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# Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors

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Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School:  
The Views of Academic and Community-Based Preceptors

by

Patricia Anne Stubenberg

A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
Department of Adult, Career, and Higher Education  
College of Education  
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## **DEDICATION**

To my dad,

Robert C. Stubenberg

for his unconditional love

and preparing me to greet the world with a gentle heart.

To my daughter,

Julie,

simply,

the power of belief is remarkable.

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## **ABSTRACT**

The changing dynamics in patient care, along with the increasing role of early clinical experiences and community-based teaching models, can be a catalyst in furthering important research and training for clinical teaching excellence. Curricular challenges as well as limited scholarly work generate educational possibilities for study. Embracing a strong educational doctrine of teaching excellence in undergraduate medical education will help shape the future of health care and ultimately enhance patient care.

This grounded theory study (a) described and explained descriptions of teaching excellence among first and second year academic and community-based preceptors in the Longitudinal Clinical Experience (LCE) program at the University of South Florida (USF), Morsani College of Medicine and (b) generated theory related to the explanation of the phenomenon of clinical teaching excellence. The single site study drew upon preceptors in the Longitudinal Clinical Experience (LCE) course who were nominated for a teaching excellence award by second, third, and fourth year medical students through a voluntary, online survey. Based on these surveys, 17 academic and 17 community-based preceptors who represented someone who had gone above the student's expectations in providing an exceptional learning experience were nominated. From the list of 34, 13 eligible preceptors were invited to participate in the study and a sample of eight (four academic and four community-based preceptors) were interviewed.

The semi-structured, one-hour face-to-face interviews were conducted between April and December 2012 using an interview process. All interviews were located in the preceptor's academic, hospital, or practice setting except one, which took place in the preceptor's private residence. Interview questions were distributed to participants in preparation of the meeting. After obtaining written informed consent by the participants, interviews were tape recorded and lasted an average of 60 minutes.

Data analysis was completed using a complimentary, manual and electronic coding method to categorize and develop initial concepts and themes. Data were continuously tested with field notes, observations of the interviews and settings, and thoughts from the researcher's journal, supporting the fluid and constant comparative analysis of grounded theory. The following four thematic categories, supported by preceptors' reflective and reframing practices, emerged from the presentation of data for theory development: (a) preceptors have an awareness of, and adapt to, each student's readiness to learn; (b) preceptors demonstrate an intrinsic commitment to teaching; (c) preceptors create supportive learning environments; and (d) preceptors utilize sound pedagogical practices. As a result of an in-depth, reciprocal analysis from the selected categories and descriptions of clinical teaching excellence, a higher-order construct (theory) was generated, and suggested transforming and implementing adult learning principles and strategies into early clinical education experiences can have a positive influence on medical education and strengthen student learning.

Recommendations for practice and future research include (a) utilizing findings in curriculum planning, (b) expanding the study to increase awareness of the value of reflection and reframing in clinical teaching, (c) investigating the impact of clinical

teaching excellence on patient care practices, and (d) expanding the study to compare primary care and specialty disciplines. Professional development programs should include designing activities based on preceptors' instructional needs, sound pedagogical practices, and in compliance with continuing medical education requirements.

# **CHAPTER ONE**

## **INTRODUCTION AND OVERVIEW**

### **Background**

Descriptions of clinical teaching excellence in the first two years of undergraduate medical education have been limited, with most research conducted in traditional, clinical clerkship years (years three and four) and residency programs. Additionally, professional development and training programs that provide instruction on teaching excellence have not been fully embraced in the early clinical experience years. Many doctors are inherently good practitioners. However, some are inadequately prepared to teach and to teach with academic excellence.

MacDougall and Drummond (2005) explored how 10 experienced doctors learned to teach and suggested a model of teacher development that includes acquisition of knowledge and understanding the constraints of teaching. McLeod, Steinert, Meagher, and McLeod (2003) used an interactive, Delphi technique method to determine consensus among 13 non-clinician educators' core concepts that were most important to clinical teaching success. The resulting four broad concepts identified included (a) curriculum, (b) how adults learn, (c) helping adults learn, and (d) assessment. There are countless instructional concepts explored and identified in the clinical and non-clinical setting. Many of the findings provided frameworks for this study.

Irby, a prominent medical education researcher, has consistently pointed to the lack of studies and preparation of exemplary clinical educators in twenty-first century medical education, specifically in the community/office-based (ambulatory) setting. Historically, research conducted by medical educators has been done in the inpatient (hospital/ward) environment (Irby, Ramsey, Gillmore, & Schaad, 1991). With the increasing emphasis on clinical teaching in the outpatient, community-based setting, it is timely to promote high quality, qualitative research that addresses clinical teaching in years one and two. Skeff, Stratos, Bergen, Sampson, and Deutsch (1999) examined the value of teaching improvement programs that showed positive effects on knowledge and ability for community-based teachers in the development of teaching excellence approaches. The authors state, “Community-based teachers bring a background and experience relevant to current medical education” (p. 76) and thus, contribute important opportunities for professional development training as well as adding to the philosophical climate of teaching excellence. This study expanded on Irby’s, Skeff’s, and other medical educators’ work in furthering teaching excellence descriptions in undergraduate medical education and academic and community-based settings.

Discussions about teaching excellence are common in the higher education literature. For example, Kogan and Shea (2007) noted, “The domains of effective teaching (e.g., evaluation) have been guided by the general higher education literature” (p. 254). Eison (2008) summarized several teaching excellence investigations in higher education and reported the following: (a) each has a deep and rich history, (b) there has been considerable research examination, and (c) communication requires developing and refining techniques. Eison’s teaching excellence research in higher education has resulted



in substantive work in the faculty development area. This study used research findings from scholars in the higher education field to guide the development of emergent theory of exemplary clinical teaching descriptions.

Irby provided another example of teaching excellence and the learner-centered approach in his descriptive article of observed teaching behaviors and how clinical, case-based learning scripts dominate content-expertise-only approaches in general medicine teaching rounds (1994b). The learner-centered approach is evident in the traditional clinical years (years three and four) of medical school. However, application of high level, critical thinking and active learning and transfer to the pre-clinical, early clinical experience settings remains an undiscovered journey. The ability to define and promote teaching excellence has been elusive. Building on educational design and changing learning needs can help ensure teaching excellence remains at the forefront of medical education.

Irby's (1995) synthesis of the literature of teaching and learning in community and office-based settings identified several ways to facilitate learning, including self-directed learning, faculty development opportunities, and strengthening assessment and feedback procedures. In addition, Irby strives to provide focus on non-primary care settings (outside of internal and family medicine and pediatrics) to expand knowledge of instructional elements that can add to the value of teaching and learning. This study bridged undergraduate medical education, teaching and learning concepts, and work from medical education scholars such as Irby for building teaching excellence descriptions.

As medical schools increasingly integrate clinical experiences into the first two years to broaden exposure to real world medicine in academic and community-based

settings, the need to identify instructional strategies for promoting clinical teaching excellence should be addressed. These strategies are important tools for student success and ultimately, enhancing patient care. For example, meeting the educational needs of the preceptor and student promotes the transition of knowledge and skills between preclinical coursework in years one and two and clinical clerkships in years three and four. This transfer of knowledge and skills “maximizes opportunities for efficient learning through vertical integration” (Liaison Committee on Medical Education (LCME), 2006, p. 4). Dornan et al. (2006) provided a systematic review of early experience outcomes in clinical and community-based settings and conclude:

Early experience helps medical students socialize to their chosen profession. It helps them acquire a range of subject matter and makes their learning more real and relevant. It has potential benefits for other stakeholders, notably teachers and patients. It can influence career choices. (p. 3)

Most medical schools have a clinical experience component in years one and two that provides students an opportunity to practice and assess clinical knowledge and skills such as physical diagnosis and history taking. Many schools are moving toward a longitudinal curriculum where there is more integrated basic science coursework, clinical application, and critical thinking skills, and thus, a more seamless transition to the clinical clerkships and post-graduate training (residency).

The traditional, four-year, undergraduate medical school curriculum consists of basic science courses, such as anatomy and molecular medicine (and in most schools, clinical experiences) in years one and two, and clinical clerkships in years three and four. The first two years are designed for students to master core knowledge and skill

competencies for transition to the third and fourth year clinical clerkships. Clinical clerkships provide required and elective rotations in different medical specialties, such as pediatrics and OB/GYN, to prepare students for residencies. The four-year undergraduate curriculum develops knowledge, skills, and clinical performance to ultimately improve patient care outcomes.

Prior to the 2010-2011 integration of a new undergraduate medical education curriculum, the study site had a separate course for preclinical experiences (e.g., Longitudinal Clinical Experience [LCE]) with the broad goal of exposure to various clinical settings through shadowing and hands on experiences. The course has been popular with students by providing early experience of patient care and opportunities to work with primary care and specialty preceptors that they would not have had the chance to work with during the clerkship rotations. Billington, a second-year medical student at the study site, selected an undergraduate curriculum that had a strong preclinical program and opportunities for application of clinical skills as a supplement to physical diagnosis.

The early clinical experience program at the selected site allowed me to get to know a side of medicine I would not be able to see in the clerkships, such as radiology and other specialties outside of primary care. It was a low stress environment which reminded me of why I wanted to pursue medicine and patient care. (personal communication, March 7, 2011)

S. Specter, Associate Dean for Student Affairs at the study site, and advocate for the early clinical experience program, stated:

The early clinical experience course at the selected study site offers medical students the opportunity to practice specialized skills such as clinical diagnosis.

However, the value of the program is the student's exposure to the patient care setting and reaching a comfort level around patients; providing a strong start to the clerkship years (personal communication, February 1, 2011).

Descriptions of the undergraduate medical school program at the study site provided a framework for the study's design. A brief overview of Florida Allopathic Medical School programs and an informal review of their clinical experience opportunities in the first two years are presented in Chapter 3.

### **Statement of the Problem**

Traditional clinical education research in undergraduate medical schools has focused on years three and four (clerkships). Limited studies in the preclinical years can have implications for achievement of competencies needed to effectively transition to year three and four clinical programs, residency programs, and ultimately, patient care practices. "For students to excel in the clerkship and elective years, they need a solid clinical foundation, so it is vital to assess the clinical teaching settings in the first two years of medical school" (Carney, Ogrinc, Harwood, Schiffman, & Cochran, 2005, p. 1153). Additionally, clinical experiences provide an opportunity for students to integrate basic science and real-patient settings and "increases the drive to obtain and retain deeper theoretical knowledge" (Dahle, Brynhildsen, Fallsberg, Rundquist, & Hammar, 2002, p. 280). Research identifying descriptions of clinical teaching excellence in the first two years of medical school can add to best practices in teaching and learning in medical education, enhancing student and patient care outcomes.

