships. This design is supported by Vygotsky's (1978) and Bruner's (1983) social constructivist theories, as well as Lave and Wenger's (1991) socially situated learning in a community of practice. By design, physician-trainees simultaneously socially construct their learning while participating in a community of practice. Expanding on social constructivism, socially situated learning emphasizes the culture in which participation occurs, the nurturing of relationships in the community of practice, and the shared sociocultural approach (Aubrey & Riley, 2019). In summary, the researcher acknowledges that her personal background, professional experiences, relationships to participants, and perceptions of social learning theories can shape the study.

### **Research Setting**

The secondary data originates from a general surgery residency program in California where 10 or more residents completed the initial informed consent and pre-course survey and consented to participate. Residency program leadership decided to implement and evaluate a longitudinal, year-long leadership course with approximately two hour-long sessions per month. Residents varied from PGY1 to PGY5 levels, and they participated in the course during their

weekly protected learning time, reserved for clinical and professional topics alike. Due to the close and often tense working relationships among the residents, it was determined to implement the BAL course across all PGYs in an effort to improve the residency culture.

### ***Socially Constructed Learning***

Although the year-long course occurred during regularly scheduled protected learning time, as opposed to time when residents are in the operating room or on the wards taking care of patient needs and responding to pages, efforts were made to maintain and enhance situated learning. Aspects of the course were traditional. Paulo Freire (2000) critiques the traditional learning model between teachers and students in his seminal work, *Pedagogy of the Oppressed*, where teachers have knowledge and power and students do not. This is, perhaps, worthy of further exploration in surgical residency. Freire (2000) suggests a problem-posing model in which students develop and engage their own critical consciousness by analyzing problems and developing solutions themselves. In this case, the residents requested the leadership course.

However, the content of the course was not created by the residents. If the residents had created the course, it would align with Freire's notion that education *for* oppressed people should come *from* oppressed people. Indeed, given the limited time for surgical residents, one can assert the constructivist paradigm that learning is a process of constructing knowledge, taking into consideration the resident's social, cultural, and contextual conditions, while theorizing that the knowledge will be constructed through experience (Guba, 1990). In the BAL course, residents experienced instruction in a classroom, coupled with opportunity for group reflection, individual and group discussions throughout the day in other settings, and self-reflection.

Residency training is a gold standard example of situated learning as described by Brown et al. (1989), including the core tenets of content, context, community of practice, and

participation. Residents learn and work collaboratively. Like a craft apprenticeship, residents engage in authentic activity acquiring and developing the tools for their trade. The BAL course engaged the residents in their culture of practice, emphasizing “the centrality of activity in learning and knowledge and highlight[ed] the inherently context-dependent, situated, and enculturating nature of learning” (Brown et al., 1989, p. 39).

Residency programs lend well to social-constructivist pedagogy. Due to daily faculty-learner interactions, “teachers do not merely transmit knowledge to be passively consumed by learners; rather, each learner constructs means by which new knowledge is both created and integrated with existing knowledge” (Anderson & Dron, 2011, p. 84). The nature of residency programs allows the teacher to become more of a guide than an instructor when it comes to facilitating conversations. In summary, this unique research setting was intended to allow learners to interpret new information, such as authenticity and integrity, through their contextual experiences with peers and superiors, and build on that new knowledge by reflecting on it (Devries & Zan, 2003).

### **Research Sample and Data Sources**

For reasons mentioned previously, including the unique role and positionality of the researcher, coupled with a distinct research setting and previously authorized access to participant data, this study utilized purposive sampling. The hospital site and eleven surgical residents were purposefully selected because they provided written perspectives in the form of documents that will best help the investigator understand the problem and the research questions (Creswell & Creswell, 2018).

### *Participants and Consent Procedures*

All surgical residents at the research site hospital were required to participate in the BAL Course. Of those who consented to participate in the original study, eleven were used for this research. All residents in the BAL Course were eligible for the research component of the study as they were all invited to complete additional surveys and assignments. There were no exclusion criteria. Resident participants could withdraw their participation from the study at any time.

### *Data Sources*

Qualitative data collection types may include observations, interviews, documents, or audiovisual digital materials (Creswell & Creswell, 2018). This study proposed the use of private documents such as written reflections collected throughout the course. Creswell and Creswell (2018) describe the following advantages to using documents as source data:

- Researchers may obtain specific language, nomenclature, and words of participants.
- Data is accessible to the researcher, an available source of information.
- Documents represent data to which participants have given attention.

For these reasons, the investigator proposed utilizing existing documents for analysis. Of note, limitations of utilizing documents as source data include the fact that not everyone is equally articulate, and the written reflections collected may not represent honest or authentic responses. Despite these shortcomings, this study represents a unique opportunity to access the thoughts and feelings of a hard-to-reach population through secondary analysis.

To answer the research questions, this study will analyze resident responses to open-ended questions created by the instructor. Written perspectives may have asked residents to respond to open-ended prompts encouraging them to enact and self-reflect on the concepts they learned in the course. Written perspectives were originally collected via a gmail email account

created specifically for the purposes of the original study. Only the instructor and secondary research scientist (not this author) had access to this account. De-identified responses were sent to the primary investigator for this analysis. To maintain confidentiality of responses and ensure that residents felt safe to respond honestly, residents were informed that the principal investigator and other GME leadership would not be able to identify responses. To achieve this, the secondary research scientist removed all names from responses, assigned them a number identifier or pseudonym (participant ID), and grouped them by assignment prior to qualitative analysis.

### **Data Collection Methods**

Data for this qualitative, narrative study has already been collected by the investigator and another research scientist at the hospital which houses the residency program.

### ***Data Management***

In line with hospital IRB requirements, all data is stored on hospital secure computers and networks and will not be shared outside the hospital system. For both the original study and this secondary analysis, data will be maintained for the required 3 years after the close of the study, or longer if necessary for accreditation requirements.

### **Data Analysis Procedures**

This section describes the methods planned to analyze and make sense out of the text data collected (Creswell & Creswell, 2018). The sequential five-step model presented by Creswell and Creswell (2018) will be followed:

1. Organize and prepare the data for analysis
2. Read or look at all the data
3. Start coding all of the data

4. Generate a description and themes
5. Represent the description and themes (p. 193-195)

In the first step, the researcher will gather the responses collected throughout the year-long course. After matching responses with the correct participant identification number, all responses will be ordered chronologically. The second step involves reading all of the data gathered to provide a general sense of the information. This stage offers the researcher an opportunity to begin to reflect on overall depth of responses, tone, ideas, and overall meaning. The investigator may begin writing notes in the margins of collected reflections to record general thoughts about the data. In step three, the researcher begins to code the data by writing a word or theme in the margin representing a potential category (Creswell & Creswell, 2018).

After getting organized, reading the data, and beginning to code, step four involves generating descriptions and themes. The codes from step three will help generate a small number of themes or categories that will “display multiple perspectives from individuals and be supported by diverse quotations and specific evidence” (Creswell & Creswell, 2018, p. 194). The researcher intends to use a combination of emerging and predetermined codes. To enhance trustworthiness, discussed in the next section, the investigator will create a qualitative codebook, with definitions of each code. This resource will promote coherence among coders. Finally, in step five, the investigator will represent the themes, either by listing them in a chronology of events, discussing major themes with subthemes, or by presenting quotations, for example. Compiling and analyzing the data is anticipated to yield insight into resident leadership development.

## **Methodological Assumptions and Issues of Trustworthiness**

Key assumptions of the study include appropriateness of methodology, number of sources, and truthfulness of participant responses. First, the study proposes a qualitative secondary analysis of narratives, and this is appropriate for the research. A second assumption is that the source data is sufficient to answer the research questions and perhaps provide transferability to similar settings. Third, the researcher assumes that participants answered open-ended questions honestly.

In addition to methodological assumptions, issues of trustworthiness need to be addressed. This section discusses measures taken to enhance the study, as well as credibility, often referred to as validity, and dependability, often referred to as reliability. The researcher seeks believability and trustworthiness (Lincoln & Guba, 1985), through a verification process, rather than traditional validity and reliability measures. Creswell and Creswell (2018) define qualitative validity as the process of the researcher checking “for the accuracy of the findings by employing certain procedures” (p. 199). In contrast, qualitative reliability implies that the researcher’s approach is replicable, and consistent across researchers. In order to conduct trustworthy qualitative research and to enhance acceptability and usefulness of the research, the investigator will implement the following trustworthiness criteria as described by Lincoln and Guba (1985), Nowell et al. (2017), and Creswell and Creswell (2018):

- **Credibility (validity):** To address “fit” between respondents’ views and the researcher’s representation of them, validity activities include prolonged engagement with data, triangulation of data sources, peer debriefing, curation of rich descriptions, and presentation of discrepant information.

- Dependability (reliability): To achieve consistency in the qualitative approach and data analysis, the researcher will clearly document all procedures. Additionally, a second reviewer will be utilized, and the inter-rater reliability will be calculated to determine inter-coder agreement. Reviewer training and communication will be documented.
- Transferability: The responsibility of the researcher is to provide thick descriptions, so that those interested in transferability can judge application in their own environment.
- Confirmability: The researcher will clarify how conclusions and interpretations were made. This will emerge as credibility, dependability, and transferability are achieved.
- Audit Trails: By keeping “evidence of the decisions and choices made by the researcher regarding theoretical and methodological issues” (Nowell et al., 2017, p. 3), the researcher provides readers a clear decision trail.
- Reflexivity: The researcher will keep a self-reflexive and self-critical journal of her internal and external dialogue to clarify her bias, values, and personal reflections.