## **Conceptual Framework and Grounded Theory**

Rich, exploratory data, collected through interviews with academic and community-based clinical educators, were used to contribute to an understanding of clinical teaching perspectives and generate additional avenues to explore through scientific study. The study methods included grounded theory, describe by Saldana (2009) as a “systematic methodological approach to qualitative inquiry that generates theory ‘grounded’ in the data themselves” (p. 206) through the application of specific types of codes and series of cumulative coding cycles. The importance of a grounded theory methodology is that it “provides a sense of vision, where it is that the analyst wants to go with the research” (Strauss & Corbin, 1998, p. 8), supporting creative interpretation of human behavior meaning. In this study, the researcher used grounded theory to develop a systematic, fluid, and constant comparative process of teaching excellence descriptions and connections to discovered meaning. “Grounded theory emphasizes the importance of developing an understanding of human behavior through a process of discovery and induction” (Elliott & Lazenbatt, 2005, p. 49).

Research in medical education has used mainly quantitative methods, with qualitative research gaining ground. For example, surveys have been used with students and faculty to assess their perceptions and beliefs of effective teaching and exemplary instructors. Limited, qualitative research in the preclinical teaching domain prevents robust consideration of teaching excellence strategies that could benefit student learning in the clinical environment. Qualitative inquiry “cultivates the most useful of all human capacities: the capacity to learn” (Patton, 2002, p. 1) and offers a powerful paradigm for studying human behavior in the medical education setting. Obtaining evidence-based

knowledge regarding educational research in academic medicine is challenging, yet important, for identifying instructional strategies and professional development opportunities for clinical educators.

### **Research Purpose and Questions**

The purpose of this study was to (a) describe and explain descriptions of teaching excellence among first and second year academic and community-based preceptors in the Longitudinal Clinical Experience (LCE) program at the University of South Florida (USF), Morsani College of Medicine and (b) generate theory related to the explanation of the phenomenon of clinical teaching excellence. The Morsani College of Medicine, part of the larger USF Health community, is a major academic medical center emphasizing interprofessional education, research, and clinical activities.

The LCE program's goal is to introduce students to clinical medicine during the basic science years, providing one-on-one learning experiences in academic and community-based environments. The study offered a unique and dynamic opportunity for scholarly work in the field of clinical teaching excellence in the preclinical medical education environment. The LCE program is designed to:

1. Introduce students to clinical medicine using a positive role model.
2. Develop students' understanding of the doctor-patient relationship and the relationship of the physician with other health care professionals.
3. Establish students' understanding of what is the essence of being a physician, including the fostering of professionalism.
4. Develop medical interviewing and communication skills.
5. Develop physical examination skills.

6. Enhance students' ability to apply and integrate basic science into clinical medicine.
7. Develop students' clinical knowledge base.

One primary and subsequent exploratory question guided this study.

Primary Question:

How do academic and community-based clinical preceptors in years one and two of undergraduate medical education describe teaching excellence?

Subsequent Exploratory Question:

Are there similarities or differences in the themes emerging from the descriptions of teaching excellence between academic and community-based preceptors in years one and two of undergraduate medical education?

The primary exploratory question aligned with grounded theory methodology, allowed concepts and relationships to evolve, and preceded examination of the subsequent question on themed similarities and differences in teaching settings. Emergent categories and logic helped to drive the grounded theory design, "allowing for new properties of the studied phenomenon to appear that, in turn, shape new conditions and consequences to be studied" (Charmaz, 2008, p. 155). Studying clinical teaching excellence descriptions systematically using interviews of preceptors provided a thorough understanding of the topic and directed further investigation for an emerging theory. Additionally, it was worthwhile to explore differences and/or similarities in clinical teaching excellence between first and second year medical students that helped address the research questions since the preclinical curriculum has distinct knowledge and skill divisions between the first and second years. Careful alignment of interview questions

and research questions facilitated a connection to the study's data analysis and results (see Appendix H for a list of the interview questions).

### **Importance of the Study**

“There is little substantive research on how medical educators in clinical settings view their teaching” (Taylor, Tisdell, & Gusic, 2007, p. 371). In addition, the growing emphasis on community-based (ambulatory) clinical teaching in the preclinical years provides challenges as well as opportunities to assess and influence teaching excellence and effective transition to clinical clerkship years. Identifying clinical teaching excellence practices is important in keeping pace with rapidly changing patient care practices.

The increasing use of qualitative research and grounded theory design has also captured the interest of researchers outside the traditional social science and educational domains and is increasingly being used in medical academia to help fill the gap in underutilized, rich data collection. Locke, Spirduso, and Silverman (2007) offered descriptions of assumptions from the qualitative paradigms in understanding the philosophical role of qualitative research that was an important tool in the study:

Qualitative researchers assume that there are aspects of reality that cannot be quantified. More particularly, they believe it is both possible and important to discover and understand how people make sense of what happens in their lives. That includes asking research questions about the meanings people assign to particular experiences, as well as discovering the processes through which they achieve their intentions in particular contexts. (p. 98)

As medical academia re-visits Abraham Flexner's 1910 report for reform in American medical education (Flexner, 1910), raising the stakes in clinical education,



clinical teaching began transitioning to better address educational needs and the changing health care climate. Riggs (2010) captured the essence of Flexner's re-emerging philosophy noting the importance of scientific rigor and knowledge application in patient care and recognizing the function of educational research constructs in developing the medical student graduate within the medical academic center. Riggs stated, "Education is critical to the success of academic medical centers, and by cultivating and rewarding faculty we can improve faculty development and pedagogy" (p. 1671).

### **Delimitations**

There were several defined parameters that reduced the scope of the study: (a) the study was conducted at only one institution due to time, geographical distribution of preceptors, and the qualitative design, (b) first and second year clinical experiences were studied, rather than all four years, since the LCE program only encompassed early clinical experiences, and (c) two settings, academic and community-based, were studied.

### **Limitations**

The researcher identified several possible limitations with the study. First, categorization of clinical education preceptors in the undergraduate medical school program prior to the clerkships was not easily accomplished. There were many variations of clinical preceptor roles and definitions throughout academic medicine. For example, faculty preceptor and clinical teacher were used interchangeably in the literature. The limitations for preceptor categorization for the study have been addressed through operational definitions listed in the Definition of Terms section in Chapter 1.

Second, the qualitative research design included fundamental limitations in its interpretability. The study's exploratory data collection method included eight semi-

structured interviews, presenting challenges in its generalizability to the total preceptor population. To address this issue, the researcher used a systematic, carefully structured design process, facilitated by emergent grounded theory, and evidence-based practices in qualitative research (e.g., interview pretesting, and reducing researcher bias) and emergent theory methodology (e.g., inductive, constant comparative analysis).

### **Role of the Researcher in the Study**

The researcher's background in medical education and close work with the preclinical experience program in the study created an in-depth awareness to issues in the qualitative design. "As researchers we acknowledge that we all enter research with a perspective drawn from our own unique experiences and so we articulate to the best of our ability these perspectives or biases and build a creative reflexivity into the research process" (Herr, 2005, p. 60). In order to be sensitive to any challenges and inconsistencies, avoiding the tendency to selectively look for evidence, the researcher followed qualitative research and emergent (grounded theory) guidelines addressing researcher bias. The steps included (a) self-awareness and critical reflection of data analysis, (b) journaling, (c) listening with openness, (d) constant comparative analysis, (e) member checks, and (f) peer review. These steps are covered in more detail in Chapter 3.

### **About the Researcher**

The researcher's academic and professional experience in education and the medical field have provided a unique opportunity for pursuing scholarly work in clinical teaching excellence in undergraduate medical education. An academic background in public health education and higher education, 13 years of frontline work in community

public health, and over 10 years of clinical program work in medical education contributed an understanding of global educational needs and training of medical care providers. Previous and current professional work experience, spanning the preclinical and clinical programs, had application to the study through work with medical school curriculum and students' clinical experiences in the academic and community-based settings. In addition, the researcher has identified the need to enhance the existing literature and professional development opportunities regarding teaching excellence in the preclinical medical school curriculum.

### **Organization of Remaining Chapters**

Chapter 1 presented an historical overview of the challenges and opportunities of defining descriptions of teaching excellence as they impact the clinical training of first and second year medical students, especially in ambulatory or community-based educational environments. A primary and subsequent, exploratory research question was presented in addition to the statement of the problem, purpose of the study, theoretical framework, and importance of the study's limitations.

Chapter 2 broadly identified prior studies in teaching excellence in higher education and the limited analysis of scholarly work in undergraduate medical education teaching excellence in the early clinical experience setting. Key scholars in medical education such as Abraham Flexner, David Irby, and Kelly Skeff are referenced in order to acknowledge their work. Their pioneering efforts provided leadership in medical education teaching excellence paradigms throughout the last century. Study methods and procedures are outlined in Chapter 3. Chapter 4 presented the findings of the data from the eight interviews and comparisons between the two settings (academic and

community-based), and thematic category development. A discussion of the results and study recommendations for future research and professional development is provided in Chapter 5.

### **Definition of Terms**

The following definition of terms provided operational definitions for the study.

*Academic preceptors.* Physicians who were full-time, paid (.75 – 1.0 FTE) with academic appointments at the medical school or employed at an affiliated site. They included faculty who taught in the in-patient (hospital-based), office-based/ambulatory setting, critical care, or academic medical center clinic setting.

*Active learning.* An instructional approach that “involves students doing things and thinking about things they are doing” (Bonwell & Eison, 1991).

*Ambulatory setting* (used interchangeably with *community-based setting*).

Ambulatory care refers to all types of health services provided by health care professionals on an outpatient basis, in contrast to inpatient services, and implied that the patient must travel to a location to receive services that did not require an overnight stay. Ambulatory settings include (a) clinician offices (large and small practices), (b) outpatient clinics, (c) community health centers, (d) emergency departments, (e) urgent care centers, and (f) ambulatory surgery centers [Agency for Healthcare Research and Quality (AHRQ)].

*Early experiences.* What would have traditionally been regarded as the preclinical phase, usually the first two years (early). Authentic (real, as opposed to simulated) human contact in a social or clinical context that enhanced learning of health, illness, and/or disease, and the role of the health professional (experiences) (Dornan, et al., 2006).