### **Limitations and Delimitations**

This section identifies potential constraints of the study. Limitations are external conditions that may confine the study’s purview or affect its outcome. For example, limitations of this study are as follows:

- Surgical residents in the study train in one community hospital on the west coast of the United States. The study’s findings may vary from participants who train in an academic hospital, or another segment of the United States, and therefore, may contain bias.
- Due to the limited number of sources, the data is not generalizable.

Delimitations are restrictions intentionally imposed by the researcher to limit the scope of the study. For example, in this study, the research is only conducted in one setting, and only with

secondary data from surgical residents in a community hospital on the west coast of the United States. Fortunately, generalizability is not the goal of qualitative research, rather, the focus is on transferability, or the ability to apply findings in similar contexts or settings (Creswell & Creswell, 2018).

## **Summary**

Chapter 3 introduced the methodology and procedures guiding the study. After restating the purpose and research questions, the methodological approach and study design were discussed. To reiterate, the purpose of this qualitative research study is to explore transformational leadership tenets in resident physician-trainees after participation in a year-long leadership course. Utilizing Bass' (1999) transformational leadership model and the Four I's as the theoretical framework to explore resident descriptions of their development as leaders, the qualitative design employs narratives in the data collection process. Chapter 3 introduced characteristics of qualitative research and narrative inquiry in general, and described the researcher's views on constructivism, as well as advantages and disadvantages of secondary analysis.

Chapter 3 also included a discussion of the researcher's role, the research setting, and further exploration of socially constructed learning in a residency training environment. The specific research sample (surgical residents) and data sources (documents) were presented before outlining data collection and analysis methods. Data analysis procedures will follow Creswell and Creswell's (2018) five-step model. Chapter 3 concluded with qualitative methodological assumptions, trustworthiness criteria to be followed, and limitations and delimitations.

Ahead, Chapter 4 describes the study findings, and Chapter 5 outlines conclusions from the synthesis and analysis of findings, detailing recommendations for future research.

## **Chapter 4: Data Analysis and Results**

### **Overview**

Chapter 4 restates the purpose of the study, important terms, methodological approach, research questions, and links to the literature review and theoretical framework from Chapter 2. Next, the data sources, data analysis procedures, process for trustworthiness criteria, and limitations are reviewed. After summarizing the background, Chapter 4 presents the study's main results through presentation of narrative data in tables and figures sorted by theme and research question. From the data, a story emerges that acts as the foundation for the conclusions and recommendations presented in Chapter 5.

### **Restatement of Study Purpose, Theoretical Framework, and Research Questions**

The purpose of this qualitative research study was to explore the development of transformational leadership tenets in resident physician-trainees throughout and after participation in a year-long leadership course. The primary research question for this study was: How did residents describe transformational leadership behaviors during and after a year-long leadership course? The tenets, or themes, of transformational leadership were generally defined as individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence (Antonakis, 2012; Avolio & Bass, 1991; Bass & Riggio, 2006). As previously stated, transformational leadership was chosen as the conceptual framework for this study because it is thoroughly vetted in the literature (Bass, 1999), has shown effectiveness across numerous types of organizations, and embodies the hope for the physician leader. Transformational leadership is concerned with emotions, values, ethics, and the ability to influence followers' motives and achieve a shared vision. The following sub-questions emerged from the theoretical framework:

- RQ1: How did residents describe individualized consideration?
- RQ2: How did residents describe intellectual stimulation?
- RQ3: How did residents describe inspirational motivation?
- RQ4: How did residents describe idealized influence?

Briefly summarized from Chapter 2, the four factors of transformational leadership mentioned above, known as the four I's (Avolio & Bass, 1991), are defined as follows:

- **Individualized Consideration.** Transformational leaders pay attention to others' unique needs and aspirations. By delegating opportunities in line with desired development opportunities, the leader shows concern for each individual (Bass, 1999; Bass & Riggio, 2006), offering support and individual attention. In residency, the opportunity for a leader to display individualized consideration manifests on the interprofessional team (physicians, nurses, and staff) and on the surgical team itself (faculty, senior resident, and intern).
- **Intellectual Stimulation.** By stimulating innovative problem-solving and questioning the status quo, effective leaders can elicit transformative solutions to everyday problems.
- **Inspirational Motivation.** Transformational leaders inspire followers toward an attractive vision of the future. To achieve the vision, the leader communicates expectations and pathways to the shared vision (Bass & Riggio, 2006).
- **Idealized Influence.** Transformational leaders are admired, respected, and trusted because they influence ideology, ideals, and "bigger-than-life" issues (Bass, 1999; Bass & Riggio, 2006). The magnetic, awe-inspiring leader serves as a role model, full of persistence and determination.

While significant research exists on transformational leadership as a theoretical framework in many organizational settings, there is limited research on how residents develop and utilize this leadership style. Designed to access the thoughts and feelings of study participants as they construct meaning of the social world they are interpreting (Crotty, 1998), this study explores physician-trainee development in the specific cultural context of surgical residency training.

### **Data Sources and Data Gathering Procedures**

This study employed secondary analysis of de-identified written perspectives from residents collected throughout the leadership course. Since there was no human subject interaction involved in curating the existing data, it qualified as nonhuman subjects research. Because of the unique role of the researcher and a distinct research setting, this study represents a special opportunity to access the thoughts and feelings of a hard-to-reach population through secondary analysis. Written perspectives from eleven residents at one hospital site were purposively sampled in the form of documents to answer the research questions.

To restate from Chapter 3, Creswell and Creswell (2018) describe the following advantages to using documents as source data:

- Researchers may obtain specific language, nomenclature, and words of participants.
- Data is accessible to the researcher, an available source of information.
- Documents represent data to which participants have given attention.

The use of existing documents is intended to harness rich, honest narratives from residents to explore their leadership development throughout the year.

The de-identified written perspectives were delineated by number (1-11) and post-graduate year (PGY). To further maintain the anonymity of the residents, each written perspective was assigned a letter, “J” or “S,” instead of PGY. “J” represents a junior resident,

which comprises PGY 1, 2, or 3, while “S” indicates a senior resident, inclusive of PGY 4 or 5. These categories allow the researcher to sort written perspectives by participant as well as by group. In general, junior residents (PGY 1, 2, 3) may experience leadership development differently than senior residents (PGY 4 or 5), as the ACGME milestone expectations presented in Chapter 2 represent (See Figures 1 and 2). Additionally, to protect the anonymity of any potentially identifiable information, the researcher utilized anonymization procedures such as redacting or altering written narratives without materially changing the meaning, with obfuscated information shown in brackets (Tsai et al., 2016).

### **Data Analysis Procedures**

For data analysis, Creswell and Creswell’s (2018) sequential five-step model was followed:

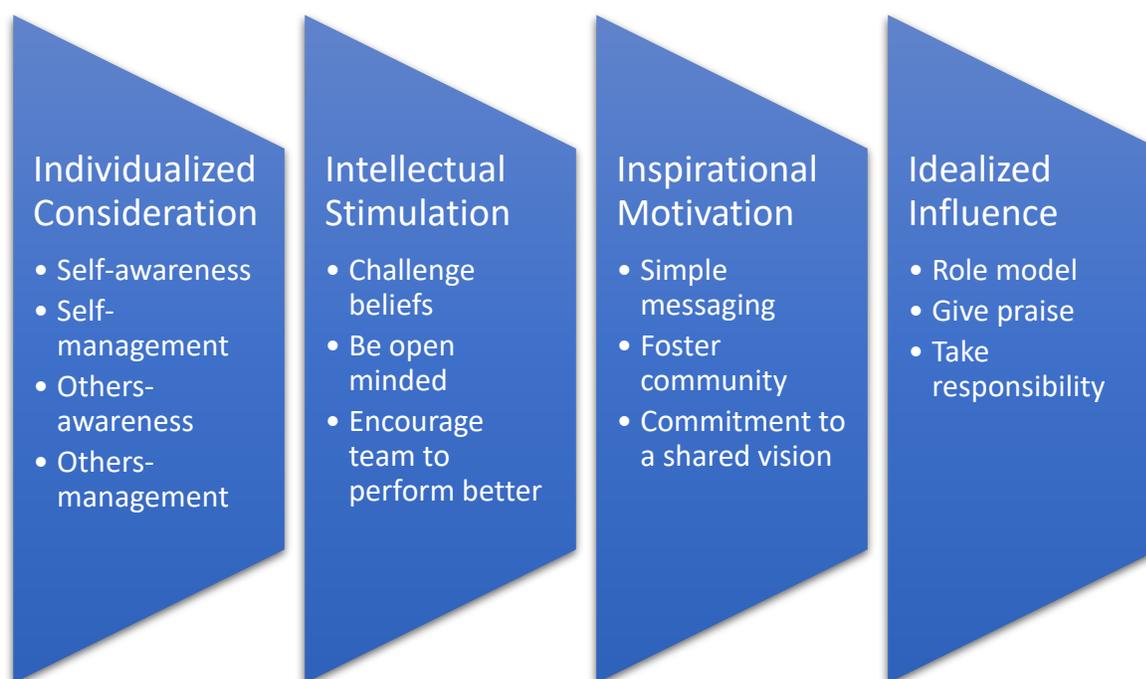
1. Organize and prepare the data for analysis
2. Read or look at all the data
3. Start coding all of the data
4. Generate a description and themes
5. Represent the description and themes (pp. 193-195)

After gathering responses collected throughout the year-long course, matching responses with the correct participant identification letter and number, all responses were ordered chronologically by participant. Second, after reading all the data gathered and taking notes, the researcher began to code by typing a word or theme in an attached column, representing a potential category (Creswell & Creswell, 2018). As codes emerged, the researcher created a qualitative codebook, with definitions of each code, to inform coherence with the second reviewer. The investigator formed definitions of each theme based on the data in the research,

balanced with definitions from the literature review. Finally, Step 5 manifests by the investigator representing the themes, either by listing them in a chronology of events, discussing major themes with subthemes, and by presenting quotations. Figure 4 showcases the codes that emerged to represent the Four I's (Bass, 1999; Bass & Riggio, 2006).