*Community-based preceptors.* Physicians who taught students and residents one-on-one in an office-based/ambulatory setting or inpatient (hospital-based) setting, who did not have full-time academic appointments at the medical school, and were not employed at an affiliated institution of the medical school. They included practitioners who were voluntary, partial, or un-paid FTE.

*Preceptor/Preceptorship.* "An individual teaching/learning method in which each student is assigned to a particular preceptor. . .so that she can experience day-to-day practice with a role model and resource person" (Chickerella & Lutz, 1981, p. 107). Thus, the medical student typically worked under the supervision of a preceptor.

*Vertical Integration.* A grouping of curricular content and delivery mechanisms, traversing the traditional boundaries of undergraduate, postgraduate, and continuing medical education, with the intent of enhancing the transfer of knowledge and skills between those involved in the learning/teaching process (Rosenthal, Worley, Mugford, & Stagg, 2004).

## **CHAPTER TWO**

### **REVIEW OF THE LITERATURE**

#### **Introduction**

A review of the published literature on clinical teaching excellence in the first two years of undergraduate medical education resulted in limited findings for application to the study. Using effective instructional approaches that include teaching excellence frameworks in the first two years of medical school can build important preclinical knowledge and skills competencies for transition into the third and fourth year clerkships, as well as residency training after completing the Doctor of Medicine (M.D.) or Doctor of Osteopathy (D.O.) degree. Recent research highlights the importance of transition courses, facilitating clinical skill development and preparing students for workplace learning, and reducing some of the challenges associated with clinical learning (O'Brien & Poncelet, 2010). Exposure to patient care early in undergraduate medical education provides opportunities for basic science application in the real world setting, adding to teaching excellence practices, student success, and enhanced health care.

The study's literature review included an exploration of the topics of teaching excellence in higher education, medical education, relevant studies in inter-disciplinary domains, and qualitative (grounded theory) methodology. The review was not a finite process, rather, an evolving, investigative examination, which continually refined the exploratory questions, contributing to the inductive approach of grounded theory (D'

Onofrio, 2001). Search tools such as Google Scholar and education-focused data bases such as ERIC and Education Full Text yielded many studies and reviews suggesting evidence-based methodologies, theoretical frameworks, and conceptual dimensions of exemplary teaching and learning in higher education. A review of ProQuest provided a brief examination of teaching excellence from researchers in diverse educational fields. One study conducted by Oesch (2005) examined perceptions and attitudes of community college students through previous literature and factor analysis of themes, identifying dimensions including diversity, organization, and enthusiasm as highly ranked characteristics. Parker's (2007) qualitative study of award-winning college instructors found emergent themes, such as subject knowledge and the intention to be excellent, that contributed to pedagogical excellence. Establishing descriptions of teaching excellence in higher education through previous scholarly work from the educational domain provided groundwork in examining descriptions in the early clinical experience years of medical school.

A review of the life sciences and biomedical data bases such as PubMed and CINAHL (nursing and allied health literature) identified important perceptions of teaching excellence, such as being clinically competent, promoting feedback, being a role model, and the ability to assess. The following three sites were also utilized to capture published and non-published work relative to the clinical teaching setting in medicine: (a) DR-ED, a listserv discussion group for medical educators, (b) MedEDPORTAL, an online publication service through the Association of American Medical Colleges (AAMC), and (c) Academia.edu, a social networking site for academic research.

Figure 1 shows a diagram of the literature review structure, illustrating a framework from the broader scope of teaching excellence in higher education to the specific, grounded theory investigation. The broader framework of teaching excellence was a “phenomenon of interest” (Merriam, 2009) in the evolving study design. The researcher’s academic experience in higher education and work experience in medical education helped support an interdisciplinary approach to information gathering. The process was further defined in the study’s domain of undergraduate medical education (years 1-4), the clinical program (years 3 and 4) and the preclinical program (years 1 and 2). The researcher identified a preclinical, grounded theory study to address the primary and subsequent exploratory research questions.

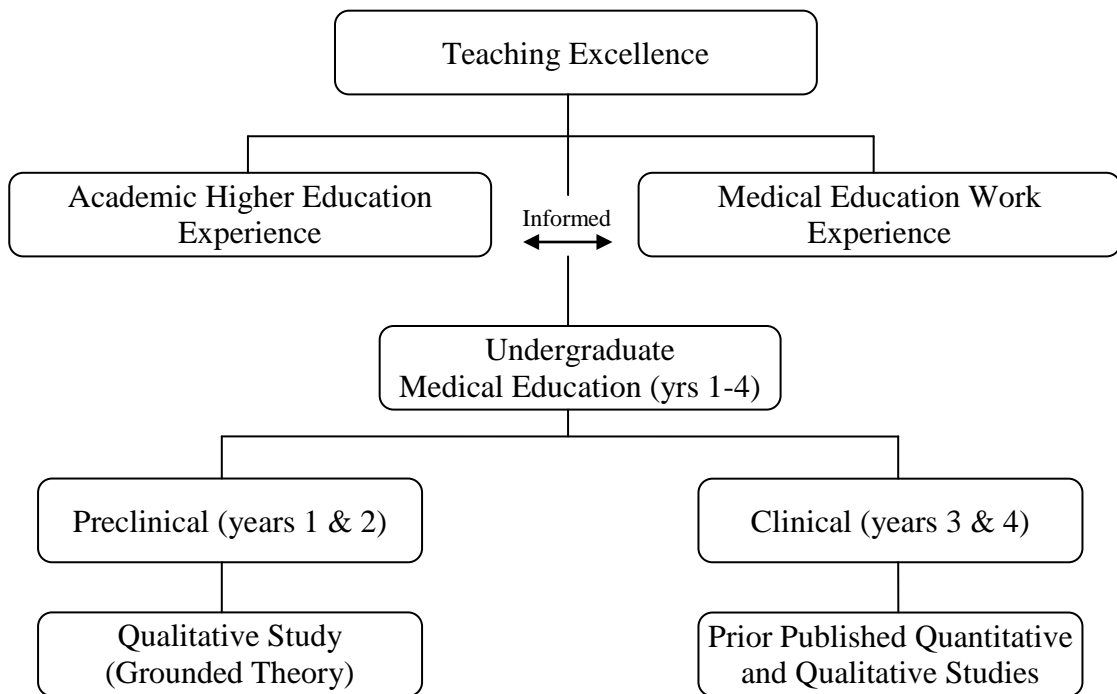


Figure 1. Diagram of literature review plan.



## **Teaching Excellence in Higher Education**

Descriptors for teaching excellence have been studied extensively in higher education, both in qualitative and quantitative research, with resulting domains bridging many disciplines. Eison's informal reviews of teaching excellence have produced documents summarizing descriptions of scholars, methodologies, and literature in education, social sciences, and professional development. The documents identified a broad scope of qualities and behaviors (e.g., passionate, competent, respectful, prepared, enthusiastic) that helped frame the study through the following domains: (a) guiding questions, (b) how teaching excellence has been studied, (c) qualities and behaviors frequently associated with teaching excellence, (d) how qualities can be developed and demonstrated, (e) concluding thoughts, and (f) references (Eison, 2008). From Eison's perspective, there has been considerable research and writing examining teaching excellence at the college and university level (J. Eison, personal communication, January 26, 2011).

Lowman (1996) conducted an informal sampling of faculty groups generating a "similar memories" list including stimulating, dynamic, enthusiastic, caring, motivating, and knowledgeable. Identifying teaching excellence characteristics "offers a place for us to begin to understand the complex human interactions that constitute teaching and learning of the highest order" (Lowman, 1996, p. 33). Exploring teaching excellence should be preceded by a rich understanding of human interactions, theoretical concepts, and instructional development prior to application of the findings to other disciplines.

Kreber's (2002) observations of teaching excellence described the construction of knowledge and skills through activities such as experimentation, performance, and

reflection. As a result, “excellent teachers are seen as those who know how to motivate their students, how to convey concepts, and how to help students overcome difficulty in their learning” (p. 9).

Chickering and Gamson’s (1991) *Seven Principles for Good Practice in Undergraduate Education* provides simple, yet effective strategies that help shape the learning environment in higher education, including undergraduate medical education. The seven principles are based on the belief that employing a few good standards, such as encouraging active learning and a commitment from teachers and students, can improve teaching and learning.

In their examination of cognitive psychology and the conditions and factors in the development of teaching excellence, Sherman, Armistead, Fowler, Barksdale, and Reif (1987) identified the following five characteristics corresponding to other researchers’ views on exemplary college instructors: (a) enthusiasm, (b) clarity, (c) preparation/organization, (d) stimulating, and (e) love of knowledge. The authors consider maturity and theory in “increasing the potential of all to reach excellence” (p. 81).

Generating a consensus on descriptors can be daunting and sometimes considered an “elusive construct” (Locke et al., 2007, p. 261), with continuing debate among educational researchers who have struggled since the turn of the century to define and measure teaching excellence attributes. Descriptors common in the literature offered comparative and reflective opportunities in this study.

For the purposes of this study, clinical teaching excellence in medical education began with a brief review of teaching excellence in higher education. It was not the intent

of the researcher to complete a detailed analysis of the literature on teaching excellence in higher education. Rather, the purpose was to guide the reader from a broad scope of substantive scholarly work, helping to define the parameters of teaching excellence in medical education for the study design. After identifying important work in the general teaching excellence area, the researcher began an analysis of scholarly work in undergraduate medical education teaching excellence in the clinical setting.

### **Teaching Excellence in Medical Education**

The medical education literature generated rich discussion on clinical teaching in undergraduate medical school curriculum. Most of the studies contribute scholarly work in the clinical clerkship years, identifying assessment methods, skill building, professionalism, competencies, and other areas of clinical training. There were valuable study findings, however limited, that suggested educationally sound evidence to guide clinical teaching opportunities in the preclinical years.

In his early examinations of medical education, Miller (1969)—a founding father of medical education—states, “the study of medical education is a new order of things” (p. 5), referencing the initial development of formal research and development (e.g., assessment) in medical education. Medical education has advanced due to many leaders shaping innovative design and best practices and impacting clinical competencies and teaching excellence. In 1961 Miller recruited Christine McGuire to lead competency assessment efforts, recognizing the importance of colleagues with professional expertise in curricular reform (Harris & Simpson, 2005). Even in their profile of McGuire, Harris and Simpson employed a methodology aligned with best research practices, conducting a review of the literature and a qualitative analysis from interviews to describe McGuire’s

exemplar work. Early work from innovators in medical education was significant in contributions to present day educational development and teaching excellence models.

Teaching excellence in undergraduate medical education is influenced by adult learning theories, models, and strategies, such as active teaching that create optimal learning environments and opportunities for better learning outcomes. Discovery of teaching excellence strategies from clinical teachers in the preclinical, academic and community-based setting contributes to the existing literature in producing optimal learning environments for medical student success and, ultimately, better patient care.

Studies of clinical teaching in the third and fourth year clerkships were considered in order to reference a longitudinal clinical teaching framework that takes the learner progressively through the training required for a medical student graduate. The framework provided a lens to view existing teaching excellence competencies well established in the literature and transitional opportunities between the preclinical and clinical curriculum.

The continuum of years one through four of medical school offered variations in course content, skills and knowledge base, curriculum development, and pedagogical principles. Successful curricular design should align the goals, competencies, and teaching strategies of the preclinical and clinical years to optimize medical graduate performance. Identifying adequate teaching paradigms that enhance the transition between the two blocks of study were important considerations in developing medical school graduates ready for twenty-first century patient care.

## **Relevant Teaching Excellence Studies in Inter-Disciplinary Domains**

Studies outside the medical education domain were relevant to the study, including findings from the veterinary, dental, and nursing fields. For example, effective teaching strategies, such as active learning and patient simulation labs, emphasized the application of educational theory and good practice to clinical teaching and the importance of preclinical instruction for student preparation in independent clinical practice (Gerzina, McLean, & Fairley, 2005).

Srinivasan et al. (2007) studied a Teaching Scholars program based on reflective practice with faculty at a medical and veterinary school. Content was guided by educational elements such as theory, perspectives, and interactive adult learning with the program rated highly among participants. A diversity of faculty participants added to the program's success, supporting inter-disciplinary involvement (medicine, veterinary), improved educational opportunities, and skill development.

Clinical teaching in dental education has been less extensively studied than medical education (Gerzina et al., 2005). However, Gerzina et al. (2005) provided relevant research that added to the existing clinical teaching excellence literature. Themed similarities and differences of perceptual conformity of clinical teaching practice between dental students and faculty were identified, using educational theory application, clinical teacher/student relationships, and important skills to extract views and perceptions of clinical teaching. Well-developed clinical teaching programs, based on best practices, innovative teaching, and adaptable to the real world environment, can effectively prepare students for patient care.

Nursing education provided a wealth of data and research on clinical teaching excellence in both the academic and community-based settings. Accordingly, there were many best practices models from nursing education that could be adapted to medical education. For example, Bartz and Srsic-Stoehler (1994) highlighted student perceptions of exemplary clinical experiences in an early program development study with clinical competence ranked as an important teaching characteristic. The key objective identified by the study group (former preceptees and preceptors) was transition to clinical practice. Early clinical teaching excellence studies as well as current research have many educational goals in common with this study, such as how an exemplary learning environment impacts the transition to real world medicine and patient care.

This study was built on many past and present educational models, including inter-disciplinary research in veterinary, dental, and nursing education conducted outside the medical school setting. Key scholars in medical education also offered successful teaching paradigms and methods for rich examination of teaching excellence descriptions and are described next. The refined literature review contributed the following broad findings relevant to the study:

1. Teaching excellence concepts from general higher education influenced instructional elements across health professions disciplines, including the medical education setting.
2. Wide variations exist in clinical teaching attributes and descriptions in all four years of undergraduate medical education.
3. Teaching excellence descriptions were limited in preclinical medical education, suggesting areas ready for further research.

## **Key Scholars in Medical Education**

Three scholars from the medical education field, two educators and one clinician, are discussed in this section presenting another framework for understanding the study. Each has contributed significant scholarly work in the field of medical education and teaching excellence.

**Abraham Flexner.** Abraham Flexner, an American educator and pioneer in medical education reform in the early 1900's, set influential standards in motion contributing to decades of curriculum changes, accreditation groundwork, and unparalleled support integrating education and medicine. Medical education was forced to change with the transformation of educational practices in order to meet the needs of knowledge and skill acquisition. As a result of Flexner's work, including the Carnegie Foundation Commissioned *1910 Report on Medical Education in the United States and Canada*, American medical schools began to mirror higher education institutions and conform to newly established medical profession standards to improve teaching and research (Flexner, 1910). Flexner's contributions were impressive, yet controversial, ultimately identifying proper channels of clinical training for students as medical schools were forced to adapt to stricter standards. Clinical training began to include educational theories and methods, laying the foundation for contributions of teaching excellence in medical education. Flexner emphasized the following reference to clinical teaching pedagogy in the 1910 Report:

On the pedagogical side, modern medicine, like all scientific teaching, is characterized by activity. The student no longer merely watches, listens, memorizes; he *does*. His own activities in the laboratory and in the clinic are the

main factors in his instruction and discipline. An education in medicine nowadays involves both learning and learning how; the student cannot effectively know, unless he knows how. (p. 53)

In Ludmerer's (2010) commentary on the Flexner Report, Flexner was described as following the lessons of another influential educational reformer, John Dewey, applying educational principles to medicine "realizing that progressive education involved concepts that were generalizable to all educational levels" (p. 195). As such, a new era of medical education, one that promoted educational excellence, philosophical, and socio-cultural approaches, emerged. In addition to the preclinical courses in biomedical sciences, the experiential, hands-on pedagogy materialized. The goal became to create a learning environment rich in skill and interaction, thus, "producing problem solvers and critical thinkers" and challenging teaching excellence in the spirit of clinical experiences (Ludmerer, 2010, p. 193). Flexner produced historical reform opportunities and charged medical schools with adapting to change, opening doors for present day scholars to continue the legacy in campaigning for academic excellence and public service (Ludmerer, 2010).

**David Irby, Ph.D.** Building on Flexner's work, David Irby, a prolific scholar in medical education, generated awareness and changes in teaching excellence strategies. Medical education's paradigm shift in the movement towards increased ambulatory training for medical students brought an increasing need for recognition of educationally sound teaching strategies and training for clinical educators. Promoting instructional interventions for teaching excellence in the real world practice environment gained strength through Irby's collaborative efforts. Cooke, Irby, O'Brien, and Shulman (2010)



studied curriculum integration in the professional education domains of medicine, nursing, law, engineering, and clergy through the lens of the Carnegie Foundation for the Advancement of Teaching. The study titled, *Educating Physicians: A Call for Reform of Medical School and Residency*, explored the role of teaching excellence in the future of medical education and advancement of global health (Cooke et al., 2010). The authors stated, “One of the major ways of promoting professional formation is to immerse trainees in a setting that embodies the highest values of the profession: excellence, collaboration, respect, and compassion” and “building a culture that values continuous learning and the scholarship of teaching and learning” (p. 32).

Irby conducted quantitative and qualitative studies over several decades of medical education reform. In a 1994 study, Irby interviewed six distinguished internal medicine clinical teachers and identified six domains of knowledge that could be applied to teaching rounds: (a) clinical knowledge of medicine, (b) patients, (c) the context of practice, (d) educational knowledge of learners, (e) general principles of teaching, and (f) case-based teaching scripts (Irby, 1994a). The results illustrate the importance of content knowledge as well as instructional skills in effective teaching and how to “target teaching to the needs of the learner” (p. 333). Irby’s work identified rich findings on teaching excellence in academic and community-based settings, foremost in the primary care practice environment.

One example of Irby’s work in grounded theory (O’Sullivan, Niehaus, Lockspeiser, & Irby, 2009) was the identification and coding of five themes related to becoming an academic doctor. The process included transcription analysis, interview debriefing, and conducting a mixed order of interview participants for question

refinement. In a survey of distinguished clinical teachers, Irby and his colleagues reported on the successes of reflective practice as a professional development strategy and achieving teaching excellence (Pinsky, Monson, & Irby, 1998). Irby has captured the importance of research using solid educational principles such as engaging learners, reflection, and developing innovative strategies to build knowledge and skills. He has been instrumental in guiding current medical school curriculum practices and ultimately changing the landscape of the clinical teaching environment. This study examined descriptions of teaching excellence reflective of Irby's work, yielding several additional layers of findings that can contribute to clinical teaching excellence in the first two years of medical education.

**Kelley Skeff , M.D., Ph.D.** An identified leader in academic medicine and medical education, Kelley Skeff has been recognized for outstanding contributions to undergraduate medical education. As a 2009 Distinguished Medical Educator Award recipient, he has had a “profound influence on the field of medical education in the United States and internationally and shaped the entire educational process, from education in the basic sciences to post-residency training” (Secor, 2009, p. 16). Training competent educators, both in the basic science and clinical years, is the core of Skeff's faculty development framework. Skeff recognized the need to develop a systematic, evidence-based educational approach in creating clinicians who would become exemplary teachers, including implementing proven strategies such as feedback, active learning, and communication skills. Many of his efforts have pioneered the way for innovative research and teaching in medical education.

The Stanford Faculty Development Center, developed in 1986 through Skeff's collaborative work with colleagues, resulted in the training of hundreds of faculty as effective teachers who adopted innovative and scientifically sound teaching strategies in medical schools around the country. In fact, his approach is considered to be unique as well as effective, for example, employing interdisciplinary practice teams to design continuous quality improvement projects (Skeff, 2005). Skeff's interdisciplinary practice contributed beneficial social science research foundations to this study since the researcher conducted interviews with participants with diverse backgrounds. Skeff has been a formidable change agent in leading twenty-first century medical education, providing the gold standard for teaching excellence and the training of medical practitioners and ultimately providing society with excellence in patient care.

### **Key Research Supporting the Study**

In addition to the key scholars described above, there are numerous other studies involving a wide range of teaching excellence characteristics in undergraduate medical education. In a Harvard Medical School curricular fragmentation article review Bell, Krupat, Fazio, Roberts, and Schwartzstein (2008) reported, "specific problems and deficits in traditional undergraduate medical education including a lack of student-centered curriculum, erosion of student's empathy, disconnected preclinical and clinical training, and lack of longitudinal experiences" (p. 567).