**Figure 4**

*Transformational Leadership Codes*



**Process for Verification and Trustworthiness**

This section summarizes the study's assumptions and measures to enhance trustworthiness. In this qualitative secondary analysis of narratives, the researcher assumes (a) the methodology is appropriate, (b) the number of sources is sufficient, and (c) the participants wrote their perspectives honestly. To magnify believability and trustworthiness (Lincoln & Guba, 1985), the researcher implemented the following verification and trustworthiness processes as described by Lincoln and Guba (1985), Nowell et al. (2017), and Creswell and Creswell (2018), restated and augmented from Chapter 3:

- Credibility (validity): To address “fit” between respondents’ views and the researcher’s representation of them, validity activities included prolonged engagement with data, triangulation of data sources (matching resident responses across time by participant ID), curation of rich descriptions, and presentation of discrepant information.
- Dependability (reliability): To achieve consistency in the qualitative approach and data analysis, the researcher documented all procedures. Additionally, a second reviewer was utilized, and inter-rater reliability was calculated to determine inter-coder agreement. Reviewer training, processes, and communication were loosely based on Hyatt’s (2017) 10-step process and documented as follows:
  - The second reviewer was familiar with qualitative research and coding, as well as transformational leadership as a conceptual framework. After the primary researcher read and made initial notes about the transcripts, both the primary researcher and second reviewer met to discuss the project.
  - After orienting the second reviewer to the project and qualitative codebook with definitions, the primary investigator reviewed a selected written perspective with the second reviewer. The emergence of codes was discussed and documented.
  - The primary reviewer provided the second reviewer with all non-coded, de-identified written perspectives. Both reviewers coded separately from each other. After coding all the data independently, the reviewers met to discuss differences and similarities, create an inter-reviewer comparison sheet on a Microsoft Word document, and discuss final subthemes. When disagreement occurred, discussion ensued, and, when possible, agreed-up codes were determined. A sample section of the inter-reviewer comparison sheet, without the participant’s written

perspective, is provided in Table 5. Inter coder reliability, or ICR, “is a numerical measure of the agreement between different coders regarding how the same data should be coded” (O’Connor & Joffe, 2020, p. 2). Increasingly, ICR assessment is noted to improve the “internal quality” of qualitative studies, as well as enhance the “transparency of the coding process, promoting reflexivity and dialogue” within the research team (O’Connor & Joffe, 2020, p. 11). In their sweeping review of ICR, O’Connor and Joffe (2020) cite Miles and Huberman’s (1994) standard suggestion for 80% agreement on 95% of codes. Additionally, when ICR results are presented on a scale between -1 to +1, figures closer to 1 indicate greater correspondence. O’Connor and Joffe (2020) present Neuendorf’s (2002) “rules of thumb,” such as “observing ICR figures over .9 are acceptable by all, and over .8 acceptable by many, but considerable disagreement below that” (p. 9). In this study, ICR was calculated at .95.

**Table 5**

*Sample of Inter-reviewer Comparison Sheet*

Participant	Primary Reviewer	Second Reviewer	Agreement? Y/N	Final Decision
J1	Self-management	Self-management	Y	Self-management
J2	Self-awareness	Self-awareness	Y	Self-awareness
J3	Simple Messaging	Simple Messaging	Y	Simple Messaging
J5	Self-awareness	Role model	N	Role model
J6	Self-awareness	Self-management	N	Self-management
J8	Self-awareness	Self-awareness	Y	Self-awareness
J10	Others- management	Others-management	Y	Others-management
S11	Shared vision commitment	Shared vision commitment	Y	Shared vision commitment

- **Transferability:** The researcher's responsibility is to provide thick descriptions, so that those interested in transferability can judge application in their own environment.
- **Confirmability:** The researcher clarifies how conclusions and interpretations were made. This will emerge as credibility, dependability, and transferability are achieved.
- **Audit Trails:** The investigator provides readers with a clear decision trail by keeping "evidence of the decisions and choices made by the researcher regarding theoretical and methodological issues" (Nowell et al., 2017, p. 3).
- **Reflexivity:** The researcher kept a self-reflexive and self-critical journal of her internal and external dialogue to clarify her bias, values, and personal reflections.

### **Limitations and Delimitations Summarized**

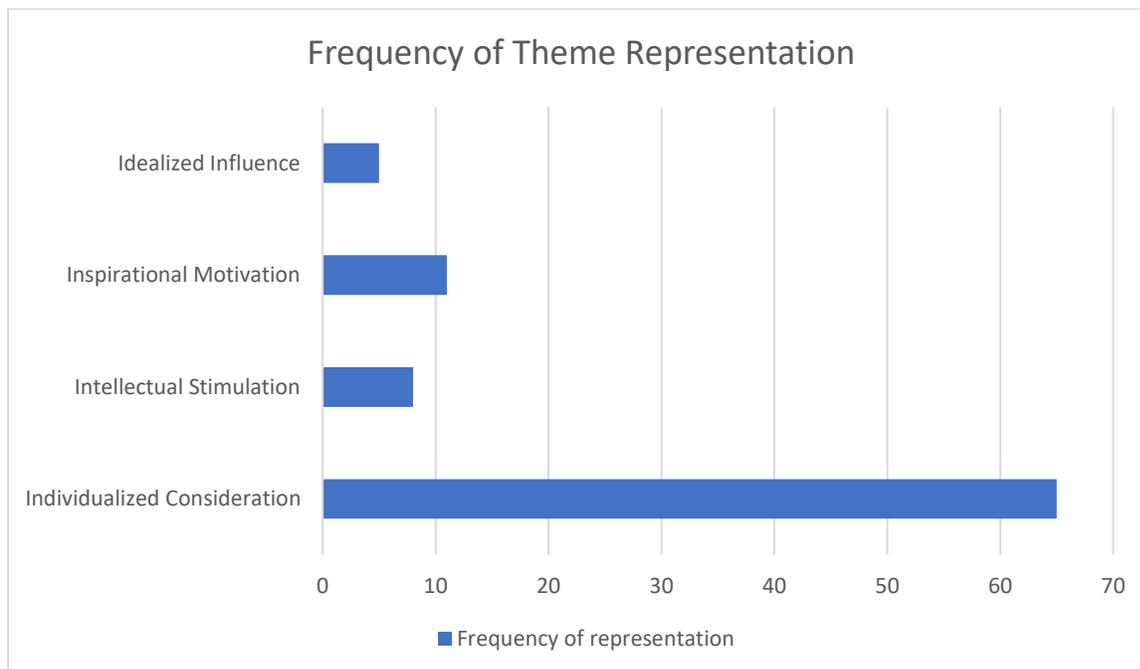
Limitations and delimitations reflect the potential constraints of the study. External conditions limiting the study include the fact that the written perspectives represent only one cohort of residents in one training hospital. Residents who train in other specialties, other areas of the United States, or other countries may experience leadership development differently. Second, due to the limited number of sources, the data is not generalizable. Again, a delimitation of the study is that the source data only comes from one setting and only from secondary sources. The limitations of using written perspectives as source data include that not everyone is equally articulate, and the data collected may not represent honest or authentic responses. The choice of transformational leadership as a theoretical construct to base the research questions also became a delimitation. As the findings in this chapter illustrate, resident leadership development was commonly described as self-awareness, which is not typically a primary construct in transformational leadership. Finally, as previously stated, the goal of qualitative research is not generalizability but transferability to similar contexts or settings (Creswell & Creswell, 2018).

## Research Results

This section presents the findings of this qualitative study exploring resident physician descriptions of transformational leadership as they progress through a year-long course. To answer the research questions, eleven participants contributed written perspectives. In order to investigate transformational leadership, four sub-questions were established based on the Four I's established by Bass (1999) and others. The data analysis involved coding 89 units composed of phrases, sentences, or paragraphs. These texts were coded and categorized by theme to provide descriptions for the sub-questions. Figure 5 illustrates the frequency of occurring themes by sub-question. Further discussion and implications of Figure 5 are discussed in Chapter 5.

### Figure 5

*Frequency of Themes by Sub Question*



### ***Research Question 1 and Corresponding Data***

The first research question focused on residents' descriptions of individualized consideration as it is a primary component of the Four I's. For this study, individualized consideration was defined as a leader who shows concern for each individual (Bass, 1999; Bass & Riggio, 2006), offering support and attentiveness to individual needs. Examples of the data captured in this category read as follows:

- “I think mentally that by coming to terms with things in a real way, there is less room to be so harsh and critical and more accepting” (J1).
- “I think since the last few sessions, I realize how often I phrase ‘requests’ in ways that are more like demands instead of invitations. I phrase it in a way that prompts the answer I want” (J3).
- After the case I felt guilty about having talked poorly about the [staff member]. Most of my participation in the conversation stemmed from a feeling of obligation to agree with the attending. I definitely wasn't being authentic, and I think there were multiple ways I could have avoided disparaging this [staff member] without confrontation with my attending. It's made me more aware of how often I bend to various pressures to say or do things, or act a certain way, rather than acting from a place of authenticity. So this incident was a failure on my part. (S4)
- “In this course, I have gained skills that help me practice authenticity” (J5).
- My already always listening for myself is that I am different. My already always listening for myself is that other people do things better than me. My already always listening is that I always have something to prove. As a newcomer to the program, My already always listening to all my seniors is that I did something wrong, or less efficiently, or just

differently than they are used to. But the more I am able to watch myself move beyond those thoughts, the more I am able to learn, and grow from this process. As [I've] addressed my "already always listening" [I'm] learning to build workability, even with just myself and my life, which i hope will translate to my relationships. (J6)

- “I believe through this course it has given me some insight on expectations I have of others and I am growing to become comfortable asking others of their expectations from me” (J10).
- “I feel I am better at taking a step back and watching things unfold before making decisions rather than rushing in” (S11).