Qualities, characteristics, and attributes of clinical teaching are prevalent in the third and fourth year undergraduate clinical clerkships (including the outpatient setting) since this is traditionally when patient care knowledge and skill building takes place. For example, Elnicki, Kolarik, and Bardella (2003) identified four preceptor behaviors

associated with overall teaching effectiveness in the outpatient setting: (a) inspired confidence in medical skills, (b) explained decisions, (c) treated students with respect, and (d) provided a role model. Accordingly, teaching excellence behaviors' research over the last few decades has focused on incorporating evidenced-based strategies in order to meet increasing requirements for accreditation.

Taylor et al. (2007) explored teaching beliefs of pediatric clerkship faculty, suggesting better preparation of future physicians through a more conscious teaching approach. By examining clinical teaching beliefs and developing programs that can enhance core educational strategies such as reflective practice, clinical teachers will be better equipped for teaching medical students. Accordingly, reflective practice in clinical teaching is an effective approach in achieving clinical teaching excellence and relevant to the study's examination of academic and community-based teaching descriptions.

There are numerous studies examining resident (post-graduate) teaching practices, further supporting exploration of teaching excellence outside the preclinical curriculum. Longitudinal development of the medical student well past the preclinical years into the clinical and graduate medical education setting is important in fostering patient care skills. In a study conducted by Masunaga and Hitchcock (2010), ideal clinical teaching beliefs of 353 family medicine faculty and residents were examined after participants completed a teaching inventory. Descriptors including innovative, encouraging, communicates, and competent were rated highly among faculty and resident teachers. The researchers found shared views of clinical teaching between faculty and resident teachers, with important implications for professional development.

Finally, it is important to highlight an examination of the transition from preclinical to clinical training to note educational opportunities for enhancing medical student preparation. O'Brien and Poncelot (2010) discussed disconnect between the two parts of the undergraduate curriculum and how the "involvement of pre-clerkship faculty might provide a more comprehensive orientation to clinical settings and enable more explicit connections between pre-clerkship and clerkship concepts and skills" (p. 1867).

Finding studies on teaching excellence indicators in the undergraduate, preclinical education setting was challenging. In a study describing preclinical academic and community-based preceptor attributes, Lie et al. (2009) assessed teaching needs and qualities and stated, "there is a paucity of literature describing the attributes of good precepting for students in the pre-clerkship years" (p. 251). The three-year mixed-methods study, by Lie et al. supported the evolving model premise of grounded theory in this study and helped to support the researcher's examination of clinical teaching excellence descriptions in the preclinical learning environment.

### **Qualitative Research in Undergraduate Medical Education**

In qualitative research, reflections of thoughts, values, visual influences, and personal beliefs are powerful contributors to scientific inquiry and educational change. Merriam (2009), whose research has qualitatively examined adult development and learning, states, "researched focused on discovery, insight, and understanding from the perspectives of those being studied offers the greatest promise of making a difference in people's lives" (p. 1). Understanding perspectives from preceptors in the clinical teaching setting offered philosophical contributions to the field based on personal experiences and

how those experiences were interpreted. Qualitative research is becoming relevant to many studies in medicine and medical education (Cote & Turgeon, 2005).

Historically, because medical education research has been situated in the medical sciences, studies have focused on the quantitative aspects of data collection. Many articles in the literature reflect findings based on data collection through clinical trials, surveys, and questionnaires, generating an approach to discovery of new information (Fox, Henderson, & Malko-Nyhan, 2006). Qualitative research is gaining ground in the medical sciences and health professions and complements the current design method of counting numbers. Physicians and clinical and health services researchers familiar with the evidence-based medicine movement seldom considered the application of qualitative design in their studies. Although, quantitative research has dominated the field, there are increasing numbers of advocates of qualitative research to address clinical and bio-psychosocial events, as evidenced in medical journals such the *Annals of Internal Medicine* and the *British Medical Journal* (Poses & Isen, 1998).

Exploring people's beliefs, interactions, and understandings has practical application to the medical sciences. In describing opportunities to capture the "richness of people's experience in their own terms," as well as contrasting qualitative and quantitative design, Labuschagne (2003) examined the emerging trend of qualitative inquiry, stating:

For many scientists used to doing quantitative studies the whole concept of qualitative research is unclear, almost foreign, or 'airy fairy'—not 'real' research. Clinical scientists sometimes find it difficult to accept this research methodology where the generation of hypotheses often replaces the testing thereof, explanation

replaces measurement, and understanding replaces generalizability. Since qualitative research is becoming a prominent tool in medical research, it will be worthwhile to have a closer look at what it is and how it works (Abstract).

Qualitative studies relevant to teaching excellence in undergraduate and graduate clinical medical education identified areas rich with opportunity in application of qualitative investigation and the benefits to medical education. Cote and Turgeon (2005) designed a grid for critical review of qualitative articles and protocol development that contributed to the robustness of clinical teacher appraisal of research articles, noting caution on a “systematic design due to the values and challenges of qualitative research” (p. 74). Stenfors-Hayes, Hult, and Dahlgren (2011) examined interview data from 39 undergraduate clinical teachers and identified three categories of good teaching: (a) focus on students’ learning, (b) responsive to students’ content requests, and (c) conveys knowledge. Their analysis, as in many qualitative studies, contributes to identifying perspectives, beliefs, and attributes. The authors also note that their study, with a research design similar to this study, adds to the “existing research within the context of a medical university where such studies are rare” (p. 207).

Manyon et al. (2003) identified teaching attitudes and approaches of ambulatory (community-based) preceptors who scored high on a student rating of instructional styles. Study results showed descriptors such as listening to students, encouraging hands-on practice, and integrating students into the professional community were rated highly with a research design similar to this study. Design differences in the study, foremost, included the research conducted in the clinical (clerkship) years and unidentified focus on specialty settings.

## **Qualitative Research in the Community-Based Setting**

After determining a need for research in the community setting, Starr, Ferguson, Haley, and Quirk (2003) conducted a qualitative study to identify factors in clinical teachers' identity and how they viewed themselves as teachers. Results from the study identified a variety of factors with "feeling intrinsic satisfaction" as the most common theme emerging from community preceptor interviews (p. 820). Their findings offer contributions in recruitment and retention of quality teaching preceptors in light of the increasing demand and reliance on clinical education resources. Heidenreich, Lye, Simpson, and Lourich (2000) reviewed the existing literature on effective education in the ambulatory setting and identified a primary focus on characteristics and behaviors of teachers. However, there was little empirical data or information outside the internal medicine and family medicine fields.

## **The Literature Review and Grounded Theory Research**

The literature played a collaborative role in data collection and analysis, helping to refine hypotheses, data, and perspective for emerging theory. According to Merriam (2009), a constant comparative method helps to formulate a theory (grounded). For this study, comparative strategies that promoted the investigative design included the collection of findings from the literature on clinical teaching excellence, scholarly work from grounded theorist in medical education, and discovery of links between previous investigations and the researcher's knowledge and experience. Grounded theory is an effective process in developing teaching excellence descriptions through the interchange between data collection and explaining the phenomenon of interest and human behavior. Although other social science theoretical approaches, such as phenomenology, might



have been used in this research, grounded theory offered an opportunity for creative interpretation of human behavior meaning and theory generation and is becoming a more widely used concept in medical education.

Strauss and Corbin (1998), Morse (2009), and Charmaz (2008) were influential in this study's grounded theory process, as well as scholarly work from medical educators such as Harris (2003) and Kennedy and Lingard (2006). Kennedy and Lingard (2006) described grounded theory as "a research methodology designed to develop, through collection and analysis of data that are primarily (but not exclusively) qualitative, a well-integrated set of concepts that provide a theoretical explanation of a social phenomenon" (p. 103). They further stated, "the study design in grounded theory employs an iterative approach with cycles of simultaneous data collection and analysis, continually refining, expanding and challenging the emerging theory" (2006, p. 103). Additionally, dissertations such as Cook's (2010) grounded theory and nursing student attrition provided a wealth of information in capturing a framework for this study's investigative design.

In grounded theory, comparative analysis navigates throughout the investigative process, and does not simply end when the data is analyzed. "The literature review and theoretical framework serve as valuable sources of comparison and analysis. . .comparing other scholar's evidence and ideas can help illuminate theoretical categories" (Charmaz, 2009, p. 165).

### **The Literature Review: Current Findings**

A literature search in the area of clinical teaching excellence was done during the data collection and interview phase to determine current (2011-2013) scholarly work that

was not captured during the initial review. Additional focus on themes such as community-based teaching, learning styles, learning levels, and reflective practice were considered based on the evolving data and themes from the completed interviews. The review produced limited recent works in the area of clinical teaching excellence in the first two years of medical education.

There were several studies on the increasing trend in clinical teaching in the community-based environment. One study by Powell and Easton (2012) obtained student perceptions on the benefits of a well-structured, well-organized surgical module delivered in the community setting which compared favorably to surgical teaching delivered in the hospital setting. After an analysis of outcome measures data at a new community-based medical school, McGeehan, English, Shenberger, Tracy, and Smego (2013) found longitudinal clinical experiences with volunteer preceptors early in medical education can have beneficial effects on how students practice medicine with community experiences contributing positively to student's education.

Conn, Lake, McColl, Bilszta, & Woodward-Kron (2012) reported on significant advances in specific and generic domains of clinical skills acquisition and found cognitive learning theories, such as diagnostic reasoning, reflection, and deliberate practice, provide the evidence-based rigor needed to develop medical students for future professional practice. Emilia, Bloomfield, & Rotem (2012) evaluated the Study Process Questionnaire (SPQ) which measured clinical learning in medical education and found it to effectively measure different approaches (e.g., deep, surface, and strategic) to learning. Understanding students' approaches to learning helps to improve teaching and learning outcomes in the clinical setting. Recent studies extend the existing findings on

descriptions of clinical teaching excellence; however, they are limited in scope, curriculum placement, and higher level interpretations suggesting the importance of the present research.

### **Rationale for Grounded Theory Study Design**

Grounded theory is an appropriate choice of method in situations where the research questions involve social interactions and experiences (Kennedy & Lingard, 2006). In addition, the clearly articulated, qualitative approach of grounded theory is “uniquely suited to form the basis of research programmes that arise from theory grounded in the medical education experience, and then build toward implementation” (Kennedy & Lingard, 2006, p. 106).

This grounded theory study offered the researcher opportunity for reflection, creativity, and insight based on a sound educational framework to explore and identify emerging concepts and categories for thematic development in descriptions of clinical teaching excellence in the first two years of medical school. The constant comparative analysis methodology of grounded theory allowed for systematic integration of interview data, reflective notes, scholarly work, and the researcher’s academic experience in medical education in the emergent theory design. Although this grounded theory study was a “jealous lover that takes over the researcher’s waking and sleeping hours” (Bryant & Charmaz, 2007, p. 124), the approach helped to shape and illuminate an important phenomenon in clinical teaching excellence.

### **The Identified Gap in the Literature**

While previous research on teaching excellence in the medical education environment focused on instructional characteristics in the third and fourth year clinical

clerkships, this study focused on clinical instruction in the first and second year (preclinical) of the curriculum. Limiting discovery of teaching excellence in the first and second year of medical education prevents essential quality and skill development in preparation of transition to the clerkships. Therefore, the present analysis incorporated existing literature on teaching excellence in general higher education, such as community colleges and universities, undergraduate medical education curriculum, clinical clerkship years, and academic and community-based settings. Review of the literature also revealed the need to capture powerful study design through inter-disciplinary programs, qualitative methodology, and grounded theory in order to illuminate the study participants' values and environment. The researcher believed the evolving approach of discovery through the constant and fluid, comparative analysis of grounded theory, such as the literature, rich interview data analysis on teaching excellence descriptions, and emerging themes, yielded an important process in the study and theory development, as well as further investigation.

### **Summary**

A careful analysis of previous research in the area of clinical teaching excellence in the first two years of medical school helped guide further exploration of this study. Given the researcher's desire to explore this area of study and the emerging needs of clinical education in current patient care practices, the study provided a unique opportunity to contribute to the existing literature.

The non-traditional, soft-science methodology of qualitative research guided by emergent, grounded theory design is a powerful tool in identifying important teaching excellence experiences among clinical educators. For example, observing or interviewing

clinical educators in their teaching setting provided exploratory opportunities common to anthropological research and the socio-cultural aspects of human nature. Building relationships and interacting with participants contributes humanistic perspectives to study, enhancing the data gathering process. Using grounded theory as a tool to link conceptual pieces among categories, properties, and hypotheses in the study supported the researcher's goals in developing an emerging body of knowledge. Models familiar to the social and educational sciences, which direct studies through observation and interviews, have been successful in highlighting effective instructional techniques for teaching. More recently, the same instructional models, when applied to the medical education setting, help guide teaching practices for physicians (Graffam, Bowers, & Keene, 2008).

Ample evidence suggests educationally sound practices of teaching excellence in the college and higher education setting. Defining an appropriate set of attributes, characteristics, and skills for early experiences in the clinical teaching setting inspires best practices and professional development in the medical education curriculum.

## **CHAPTER THREE**

### **METHODS**

This chapter outlines the study's methodology and is divided into three sections. The first section describes the participants, how they were selected for the study, and their characteristics. The second section presents the interview protocol and the procedures for conducting the interviews. The third section describes the method of data analysis, member checking process, a brief, methodological review of Florida medical schools' early clinical experience programs, and the procedures used to enhance the study's credibility.

#### **Participants**

The target population for this study was preceptors from academic and community-based settings who were identified as exemplifying the qualities of a good physician with patients, and who exceeded expectations as a clinical instructor. The sample was drawn from first and second year academic and community-based preceptors at the University of South Florida (USF), Morsani College of Medicine. To identify exemplary clinical teachers, the researcher relied on an awards nomination process facilitated by student leaders in their second year of medical school in 2011. Second-, third-, and fourth-year medical students completed a voluntary, online awards survey that recognized exemplary clinical teachers in the first and second years of the Longitudinal Clinical Experience (LCE) course. Based on these surveys, 17 academic

and 17 community-based preceptors were nominated. The researcher was provided access to the list of nominations by the Office of Educational Affairs (OEA) at USF (see Appendix M for Letter of Support), which was used by the researcher to recruit participants to the current interview study.

From the list of 34, 14 were not eligible because they had left the LCE program. To obtain a sample of eight eligible participants (four academic and four community-based preceptors) the researcher extended invitations to 13 participants, based on a simple ranking process from the student nominations. For the five preceptors who declined participation, the reasons for not participating were lack of time, inability of

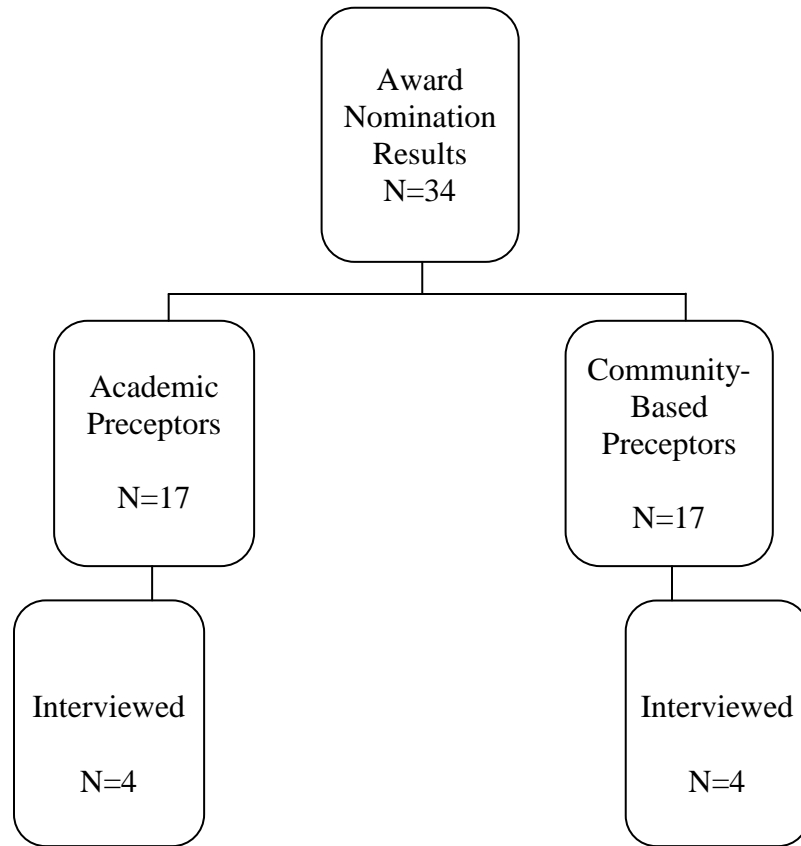


Figure 2: Nomination results tree with selected interviewees.

practice schedule to accommodate the interview, and not responding to the email or phone request. Figure 2 shows the nomination results with selected interviewees.

Of the eight participants who were interviewed, three were women and five were men, with ages ranging from late 20's to late 50's. Preceptors practiced either primary care or specialty medicine for an average of 18 years, and had served as a preceptor, on average, for nine years with 12 medical students in the LCE program since its inaugural year in 2001. Table 1 summarizes the demographic and setting descriptions of the eight interviewees.

Table 1

*Demographic and setting descriptions of the interviewees*

	Pseudonyms							
	Carin	Truman	Dean	Judy	Adelane	Trevor	Arthur	Eaton
Gender	F	M	M	F	F	M	M	M
Age	Mid 40's	Mid 40's	Late 50's	Mid 30's	Mid 40's	Mid 50's	Late 20's	Mid 40's
Years in medicine	16	17	35	8	17	26	4	18
Years as LCE preceptor	11	11	11	7	11	11	3	10
Number of LCE students	16	15	20	14	10	9	4	10
Teaching setting	Academic	Academic	Community-Based	Academic	Academic	Community-based	Community-based	Community-based
Medical discipline	Primary care	Specialist	Specialist	Specialist	Specialist	Specialist	Specialist	Specialist



## **The Interviews**

The semi-structured, one-hour face-to-face interviews were designed to elicit preceptors' views and perceptions of clinical teaching excellence. The interview questions were generated and refined using an iterative process that was informed by the literature on teaching excellence, the researcher's prior work and academic experiences, feedback from the researcher's major professor and committee, and by the student comments from the award nomination process. Probing questions were added to help clarify meanings and guide the interview questions. The interview protocol and questions are provided in Appendix H.

All interviews were conducted in the preceptor's academic, hospital, or practice setting except one, which took place in the preceptor's private residence. The interviews occurred between April and December of 2012. Confirmation emails, informed consent procedures, and copies of the interview questions were distributed to participants in preparation of the meeting. Interviews were tape recorded and lasted anywhere from 45 to 75 minutes. The average length of the interview was 60 minutes. The first step in the interview process was to obtain written informed consent from the study participants (see Appendix I for the approved IRB application from the Institutional Review Board at the University of South Florida). Interview transcripts were transcribed through a professional transcription service and returned to the researcher for analysis.

## **Field Notes**

Research field notes were completed for each interview and included key thoughts from observations and events such as, setting description, length of interview, initial coding, and interviewee quotes (see Appendix J for an example).

## Researcher's Reflective Journal

The researcher used reflective journaling throughout the data collection and analysis phase of the study. The journaling focused on theoretical, methodological, and personal issues that arose throughout the research process (see Appendix K for sample).

### Member Check

Participants were sent uncoded transcripts by email one to two weeks after each interview for review, clarification, and comments to check for accuracy of the questions and responses. A follow-up email was sent if there were no responses to the initial

Table 2

#### *Summary of the Member Check Process*

Pseudonym	Number of Transcript Pages	Date(s) Transcript Sent	How Member Check was Conducted	Feedback
Carin	36	4/25/2012 10/14/2012	Email with follow-up	Minor grammatical revisions
Truman	34	11/19/2012	Email	Minor revision - medical school name
Dean	23	11/18/2012	Email	No revisions
Judy	21	11/19/2012	Email	Minor grammatical revisions
Adelane	42	11/18/2012	Email	No revisions
Trevor	22	12/10/2012	Email	No revisions
Arthur	14	12/4/2012 12/10/2012	Email with follow-up	Minor grammatical revisions
Eaton	28	1/12/2013	Email and text message	No revisions

member check request. Only minor grammatical corrections were noted. A summary of the member check process is provided in Table 2.

### **Data Analysis**

Data analysis was completed using manual and electronic methods, providing a complimentary approach to iterative theme development. Initial coding was the first step in the analysis of manual transcripts and provided the opportunity to stay close to the data and remain creative in the exploration of emergent design. The data were highlighted and examined through the identification of words that reflect action (gerunds). The next step of focused coding provided a more directed exploratory approach and helped to conceptually categorize earlier concepts identified from initial coding. Manual coding was continuously tested with field notes, observations of the interviews and settings, and thoughts from the researcher's journal, supporting the constant comparative analysis of grounded theory. Examination of the initial concepts from each interview was used to construct primary themes, categories, and subsequent theory development (see Appendix P for a list of initial concepts). Atlas.ti<sup>®</sup> qualitative analysis software was used to electronically highlight Transcript Lines (TL) and free quotations for data comparison and to aid in grounded theory building.