While reading the written perspectives from the residents collected throughout and after the course, the primary and secondary reviewers commented on the overwhelming frequency of remarks coded as self-awareness and self-management. This was surprising because much of transformational leadership is concerned with others-leadership, or the leaders' effect on followers. Of course, some of the written perspectives were self-reflection assignments. However, it was still prominent to both reviewers that many of the residents were grappling with and developing self-leadership through self-awareness and self-management. This realization led the reviewers to codes for individualized consideration that included Senge's (2006) thoughts on the development of personal mastery, scaffolded by Goleman's (2006) tenets of emotional intelligence. Figure 6 displays the frequency of subthemes for individualized consideration, including self-awareness, self-management, others-awareness, and others-management.

## Figure 6

### *Summary of Subthemes Generated from RQ1*



### *Research Question 2 and Corresponding Data*

The second research question asked how residents described intellectual stimulation. As part of transformational leadership (Bass, 1999), effective leaders stimulate thinking, creativity, innovative problem-solving, and questioning the status quo. Data were captured in this category from 6 of the 11 written perspectives. The following examples represent perspectives written about intellectual stimulation:

- “I think being honest and recognizing who you are, what you are capable of controlling and not controlling is one of the more vulnerable components to living with integrity” (J1).
- “I’ve been able to better challenge and identify my feelings and how that affects my interactions” (J1).

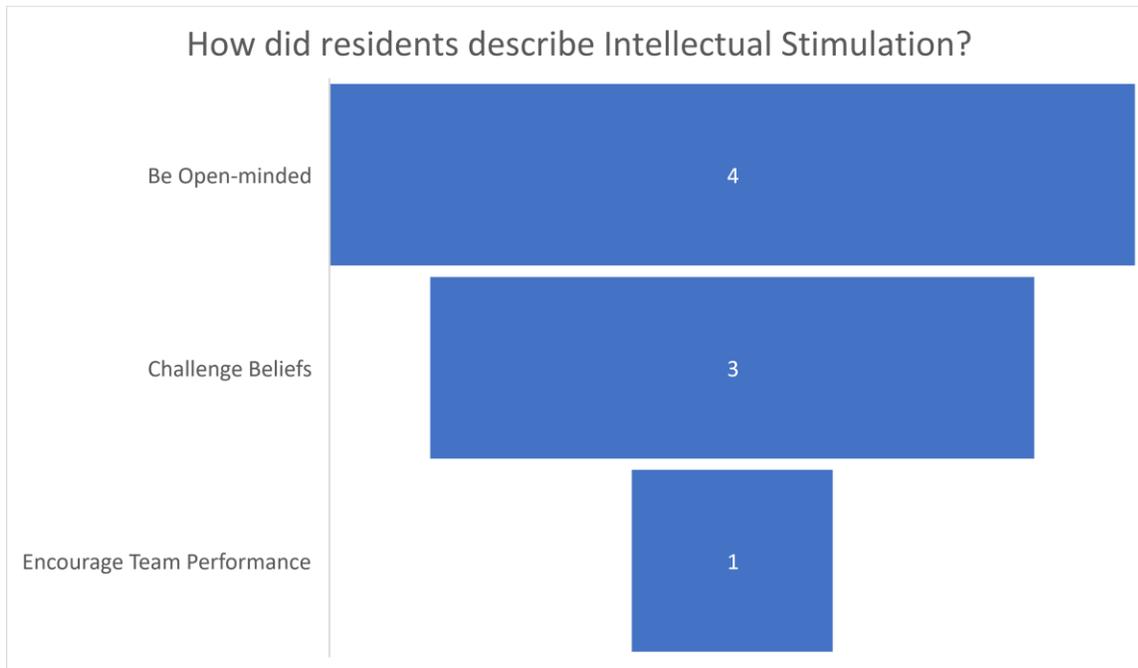
- “Since the last session, I have learned that it takes a very active effort to realize something I have not been aware of” (J5).
- “It's helpful at least to recognize that there is always an alternate opinion that takes conscious effort to see” (J5).
- “Some concepts that stuck out for me were 1) Being authentic with oneself and to others 2) Having Integrity 3) Being open minded 4) and most importantly living for a purpose or concept greater than oneself” (J7; Phrases in this segment were coded separately, “being open minded” was coded with the sub-theme for intellectual stimulation. The rest is presented for context).
- “[I define leadership as] the ability to direct others in one way or another” (S9).
- What I have learned is to change how I address the requests. I started to say, “thank you for making me aware of,” and, “I will get to that as soon as I can.” I noticed [I] wasn't getting as many pages regarding the same patient and request. (J10)
- “Improving effectiveness and confidence - I am now better at separating myself emotionally from situations and making decisions confidently based on objective data” (S11).

Of note, the data representations for intellectual stimulation are sometimes focused on self- not others. The transformational leader aspires to stimulate thinking, creativity, and innovative problem-solving in the team or others. It follows, or precedes, that first one must know how to stimulate their own intellect before engaging others in the practice. Figure 7 displays subthemes for intellectual stimulation, with only one representation for “encourage team performance.” This highlights the beginning of the decline in representations of transformational leadership tenets in resident descriptions. “Encourage team performance,” notably, was only

mentioned once by a senior resident. Patterns that emerge in the data may indicate that senior residents, as opposed to junior residents, are cognizant, aware, and even experienced at leading others.

### Figure 7

*Summary of Subthemes Generated from RQ2*



### *Research Question 3 and Corresponding Data*

The third research question asked how residents described inspirational motivation. As part of the conceptual framework of transformational leadership, inspirational motivation manifests in those who inspire followers toward a shared vision by communicating expectations and pathways with simple but clear messaging (Bass & Riggio, 2006). Samples of data content representing this category are presented here:

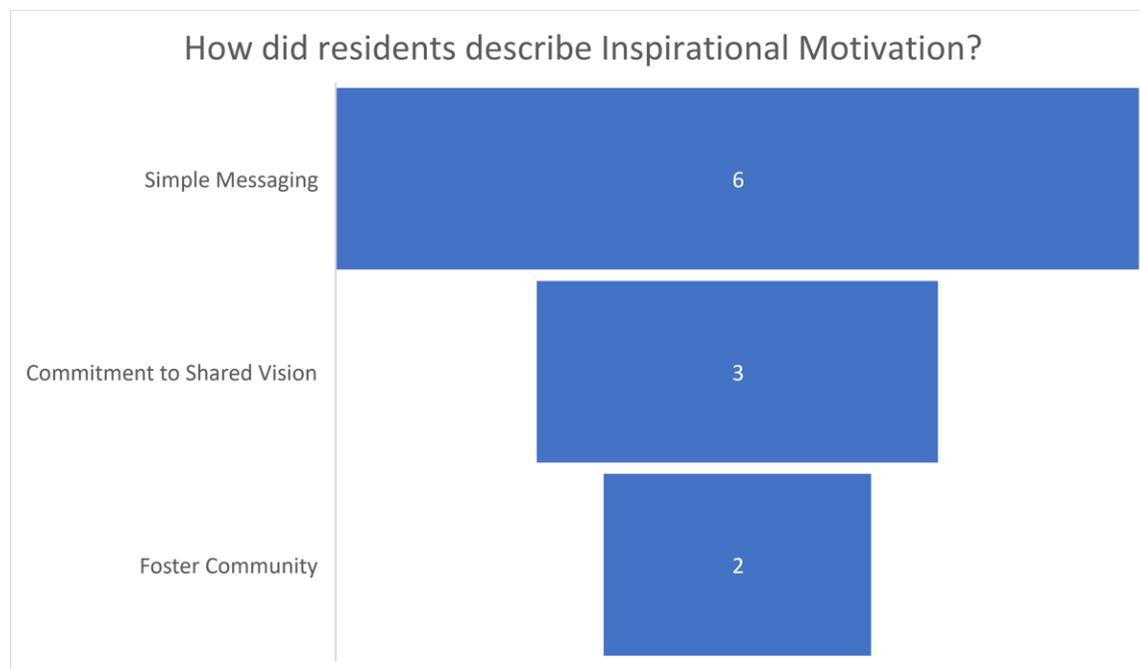
- “I promise to work on requesting clear demands when appropriate instead of masking as a fake request” (J7).

- “Some concepts that stuck out for me were ... living for a purpose or concept greater than oneself” (J7).
- I feel like in so many situation[s] while we are in the OR and struggling to hold camera or bovie right, the sentiment we are met with from a lot of attendings is “I’ll just do it you aren’t good” instead of “let me show you where I think you could improve in order to reach your potential. (J8)
- “I see my higher powers as fairness, hard work, and an expectation of excellence for all” (S9).
- I feel like I would have more effective support if I acknowledge people, including techs, nurses, and residents doing the little things that benefit patient care like ensuring a NGT is functioning, or catching misplaced order, or showing concern that a wound is infected rather than scoffing at them that I would have noticed something on my exam anyways. (S9)
- What I have learned is to change how I address the requests. I started to say, “thank you for making me aware of” and, I will get to that as soon as I can. I noticed [I] wasn’t getting as many pages regarding the same patient and request. (J10)
- “As a team member I try to address areas of miscommunication and disconnect” (J10).
- [I define leadership as] being able to see your own as well as others’ limitations and using that information to achieve a goal or set of goals within the confines of that knowledge. Being willing to do anything from the "smallest" task to the greatest without hesitation if necessary. (S11)

Simple messaging and commitment to a shared vision appear to be more readily experienced, or understood, by residents based on their descriptions. For inspirational motivation, six of 11 participant perspectives expressed the subthemes presented in Figure 8.