### **Credibility of the Study**

Trust and credibility in the research design were facilitated by the use of an audit trail, member checking, peer review, critical self-reflection and discussions with colleagues, including the peer reviewer and major professor. Table 3 provides a summary of the study's credibility process.

Table 3

*Summary of the Study's Credibility Process*

Process	When	Who	Intended Results
Audit Trail	Throughout the writing process	Researcher	Transparency and trustworthiness
Member Check	Completion of Interview and Transcript	Researcher Interviewees	Transparency and accuracy
Peer Review	After each of three interview sets completed	PhD colleague Researcher	Consensus and consistency of data analysis
Critical Self-Reflection	Throughout the writing process	Researcher	Transparency

**A Brief Methodological Overview of Florida Allopathic Medical School Programs and their Clinical Experience Opportunities in the First Two Years**

After identifying appropriate contacts at six accredited, allopathic (M.D.) Florida medical schools, the researcher conducted a short poll and review providing a contextual reference to the literature on undergraduate clinical experiences in the first two years. Contacts were asked about available clinical experiences and the distribution of academic and community-based preceptors (see Appendix A for map):

1. University of South Florida, Morsani College of Medicine, Tampa, FL.
2. Florida State University, College of Medicine, Tallahassee, FL.
3. University of Central Florida, College of Medicine, Orlando, FL.
4. University of Florida, College of Medicine, Gainesville, FL.

5. University of Miami, Leonard M. Miller, School of Medicine, Miami, FL.
6. Florida International, Herbert Wertheim, College of Medicine, Miami, FL.

Florida allopathic schools were considered in the overview, rather than osteopathic (D.O.), since the study site was at an allopathic, undergraduate medical school program. Curriculum for both medical school philosophies is similar, with state licensing agencies and most hospitals and residency programs recognizing the degrees as equivalent. The important difference between the two types of schools of training is that osteopathic medical schools have a holistic perspective on practice of medicine based on a belief in treating the "whole patient" (mind-body-spirit) and the primacy of the musculoskeletal system in human health and the utility of osteopathic manipulative treatment (Kuther, 2011, Answer section, para. 2). Osteopathic training also has an added component of Osteopathic Principles and Practices (OPP) with attention to the musculoskeletal system.

All five schools had clinical experiences in the first two years of undergraduate medical education. However, there was variation among the descriptions and setting. Most had an integrated clinical placement component throughout the two years structured as Doctoring, Essentials of Patient Care, or Practice of Medicine courses (the study site's program is LCE). All of the programs included placement with preceptors who worked in the primary care as well as specialty setting, except one that was strictly primary care (family medicine, internal medicine, pediatrics). The informal review of the six allopathic medical schools provided a contextual overview to clinical experiences in the first two years of undergraduate medical education for comparative analysis to the study site.

## **Summary**

Chapter 3 described the methodology of the grounded theory study of teaching excellence descriptions provided by academic and community-based preceptors and the process used to select the four academic and four community-based preceptors for semi-structured, one-on-one interviews. The interview and additional data sources were also described along with the analysis of the data using grounded theory. A brief, methodological review of six Florida medical schools' early clinical experiences was presented. The analysis and presentation of data from the eight interviews are described in Chapter 4. Conclusions, implications for practice, and recommendations for future research and professional development are described in Chapter 5.

## CHAPTER FOUR

### RESULTS

#### Introduction

Chapter 4 begins with the presentation of interview data from eight preceptors in the academic and community-based settings. Illustrations of the interview setting and introduction of each interviewee highlight important observations and precede a synthesis of responses and descriptions of concepts and themes from each interview. For clarity of reading and data presentation, and in accordance with the researchers grounded theory framework, references to field notes are captured in [brackets]; for example, [April field note]. Preceptor quotes are presented with “quotes” or, if lengthy, by indented paragraph with the referenced transcript line [TL:123]. Researcher notations and observations from the interview settings use *italics*. Reflections from the researcher are noted as (Researcher’s Journal). Verbal characteristics from the interview transcripts that detract from the presentation of data, such as “you know,” are minimized. Including “. . .” in the quotes indicates an emphasis and/or pause from the interviewee’s thoughts which the researcher considers significant in interpretation of the data.

Following a biographical picture of each preceptor, a synthesis of interview question responses and researcher observations across all eight interviews is presented. The emerging themes from the manual and electronic data analysis method, descriptions of similarities and differences of interview findings, and the thematic category

descriptions are presented. The data synthesis, through grounded theory, addressed the primary question, How do academic and community-based clinical preceptors in years one and two of undergraduate medical education describe teaching excellence? and the subsequent exploratory question, Are there similarities or differences in the themes emerging from the descriptions of teaching excellence between academic and community-based preceptors in years one and two of undergraduate medical education? The presentation of interview data is summarized in Figure 3.

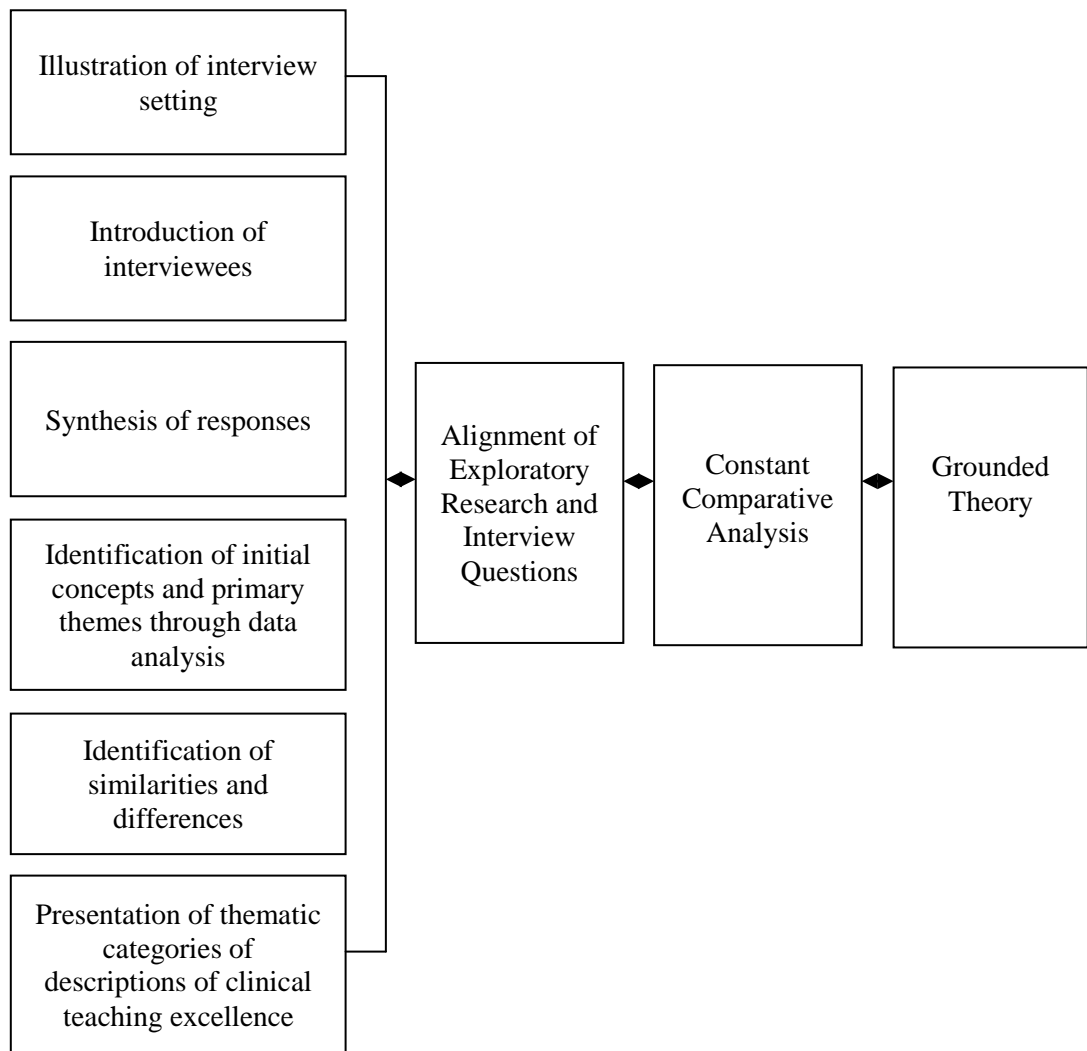


Figure 3. Presentation of Interview Data Summary



## **Carin: Academic, Primary Care Physician**

**Introduction of Carin.** Carin, a female practitioner in her mid-40's, works in a primary care setting in an academic medical center. She is a medical doctor of both primary care and a surgical subspecialty and has spent over 20 years in academic, clinical teaching with third and fourth year medical students, residents, and a continuous cycle of first and second year LCE students since its inaugural year in 2001. Carin was one of four academic preceptors identified from the 34 nominees to be interviewed.

**Carin: A synthesis of responses.** The interview began on time with a first impression of an *academically accommodating* environment. It was interesting to experience the academic LCE office setting again and know that social and behavioral science (educational) research was a welcomed addition to medical academia. Carin was *flattered* to provide her views on clinical teaching excellence. There was a comfortable discussion pace and enjoyable dialogue while listening to many stories of teaching successes and challenges with students from the LCE program. Of the ten interview questions in the protocol, nine were included with discussion on each. One question, "Now tell me about your most wonderful experience as a LCE preceptor," was not included in consideration of time and adjustments to the question flow. Given this was the first interview meeting, the researcher believes the minor adjustments were of minimal disruption to the data collection and analysis. It is noteworthy that Carin spent considerable time and careful thought in responding to all questions, attesting to identified attributes of clinical teaching excellence.

There were several key elements identified, holistically, through the initial note taking and transcript coding and prior to the reflective documentation of data through

memo-writing: (a) teaching to the appropriate level of the learner, (b) preventing burn-out, (c) connecting to the students, and (d) understanding learning and personality styles [April field notes]. The elements helped to form the foundation of further analysis, identification of categories, and emerging theory from Carin's interview data.