### Figure 8

*Summary of Subthemes Generated from RQ3*



### *Research Question 4 and Corresponding Data*

The fourth research question asked how residents described idealized influence. As the aspirational goal for transformational leaders, idealized influence represents the top of the chart for effectiveness in the Full Range of Leadership Model (See Figure 3). Leaders exhibiting idealized influence manifest charisma and are admired role models because they influence ideology and outcomes (Bass, 1999; Bass & Riggio, 2006). These leaders utilize their charisma to role model shared inspiration, intellectual stimulation, and individualized consideration. As mentioned in Chapter 2, these actions elevate “the follower’s level of maturity and ideals as well as concerns for achievement, self-actualization, and the well-being of others, the organization,

and society” (Bass, 1999, p. 11). To meet the criteria for idealized influence, the data had to be others-focused and represent some sort of positive outcome. The following are examples of data content representing idealized influence:

- “Leadership means being effective at demonstrating behavior and actions that need to be done. Being able to communicate in actions, words and relationships effectively” (J1).
- “When I finally talked to the [team] junior, I learned he felt similarly and we were able to more clearly delineate our roles and expectations. The month has been much more harmonious since” (J2).
- “When I deem someone to be supportive, I tend to allow myself to be vulnerable and have more open and honest communication” (J5).
- “I believe it’s a miscommunication on their side and blame them rather than realize it’s my poor communication and taking blame for that expectation limitation. I think it sets up an air of resentment by myself and the juniors” (S9).
- “That was a nice feeling and I commended the group at the end of our conference” (S9).

The theme of idealized influence had the least representations in the data of any category. Figure 9 displays the frequencies of the subthemes. Two of the subthemes, “take responsibility” and “give praise,” were only represented by one senior resident. Based on the representations captured in the data, residents rarely describe idealized influence in their written perspectives. One may speculate that this is by course design, resident existence in the medical hierarchy, or something else. In any case, residents in this program most frequently describe their experiences with self-awareness, as mentioned in the discussion for Research Question 1. Descriptions of idealized influence were captured by four residents, three of whom were juniors, and the juniors’ data only coded to the subtheme of “role modeling.” The senior resident’s data was included as

descriptors of idealized influence to capture the essence of idealized influence behaviors from one who has already been placed in leadership roles. These findings are discussed further in Chapter 5.

### Figure 9

*Summary of Subthemes Generated from RQ4*

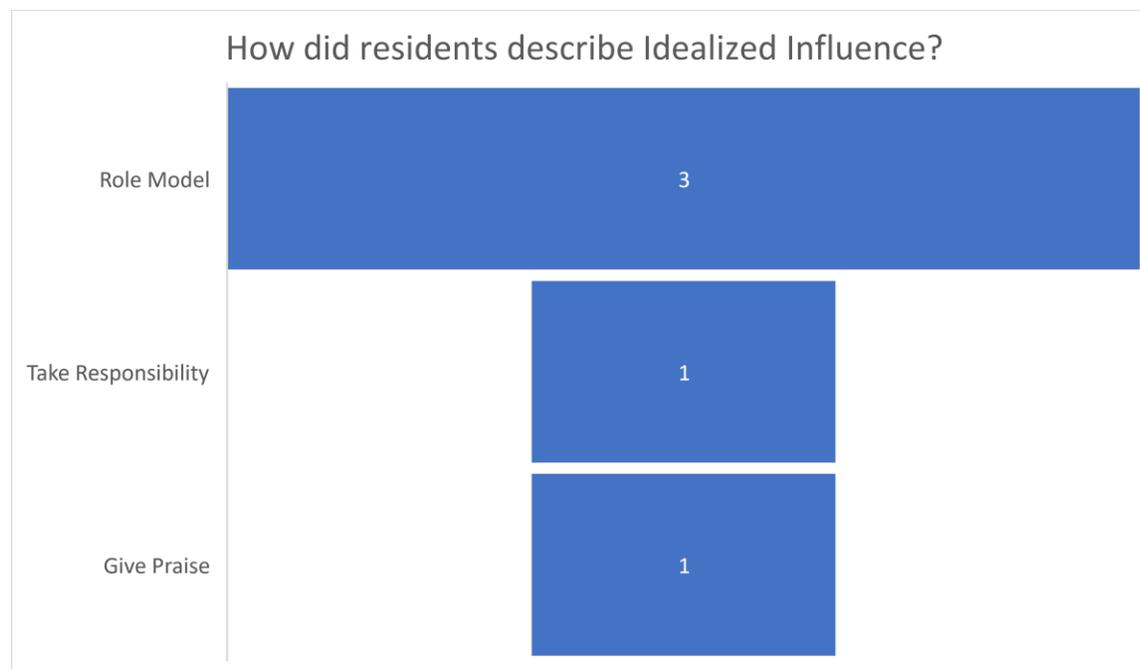


Table 6 summarizes the data results and presents themes with subthemes categorized by research question. In general, residents described individualized consideration for themselves and others through the tenets of emotional intelligence (Goleman, 2006) and personal mastery (Senge, 2006), as captured through self-awareness, self-management, others-awareness, and others-management. Residents described intellectual stimulation as being open-minded, challenging your own and others' beliefs, and encouraging better team performance. Residents described their experience with inspirational motivation through the importance of simple messaging, a commitment to a shared vision, and the practice of fostering community. Finally,

residents described idealized influence with descriptions of effective role modeling, the importance of taking responsibility, and giving praise.

**Table 6**

*Research Questions with Identified Subthemes*

Theme	Research Question	Subthemes
Individualized Consideration	RQ1: How did residents describe individualized consideration?	<ul style="list-style-type: none"> <li>- Self-awareness</li> <li>- Self-management</li> <li>- Others-awareness</li> <li>- Others-management</li> </ul>
Intellectual Stimulation	RQ2: How did residents describe intellectual stimulation?	<ul style="list-style-type: none"> <li>- Be open-minded</li> <li>- Challenge Beliefs</li> <li>- Encourage better team performance</li> </ul>
Inspirational Motivation	RQ3: How did residents describe inspirational motivation?	<ul style="list-style-type: none"> <li>- Simple Messaging</li> <li>- Commitment to Shared Vision</li> <li>- Foster Community</li> </ul>
Idealized Influence	RQ4: How did residents describe idealized influence?	<ul style="list-style-type: none"> <li>- Role Model (behavior and communication)</li> <li>- Take Responsibility</li> <li>- Give Praise</li> </ul>

**Summary**

After restating the study purpose and important terms, Chapter 4 reviewed the methodological approach, research questions, theoretical framework, data sources, and data analysis procedures. The process for following Creswell and Creswell's (2018) five-step sequential model for data analysis was outlined, as well as actions to enhance the trustworthiness criteria. These actions included a description of the steps involved in working with a second reviewer and the calculation of Inter-Coder Reliability (ICR).

Chapter 4 presented the study's results through presentation of narrative data collected from eleven residents to explore their transformational leadership development. Sorted by research question, the narrative data, tables, and figures presented subthemes representing each

research question. The data analysis summarized resident descriptions of transformational leadership under the themes of individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence. Under these four themes, subthemes emerged. For the theme of individualized consideration, subthemes included self-awareness, self-management, others-awareness, and others-management as descriptors. For the theme of intellectual stimulation, subtheme descriptors included a willingness to challenge beliefs, be open-minded, and encourage better team performance. For the theme of inspirational motivation, subthemes of simple messaging, commitment to a shared vision, and efforts to foster community emerged. Finally, for the theme of idealized influence, subthemes included those who role model, take responsibility, and give praise.

As mentioned at the outset of the chapter, the data tell a story that acts as the foundation for the conclusions and recommendations presented in Chapter 5.

## **Chapter 5: Findings and Conclusions**

### **Overview**

This chapter presents a summary of the study's findings and conclusions. Beginning with a review of the study, including restating the problem statement and purpose, Chapter 5 summarizes the theoretical framework, research questions, study design, methodology, data analysis procedures, and key findings. Chapter 5 concludes with sections on implications for practice, recommendations for future research, and a final summary.

### **Review of the Study**

#### ***Problem Statement***

Physicians are essential members of the health care team. With the intent to optimize health outcomes, interdisciplinary teams facilitate health care throughout the nation's clinics, hospitals, and community-based organizations. Physicians are often designated as leaders of these settings (Lee, 2010) without any formal training, mentoring, or assessment of leadership abilities (Rotenstein et al., 2018). Physician educators declare a need for leadership development throughout the medical education continuum (Angood, 2015; Dhaliwal & Sehgal, 2014; Rotenstein et al., 2018; Varkey et al., 2009). When physician-trainees leave medical school and enter residency, they continue to hone their skills in (a) patient care, (b) medical knowledge, (c) professionalism, (d) interpersonal and communication skills, (e) practice-based learning and improvement, and (f) systems-based practice (Edgar et al., 2020; Swing, 2007). These six domains are known as the ACGME (2022b) competencies.

Despite a lack of intentionally designed longitudinal leadership courses in the graduate medical education continuum (Torres-Landa et al., 2021), this study answers the call to enhance leadership development in residency (Blumenthal et al., 2012; Bronson & Ellison, 2015; Onyura

et al., 2019; Rotenstein et al., 2018; Sadowski, 2018; Torres-Landa et al., 2021; Varkey et al., 2009). As stated in Chapter 1, effective leadership training can guide physician-trainees on a journey toward self- and others- awareness and management utilizing emotional intelligence (Goleman, 2006), integrity, authenticity (Erhard et al., 2010; George, 2003; Snook et al., 2012), communication, teamwork (Hackman, 2012; Larson & LaFasto, 1989), change management (Kotter, 1995, 2012), and systems thinking (Senge, 2006).

### ***Restatement of Purpose***

This study explored the development of transformational leadership in physician-trainees after participation in a year-long leadership course. As called for by Frich et al. (2015) and Sadowski et al. (2018), this study embarked on a qualitative analysis of leadership identity in residency. By focusing on the robust tenets of transformational leadership, the investigator examined data from residents across five years of training to discover how they describe their leadership development throughout and after a year-long course. The promise of the BAL Course is to teach leadership in a way that informs students about leadership and transforms them into “actually being leaders and exercising leadership effectively as their natural self-expression” (Erhard et al., 2010, p. 2). The components explored and practiced throughout the course included “integrity, authenticity, being committed to something bigger than oneself, and being cause in the matter” (Erhard et al., 2010, pp. 14-16). The investigator was curious if resident descriptions of their experiences throughout the course would align with characteristics of transformational leadership.

### ***Review of Theoretical Framework***

Utilizing transformational leadership tenets (Bass, 1999; Bass & Avolio, 1993), this study explored the extent to which “idealized influence, inspirational motivation, intellectual

stimulation, and individualized consideration” (Bass & Avolio, 1993, p. 112) were present in the physician-trainees through the analysis of findings. As the theoretical framework guiding the research in this study, it is important to note that the scholarly and practical literature on transformational leadership spans over four decades (Bass, 1999). The extensive body of research informed the theoretical and methodological foundations for this study and the analysis of findings. The historical development of transformational leadership, including the FRLM with descriptions of laissez-faire, transactional (management-by-exception, contingent reward), and transformational (idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration) components, was described as a single continuum by Bass (1985), and further elucidated by Avolio and Bass (1991). In Chapter 2, Figure 3 represents a graphic depiction of the Full Range of Leadership Model, and it is worth restating that “every leader displays each style to some amount” (Bass & Riggio, 2006, p. 9).

In surgical residency, the transactional and transformational rubric is particularly applicable because of trainee needs as individual learners (followers), participation in various healthcare teams (eventually as leaders), and contribution to the organization in which they train. Eventually, as a senior resident, each trainee is expected to operate as a team leader. According to Bass (1999), transformational teams are high performing. To restate from Chapter 2, if or when a trainee can move beyond their own needs and self-interest, guided by a transformational leader, the aspiration is that they will co-create a highly functioning team that cares for each other, intellectually stimulates each other, inspires each other, and identifies with the team’s goals (Bass, 1999). In surgery, this team may have several transformational leaders (residents and faculty). The goal is to develop them while they are still in training so that they graduate and go on to their next position and organization as an equipped, experienced, transformational

leader. The potential outcomes for an effective transformational leader include improved interprofessional relationships, patient interactions, quality measures, and organizational outcomes.

By employing the Four I's, transformational leaders transcend transactional leadership and raise the level of motivation, ethics, emotions, standards, and long-term goals, for the individual, and the entire team. Brief descriptions of each of the Four I's are restated from Chapter 3:

- **Individualized Consideration.** Transformational leaders pay attention to others' unique needs and aspirations. By delegating opportunities in line with desired development opportunities, the leader shows concern for each individual (Bass, 1999; Bass & Riggio, 2006), offering support and individual attention. In residency, the opportunity for a leader to display individualized consideration manifests on the interprofessional team (physicians, nurses, and staff) but also on the surgical team itself (faculty, senior resident, intern).
- **Intellectual Stimulation.** By stimulating innovative problem-solving and questioning the status quo, influential leaders can elicit transformative solutions to everyday problems.
- **Inspirational Motivation.** Transformational leaders inspire followers toward an attractive vision of the future. To achieve the vision, the leader communicates expectations and pathways to the shared vision (Bass & Riggio, 2006).
- **Idealized Influence.** Transformational leaders are admired, respected, and trusted because they influence ideology, ideals, and "bigger-than-life" issues (Bass, 1999;

Bass & Riggio, 2006). The magnetic, awe-inspiring leader serves as a role model, full of persistence and determination.

The aspiration toward transformational leadership on the Full Range of Leadership Model (Avolio & Bass, 1991) acknowledges the notion that leaders display both transactional and transformational tendencies but that to be more effective, one would strive toward more transformational factors and less transactional factors.

### ***Review of Research Questions***

Tied to the qualitative study's purpose of exploring transformational leadership tenets in residents after participation in a year-long leadership course, the overarching research question was: How do residents describe transformational leadership? The following sub-questions were generated from the Four I's (Bass & Avolio, 1993):

- RQ1: How did residents describe individualized consideration?
- RQ2: How did residents describe intellectual stimulation?
- RQ3: How did residents describe inspirational motivation?
- RQ4: How did residents describe idealized influence?

### ***Study Design and Methods Overview***

There is a paucity of literature exploring resident leadership development utilizing secondary analysis of qualitative data after a year-long course. This study employed secondary analysis of existing de-identified written perspectives previously collected throughout and at the conclusion of a leadership course. The process of narrative inquiry offered unique insight throughout the qualitative research. With 11 surgical residents comprising the research sample, and documents, or written perspectives, as the data source, the next step in the study involved data analysis.

### ***Data Analysis Overview***

For data analysis, Creswell and Creswell's (2018) sequential five-step model was followed.

The researcher:

1. organized and prepared the data for analysis,
2. read and studied all the data,
3. began coding all of the data,
4. generated descriptions and themes with a second reviewer,
5. represented the descriptions and themes in the study results.

Restated from Chapter 4, after gathering responses collected throughout the year-long course, matching responses with the correct participant identification letter and number, all responses were ordered chronologically by participant. After reading all the data gathered and taking notes, the researcher began to code by typing a word or theme in an attached column, representing a potential category (Creswell & Creswell, 2018). As codes emerged, the researcher created a qualitative codebook, with definitions of each code, to inform coherence with the second reviewer. Finally, in Step 5, the investigator represented the data, as in Chapter 4, discussing major themes with subthemes, and by presenting quotations.

Additionally, to enhance trustworthiness, the researcher implemented processes described by Lincoln and Guba (1985), Nowell et al. (2017), and Creswell and Creswell (2018). To address credibility, validity activities included prolonged engagement with data and curation of rich descriptions. To achieve dependability in this qualitative approach, the researcher documented all procedures, utilized a second reviewer, and calculated inter-coder reliability (ICR) at .95, showcasing high agreement between reviewers. The investigator is interested in transferability, not generalizability, and documentation of all decisions scaffolds confirmability.

## Overview of Results and Key Findings

### *Conclusion 1*

Research Question 1 asked: How did residents describe Individualized Consideration? The subthemes that emerged from the data related to individualized consideration were (a) self-awareness, (b) self-management, (c) others-awareness, and (d) others-management. By frequency alone, the data analysis revealed that residents predominantly describe their leadership development throughout and after the course as developing self-awareness. Narratives about developing self-awareness were evident by every participant, and reflections on self-awareness were present more than any other subtheme. Initially, this confounded the primary investigator, as most transformational leadership tenets are about “others-leadership,” not “self-leadership.” However, after a review of Goleman’s (2006) emotional intelligence, and Senge’s (2006) personal mastery, the investigator was reminded that self-leadership is the precursor and foundation of others-leadership. Thus, the subthemes related to individualized consideration declaratively included self- (awareness and management) and others- (awareness and management). Examples of these descriptors include:

- (a) Self-awareness: Since starting my first month in the ICU, I’ve found it difficult to negotiate the dynamic between the [team] junior and the ICU. I noticed myself getting frustrated that task[s] I considered the responsibility of the primary team were left for me to complete, and I started to feel a little resentment (and maybe acted a little passive aggressively as a result). (J2)
- (a) Self-awareness: In terms of authenticity, I have noticed that my tone/mood/attitude may change depending on who I am surrounded by. I try to match someone’s tone when

appropriate, but in doing that I will often sacrifice being authentic or holding firm in what I stand for. (J5)

- (a) Self-awareness: “I am now better at separating myself emotionally from situations” (S11).
- (b) Self-management: Since discussing integrity, I have consciously made an effort to reflect on the days events and think about the situations that I may encounter the next day, to live with integrity. I think this has helped be more sure of myself, feel more prepared and also be kinder to myself. (J1)
- (b) Self-management: “[This course has] allowed me to function better on a team with people who I previously did not get along with” (J2).
- (b) Self-management: “I’m learning to build workability, even with just myself and my life, which I hope will translate to my relationships” (J6).
- (c) Others-awareness: “I realized the residents are starting to really fall into their roles and function with less oversight” (S9).
- (d) Others-management: I ask nurses often “can you please” when I am requesting something not urgent. However if it’s a more pressing request, I usually say “please give this patient \_\_\_ when you get a chance” or “are you available to \_\_\_\_.” I do agree with [the instructor] sometimes that it sounds like I may be demanding something more than requesting. (J10)

## ***Conclusion 2***

Research Question 2 asked: How did residents describe intellectual stimulation? The subthemes that emerged from the data related to intellectual stimulation were (a) challenge

beliefs, (b) be open-minded, and (c) encourage better team performance. Examples of these descriptions include:

- (a) Challenge Beliefs: “I’ve been able to better challenge and identify my feelings and how that affects my interactions” (J1).
- (b) Be Open-Minded: “It’s helpful at least to recognize that there is always an alternate opinion that takes conscious effort to see” (J5).
- (c) Encourage Better Team Performance: “[I define leadership as] the ability to direct others in one way or another” (S9).

### ***Conclusion 3***

Research Question 3 asked: How did residents describe inspirational motivation? The subthemes that emerged from the data related to inspirational motivation were (a) simple messaging, (b) commitment to a shared vision, and (c) foster community. Examples of these descriptions are as follows:

- (a) Simple Messaging: “As a team member I try to address areas of miscommunication and disconnect” (J10).
- (b) Commitment to a Shared Vision: “[I define leadership as] being able to see your own as well as others’ limitations and using that information to achieve a goal or set of goals within the confines of that knowledge. Being willing to do anything from the ‘smallest’ task to the greatest without hesitation if necessary” (S11).
- (c) Foster Community: “I see my higher powers as fairness, hard work, and an expectation of excellence for all” (S9).

### ***Conclusion 4***

Research Question 4 asked: How did residents describe idealized influence? The subthemes that emerged from the data related to idealized influence were (a) role model, (b) take responsibility, and (c) give praise. Examples of these descriptors are:

- (a) Role Model: “When I finally talked to the [team] junior, I learned he felt similarly and we were able to more clearly delineate our roles and expectations. The month has been much more harmonious since” (J2).
- (b) Take Responsibility: “I believe it’s a miscommunication on their side and blame them rather than realize it’s my poor communication and taking blame for that expectation limitation. I think it sets up an air of resentment by myself and the juniors” (S9).
- (c) Give Praise: “That was a nice feeling and I commended the group at the end of our conference” (S9).

### ***Overview of Results***

This study utilized de-identified written perspectives from residents throughout and after a year-long leadership course and asked: How do residents describe transformational leadership? Residents submitted responses chronicling their experiences in the BAL course with integrity, authenticity, being cause in the matter, and being committed to something greater than oneself (Erhard, 2010). Resident narratives produced descriptions of individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence. These data were analyzed and coded by the primary investigator and a second reviewer. Subthemes were identified for each research question. See Figure 4 and Table 6 from Chapter 4 for visual representations of subthemes by research question related to the Four I’s (Avolio & Bass, 1991).

Interestingly, perhaps the most informative data analysis came from what was said, and by whom. For example, the individualized consideration theme had the most representative data by far, with each of the four elements of emotional intelligence (self-awareness, self-management, others-awareness, others-management) harnessing more descriptions than any other category, with one exception. Self-awareness was coded 36 times, self-management – 12, others-awareness – 12, and others-management – 5. The one exception was simple messaging under the inspirational motivation theme. Simple messaging had 6 descriptions, just 1 more than others-management. All other codes had 4, 3, 2, or 1 representative descriptions.

The “by whom” was an interesting piece of data as well, worthy of further research, described in the next sections. Suffice it to say that few junior residents described inspirational motivation or idealized influence in their reflections. This may reflect course goals, or hierarchy in medicine, or something else entirely, but it was noteworthy that most descriptions focused on self-leadership, not others-leadership. Senior residents, who are most likely already leading teams, seemed more likely to express in their reflections about themselves or others manifesting tenets of transformational leadership.

## **Implications for Practice**

### ***Leadership Training Fulfills ACGME Competency and Milestone Requirements***

Several subthemes described in the data relate back to considerations from the literature review in Chapter 2. For example, ACGME Competencies such as professionalism, interpersonal and communication skills, systems-based practice, and practice-based learning were described in Chapter 2 as requirements for residency programs to teach and assess. These competencies typically overlap with traditional leadership development training, such as emotional intelligence, integrity, communication, conflict resolution, inspiring a shared vision, and change

management. First, professionalism includes expectations such as demonstrating “competence in compassion, integrity, and respect for others; responsiveness to patient needs that supersedes self-interest; [and the] ability to recognize and develop a plan for one’s own personal and professional well-being” (ACGME, 2022b, p. 25). Subthemes described by residents in this study, such as commitment to a shared vision, self- and others- awareness, and simple messaging, represent these descriptions of professionalism.

Second, restated from Chapter 2, practice-based learning and improvement involves “identifying strengths, deficiencies, and limits in one’s knowledge and expertise, setting learning and improvement goals, ... [and] systematically analyzing practice using quality improvement methods, and implementing changes with the goal of practice improvement” (ACGME, 2022b, p. 27). Subthemes from this study, such as self-awareness, the importance of challenging beliefs, and taking responsibility, represent these descriptions of practice-based learning.

Third, the requirement for interpersonal and communication skills includes the expectation that residents demonstrate capabilities “that result in the effective exchange of information and collaboration with patients, their families, and health professionals” (ACGME, 2022b, p. 28). This requirement includes subthemes found in this study’s data, such as simple messaging and commitment to a shared vision, but it also points to the need for collaboration amongst team members and patients. This description may manifest as fostering community.

Finally, within the interpersonal and communication skills competency, the one requirement that mentions leadership states that residents are expected to demonstrate competence in “working effectively as a member or leader of a health care team or other professional group” (ACGME, 2022b, p. 28). As has been previously stated, intern and junior residents, early in their medical education continuum, can initially meet the requirement by

simply existing as a member on a health care team. However, and particularly in surgery, once a resident reaches the senior level, they are expected to lead and teach their team, in the operating room, on the patient floor, or in a community setting.

In addition to the competencies, the ACGME sets forth milestones by which programs and faculty are to assess their trainees (Edgar et al., 2020). As stated in Chapter 1, the milestones provide a framework for assessing resident development (ACGME, 2019). The milestones are based on a developmental continuum with five levels. Level 1 is appropriate for an incoming resident, Levels 2 and 3 describe behaviors expected of junior residents who are proficient and adequately progressing, and Level 4 represents behaviors appropriate for graduating residents. Level 5 delineates aspirational skills, those expected of an experienced faculty member (Edgar et al., 2020). As mentioned in Chapter 1, of the 18 surgery milestones, approximately 14 of them describe transformational leadership behaviors in Level 5. Figure 2 in Chapter 2 displays an example of milestone expectations of the interpersonal and communication skills competency. This milestone showcases the expected trajectory from self-, to others-, to systems- leadership. This study's captured data reflects these milestone expectations. Junior and senior residents are engaged in self- and others- awareness and management, wrestling with their own thoughts and feelings while learning how to be effective members of the health care team. The call for leadership training in residency beyond the tenets of emotional intelligence may be unwarranted. Indeed, even the expectations from the ACGME lean toward self- and others-leadership, and less toward systems-leadership. Residents are only expected, but not required, to reach Level 4 on any of the milestones. Level 5 is depicted as an aspirational goal, one that even attending physicians may not achieve. Restated from Chapter 1, perhaps leadership training at the GME

level should focus on self- and others-leadership, leaving systems-leadership for physicians already in practice.

### ***Augmentation of Transformational Leadership***

The data analysis for this study produced descriptions and subthemes for the theoretical framework of transformational leadership. Even though the course in the surgical residency did not espouse to train residents directly in the Four I's, based on resident perspectives, it did. More importantly, their reflections indicate they are grappling with self-awareness and self-management at a high level. This foundation of self-leadership will build workability with peers, attendings, staff, significant others, friends, and oneself. The BAL course, alternatively known as the ontological-phenomenological model for creating leaders (Erhard et al., 2010), aims to teach leadership in a way that informs students about leadership and transforms them into “actually being leaders and exercising leadership effectively as their natural self-expression” (Erhard et al., 2010, p. 2). The resident written perspectives indicate they are being challenged to be open-minded, be aware of their own journey toward integrity and authenticity, and are working toward building community through simple messaging, role modeling, and taking responsibility, to name a few.

In retrospect, the theoretical ‘fit’ of transformational leadership may have been aspirational. Although transformational leadership (Bass, 1985) as a conceptual framework may be the most researched of the ‘new leadership theories’ since the 1980s, components of authentic leadership (George, 2003; Walumbwa et al., 2008), emotional intelligence (Goleman, 2006), and personal mastery (Senge, 2006) are pervasive in this study’s findings. Authentic leadership, as defined by Walumbwa et al. (2008), is leader behavior that facilitates a positive psychological space “and a positive ethical climate, to foster greater self-awareness, an internalized moral

perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development” (p.94). Development of the self-regulatory processes necessary for authentic leadership, emotional intelligence, and personal mastery, were evident in this study’s data. Indeed, the frequency and depth of descriptions of individualized consideration for self-awareness were more present than in any other category. However, the long-term goal is not simply self-regulation, self-awareness, and self-leadership. The long-term goal is effective others-leadership and systems-leadership. The focus and development of self- (awareness and management) may be the precursor and foundation to others- and systems- leadership. Interest in this trajectory warrants further exploration, as described in the following sections.

The implications for improved interprofessional relationships, as well as relationships at home set the foundation toward the aspirational goal of idealized influence. The goal of the BAL leadership course was to improve not only individual leadership skills, co-worker well-being, patient interactions, patient care outcomes, and quality measures at the organizational level. To restate and summarize from Chapter 2, the researcher chose transformational leadership as the conceptual framework for this study because it is thoroughly vetted in the literature (Bass, 1999), has shown effectiveness across a variety of organizations, and embodies the hope for the physician leader; one who is attuned to the needs of others (individualized consideration), can share a compelling vision for the future (inspirational motivation), inspire creative thinking (intellectual stimulation), and lead with captivating charisma (idealized influence). Furthermore, Horwitz et al.’s (2008) description of an augmentation effect indicates that transformational leadership behaviors appear to be associated with enhanced levels of performance and satisfaction in followers. Research indicates that transformational leaders motivate individuals

and organizations to achieve that which was previously thought impossible. In the specific context of GME, the transformational leader will contribute to resident well-being, excellence in patient care outcomes, and improved collaborative teamwork.

### ***Leadership Training for Physicians to Improve Collaboration, Outcomes, and Well-Being***

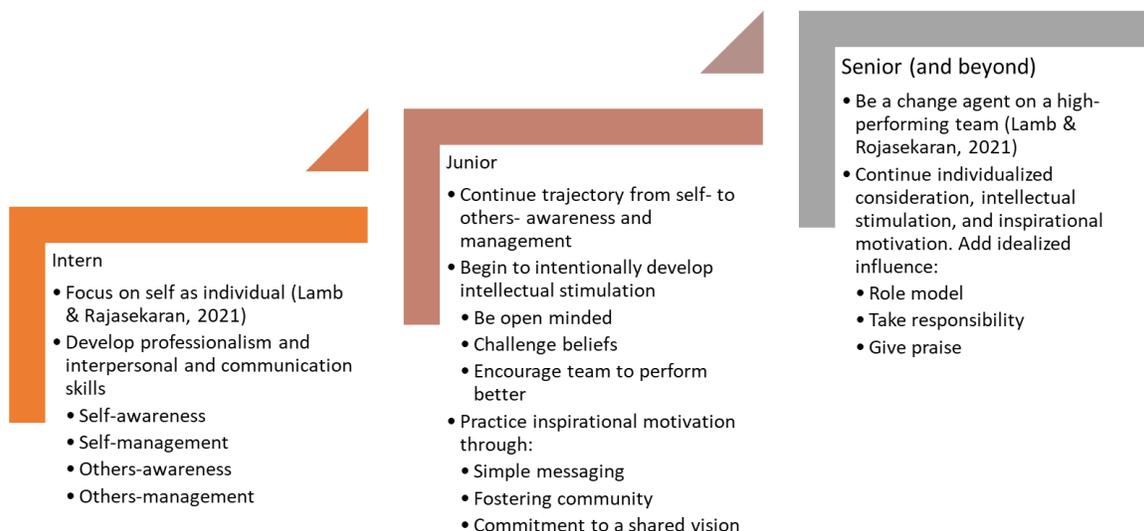
As mentioned at the outset of this study, formal leadership training is not currently required or regularly offered during medical residency. Recent studies support the notion of incorporating leadership training in residency programs (Baird et al., 2012; Jardine et al., 2015; Kumar et al., 2020; Rotenstein et al., 2018; Saravo et al., 2017; Stoller, 2009; Torres-Landa et al., 2021). True (2020) has suggested that the ACGME introduce leadership training as a requirement. Beyond individual assessment of competencies and milestones, the goal is to improve interprofessional collaboration, quality, provider and patient well-being, and financial outcomes. Torres-Landa et al. (2021) conclude that physician-led teams with poor leaders experience adverse effects on financial, clinical, and well-being of team members. Additionally, Fagin and Garelick (2004) concluded their article on the nurse-doctor relationship by suggesting pathways to collaborative clinical work that mirror transformational leadership practices such as effective engagement, clinical management, and help and support. These suggestions align with the findings in this study of resident descriptions of inspirational motivation (simple messaging, fostering community, commitment to a shared vision) and idealized influence (role model, giving praise, taking responsibility).

Both nursing and medicine are traditionally hierarchical (Edmonson & Zelonka, 2019; Fagin & Garelick, 2004). Overcoming negative hierarchical effects, as captured in the resident narratives, can lead to improved collaboration and outcomes. This is the crux of the call to action to implement intentional leadership development for physician-trainees. To the extent that this

study showcases the longitudinal development of individual resident trajectories from self-awareness to others-awareness, to others-management and inspirational motivation and beyond, one may conclude that residency training is the appropriate environment for physician-trainees to engage in this experiential learning.

### ***Leadership Training Timing, Content, and Competency***

Before leaving the timing of training issue, it is imperative to return to Lamb and Rajasekaran's (2021) handbook created for the American Medical Association to assist in facilitating student, resident, and fellow transitions across the medical education continuum. At the end of the handbook, after numerous mentions of the importance of leadership skills at each stage of UME, GME, and CME, the authors described an initial framework for a "leadership competency" (p. 68). Their recommendations for a leadership competency include themes such as (a) lifelong learning and teaching, (b) wellness, (c) self-efficacy and time management, (d) professional growth and role adaptation, (e) community of practice, and (f) shared understanding and systems thinking. Although these may not seem to align with resident descriptions of leadership development in this study, Lamb and Rajasekaran (2021) offer specific guidance for both "early" and "late" learners. Figure 10 sets intentionality to when and what type of learning should occur across the continuum, including specific leadership expectations for progression from intern to senior resident status and beyond. Aligning with the conclusions from this study, Lamb and Rajasekaran (2021) describe, as an example for the community of practice theme, the early expectation to "focus on self as an individual" and the late expectation to be a "change agent on a high performing team" (p. 68). These descriptions mirror not only the ACGME milestone trajectory from self- to others- to system- leadership and this study's resident descriptions of the journey from self-awareness to others-leadership.

**Figure 10***Coupling of Leadership Training Content, Timing, and Competency*

Toward the goal of physician and interprofessional well-being, enhanced collaboration and successful outcomes, Figure 10 describes a framework of specific timing and content for leadership development of physicians in training.

***Attention to Constructivism***

Resident written narratives utilized in this study allowed the researcher to harness the thoughts and feelings of the participants as they were constructing meaning of the topics with which they were engaged. As evidenced by their writings, residents were constantly co-constructing and re-constructing their learning while participating in their community of practice with their co-learners. Because the narratives were collected over a prolonged period of time, continuous representations of repeated efforts at self-awareness, others-awareness, shared cultural experiences and reflection, and attention to messaging and authenticity are present.

Specifically, knowledge co-creation of the Four I's transpired throughout the course. Taking into consideration the resident's social, cultural, and contextual conditions, their experiential learning involved instruction in a classroom, opportunity for group reflection,

individual and group discussions throughout the day in other learning environments such as the operating room or resident lounge, and self-reflection. This context-dependent, situated learning environment allowed the rich descriptions of individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence to emerge. As residents continue to learn and work collaboratively, they actively re-construct existing knowledge while simultaneously integrating new knowledge. As findings from this study are integrated into the social constructivist pedagogy, residents will further their understanding of desired behaviors, attitudes, and actions that will contribute to positive outcomes for themselves and the community of practice as a whole. The presentation of Figure 10 will further facilitate discussion of self- to others- to systems- leadership possibilities in residency training.

### **Recommendations for Future Research**

This qualitative study focused on resident descriptions of transformational leadership as they progressed through a leadership course. As such, the participants' descriptions offered a unique insight into their development as leaders and their understanding of leadership development.

#### ***Qualitative Studies with Senior Residents and the Interprofessional Team***

Since most narratives analyzed in this study were from junior residents, future research could conduct interviews or gather written perspectives from senior residents and further explore their transition from self-leadership to others-leadership to confirm or enhance resident descriptions of the Four I's. Additionally, a future qualitative study could partner the resident's perspectives of their leadership development with narratives from nurses, peers, and attendings. It may be that the humble resident progressing through the hierarchy of training cannot see themselves as a transformational leader. However, the nurses, peers, and attendings who observe

and evaluate them may have observations to share that point to behaviors that reflect individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence.

### ***Longitudinal Studies on Individual Effectiveness and Organizational Outcomes***

In addition, a study incorporating longitudinal tracking of individual residents throughout their careers collecting self-reflections and comments from the entire healthcare team may inform the effectiveness of current leadership training efforts. Just as the Throgmorton et al. (2016) and Fassiotto et al. (2018) leadership studies incorporated measures for prolonged interprofessional engagement and organizational impact, future studies could follow residents into practice and explore these issues. Including additional outcome measures, such as expenditures, improvement in patient's health, and co-worker well-being, would enhance insight into system factors. Since physicians are part of the community of practice charged with improving health care (Lee, 2010; Smith et al., 2012), and the population's health (NASSEM, 2020), it behooves the medical profession to engage, train, and evaluate themselves on their ability to improve expenditures, system problems, and influence the social determinants of health. Additionally, some physicians will venture into policy, advocacy, and community-based organizations. Their ability to lead effectively matters.

### **Summary**

This qualitative study utilized narrative inquiry to explore resident descriptions of transformational leadership throughout and after a year-long course. Since physicians are called to collaborate on teams (Fagin & Garelick, 2004; Hirpara & Taylor, 2020; Xyrichis & Lowton, 2008), advocate for patients, contribute to a positive workplace culture, and deliver efficient quality of care, interest in physician leadership development across their training continuum

remains high. Since physicians are routinely placed in leadership roles, and residents interact constantly with co-residents, faculty, social workers, nurses, pharmacists, and discharge planners, this study examined leadership skills development in a cohort of residents as the leadership course was integrated into their training.

Through data analysis, subthemes for individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence (Antonakis, 2012; Avolio & Bass, 1991; Bass & Riggio, 2006) emerged. These included self-awareness, others-management, simple messaging, commitment to a shared vision, and the expectation to role model, to name a few. Although significant research exists on transformational leadership as a theoretical framework, little exists on how residents utilize this leadership style. By exploring and gaining a deeper understanding of the resident leadership journey from self- to other- to systems-leadership, alignment with the expectations of the AMA (Lamb & Rajasekaran, 2021) and ACGME (2019; 2022b) surfaced. The results of this study add to the existing body of literature on transformational leadership development in graduate medical education.

The public holds physicians to the aspirational goal of optimizing health outcomes. We expect our leaders to challenge beliefs and cultural norms, to be open-minded and take responsibility for their actions, to foster organizational change, and empower others to align around a shared vision. If medicine is indeed a leadership profession intended to achieve positive outcomes, then graduate medical education leaders must commit to the dynamic and time-consuming development of their trainees. As Schmidt et al. (2018) summarized, “patients deserve doctors who understand and are motivated to master this process. If the healthcare team lacks leadership and fails in the communication, coordination, and delivery of medical care (the process), therapeutic interventions may be for naught and patient outcomes will suffer” (p. 281).

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## APPENDIX

[Received 3/7/2023 via email]

Dear Ms. Robinson,

Your request to use images of ACGME Milestones as part of your dissertation is approved. If you prefer a Word version of the tables, those can be shared.

Please let me know if you have any other questions.

Sincerely,

Laura

**Laura Edgar, EdD, CAE**

Vice President, Milestones Development



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