The first interview question, "How would you describe clinical teaching excellence in working one-on-one with first and/or second year undergraduate medical education students?" generated a discussion of successes and challenges in Carin's clinical teaching with thoughtful reflection illustrated in her statement, "it is what makes me happy at the end of the day after teaching that is important." The statement provided opportunity for reflection several times during the analysis (Researcher's Journal).

When asked about specific attributes and/or behaviors which distinguish excellence in clinical teaching from satisfactory performance, Carin chose three descriptors: (a) enthusiastic, (b) interactive, and (c) adaptive. In broadly comparing these to other findings in clinical teaching studies, enthusiasm was an important attribute found in undergraduate medical education (years 1-4). Interactive and adaptive align with best practices in higher education teaching methods (e.g., Chickering and Gamson's Seven Principles) and were woven throughout the category and theme building in the interview data.

Carin applied the attributes to her role as an academic clinical teacher by describing how topics can be adapted for and connected to the interest of the learner. Her style of teaching became a developed skill over many years, first as a resident, a junior faculty, and now an exemplar faculty clinical teacher. She found the traditional style of clinical teaching (e.g., non-patient-centered) was not optimizing learning opportunities

for the student. Instead, she incorporated concepts such as enhancing patient interaction, demonstrating the fun of clinical medicine, and bringing clinical information to the learner's level of understanding into the framework of critical thinking and the traditional Socratic approach (e.g., asking probing questions). Teaching to the student's level is important; however, Carin believed that "pushing them to advance their level of understanding is also an important attribute in clinical teaching." Carin found rewards in student's abilities in perfecting these skills.

And suddenly he was then able to grasp it. And as soon as I said, no, look at it from the perspective of what medical conditions might a patient have that you are going to tell me, you might have issues about wound healing? And suddenly he's like, well like diabetes? I said yes, absolutely. You know, it would have [sic]. . . So then he wanted to go on to the molecular basis of why diabetics have problems with wound healing, I'm like that's great and I'm glad you want to know that, but. . . And I kind of rewarded him for that but I said you know, let me give you an example of somebody who had a significant impact from being an undiagnosed poorly-controlled diabetic and an infectious process and how that was able to completely clear once her diabetes got under control. And so then suddenly he became much more excited and engaged and not so freaked out about the blood that was all around him. And, so trying to put it back into what their area of interest or what their perceived area of interest is. Which then, I mean I guess with that, really you know thinking about it, perhaps then relates better to their learning style. [TL:300]

Of significance in the overall learning environment were Carin's efforts to improve primary care by ensuring women having access to well-woman exams as part of their health care. The attribute Carin considered important in her role as a primary care preceptor in the academic setting was an understanding of the whole patient (comprehensive care) including the promotion of physical and mental health as well as diagnosis and treatment. She is dedicated to improving women's health through a holistic philosophy and investing in the education of our future health care workforce.

The opportunity for reflection of similarities and differences between the current LCE program and Carin's own medical school training yielded several points of interest. For example, one of the differences was minimal one-on-one longitudinal clinical learning opportunities at Carin's medical school with most of her clinical training taking place in a group setting at the patient bedside. LCE students are placed one-on-one with preceptors at the hospital or ambulatory site and are usually the only student at the bedside, with individual attention from the preceptor. In contrast to Carin's medical education, LCE students have maximum one-on-one opportunities. Another difference, except for a short summer clinical placement at the end of year one which was referred to as "memorable," was that patient care experiences in Carin's preclinical curriculum were placed within the curriculum in a course called Clinical Medicine I and II. The LCE program (prior to the new curriculum) was a part of the year one and two curricula, however, was assigned its own course number and had a certain level of programmatic autonomy. As a result of the group learning setting in Carin's preclinical experience where patient care was delivered with more than one student at the bedside, there were limited numbers of student-patient exposures during the day.

At this stage, a question probe was asked for Carin to describe one positive and one negative experience in reflecting on her own medical school clinical training. She described the limited patient contact as a negative experience during her training and eagerly described the opportunity for LCE students to see several patients in a half day of clinic as a positive learning experience. Seeing multiple patient cases each day during LCE was uniformly heard from students, reinforcing Carin's observation that her medical training of limited patient contact was a negative experience. Even though Carin's patient care experiences were limited in her medical school training, she had the opportunity to have a notable summer clinical experience in neurology and take care of individual patients. She correlated aspects of her clinical training to LCE including, admitting a patient to the hospital and presenting a case to the attending physician. The opportunity for students to see several patients during the LCE clinical day was important to Carin in creating an environment of clinical teaching excellence.

To further explore descriptions of clinical teaching excellence, it was important to look at the differences and similarities between first and second year medical students through the lens of the LCE program. Undergraduate medical education includes the four years of medical school after completion of an undergraduate program of three to four years such as a bachelor degree in biology from a higher education institution. Graduate school in medical education represents residency or the training of medical doctors after they receive their M.D. or D.O. degree. Thus, undergraduate programs in medical education are academically different than general education in colleges and universities. The question on differences and similarities between first and second year LCE medical students applies to the preclinical program of the four-year program. Academic

challenges such as, maturity and experience, should be considered in the pedagogical elements of clinical teaching and may offer opportunities in this study for professional development and further research.

Overall, Carin's response to teaching both levels was positive. In fact, having a mixture of first and second year students was beneficial in providing several teaching options and opportunities for student's knowledge and skill advancement. She stated, "Having a first year student provides you a blank slate for teaching. . . This is the first time they are putting on their white coat and coming into a clinical setting." Logistically, the LCE program is arranged where the first year student is randomly assigned to a preceptor and the second year student has the option to select a discipline of choice. Carin considered this an important program design feature acknowledging, "If I was stuck with having only randomly assigned students every year, someone who might have no interest in what I'm doing, I would have gotten burned out."

Many of the challenges were similar for both groups. For example, Carin had to develop her own style of teaching at each level to maximize understanding of student's learning and personality styles. Much of this was done through an examination of her own abilities in teaching and how she could adapt through professional development training such as completing teaching and personality inventories. Carin's description of her challenges in clinical teaching were insightful, producing much discussion on the logistics of the LCE program and how to teach students who were not interested in her discipline or had cultural barriers in patient care. For example, medical students from other countries can experience anxiety in seeing a naked patient for the first time. Carin described important teaching skills such as helping the student improve student-patient

interaction and communication and how this helped the student overcome shyness in patient care.

Another skill in overcoming clinical teaching challenges was adapting to a student's level of involvement and commitment to her profession. It was necessary for Carin to acknowledge her own limitations and the limitations of students' interest and encourage them to follow colleagues who could offer learning opportunities. Arranging for the student to be in a closely related setting of interest, such as the operating room if interested in a surgery specialty, rather than primary care created a "win-win" situation for both the student and preceptor. LCE affords preceptors the time to make adjustments, which in turn contributes to an environment of teaching excellence. She states, "I always try and stress for them, don't tell me you want to go into this (primary care field) just to think that's going to make me happy, you know? I want to know what you're really interested in and then I'll correlate this field to what your interest is." In her role as a LCE preceptor, Carin saw the challenges as an opportunity to enhance the learning environment as well as her skills and knowledge on clinical teaching.

One of Carin's memorable (positive) medical school experiences took place in a short summer clinical program at the end of her first year of undergraduate training. The setting was in the neurology department at a veteran's hospital with opportunity to do teaching service rounds and patient case presentations. After admitting patients with the attending, Carin got to examine and present the patients to the attending and to the rest of the team. The one-on-one patient contact and learning environment was important in Carin's reflection of her own medical education and both different and similar to the LCE program. She described her experience with LCE students and stated, "They (LCE

students) seemed to all uniformly respond, they're like wow, I can't believe we could see that many patients in a day." Seeing limited numbers of patients in Carin's clinical training during Clinical Medicine I and II was a negative event and one that prompted her reflection of the realities of patient care in the clinical setting and making this into a learning opportunity for students.

Finally, Carin's responses to the close of the interview questions captured a few more important points which reinforced concepts and themes previously discovered in discussion. When asked to describe essential attributes of teaching excellence important in designing professional development programs and in preparing preceptors for their role in LCE, Carin mentioned the importance of self-awareness in adapting to and connecting with the LCE student's learning level. Professional development programs on learning and personality types were an important training tool in overcoming teaching challenges. For example, at a leadership institute's professional development training on learning styles, Carin discovered that student testing, completed just after being admitted to medical school, helped determine their level of orientation to detail and readiness to learn, enhancing her awareness of the student's level of learning in LCE clinical experiences. She stated:

I think it's important to every so often sit back and analyze what it is you're doing. If you're not happy doing it you should either...either you go figure out what's going to make you happy and that may be... stop being a preceptor or change the way you're doing it. [TL:620, 624]

Observations from Carin's interview setting were simultaneously reviewed with the transcripts, field notes, researcher's journal and researcher perspectives and aligned



with grounded theory's constant comparative analysis. As a result of the interview analysis, the primary themes that emerged from Carin's interview were (a) being adaptable in the teaching environment, (b) having an awareness of learning styles, and (c) making learning connections and will be described below.

**Carin: Being adaptable in the teaching environment, having an awareness of learning styles, making learning connections.**

*Being adaptable in the teaching environment.* In the researcher's view, adaptation is the ability to understand and actively adjust to one's environment. In the clinical learning environment adaptation is a key factor in a successful clinical experience and includes adjusting teaching expectations of the preceptor as well as the student and determining appropriate learning levels. Carin viewed adapting as "having the ability to sense when something is not working and understanding how it should work" and considered this an important attribute for preceptors. Adapting and adjusting teaching and learning expectations and bringing lessons to the appropriate student level is an identified adult learning tool and evident in Carin's teaching. She stated, "You can't do the same thing and expect everybody to learn it and understand it. . .when I was a junior faculty, part of it is the way I was trained so this must be the way you do it." It became important for Carin to sense the need to adapt if something wasn't working and to "know how and when to correlate the field to what the student is really interested in."

With a continuous cycle of first and second year medical students, Carin had to demonstrate her adaptation of clinical teaching at many levels. First year students provided different challenges than the second year students, including maturity level, competencies, and communication skills. LCE rotations ranging from a few months to

most of an academic year meant clinical teaching skills and knowledge needed to be adjusted. Carin provided insight into adapting to students during a rotation.

So the way I talk to them on their first day of the rotation I would hope is not the same way that I'm talking to them the last day of the rotation. And what I'm getting them involved with you know throughout the rotation is continuing to increase. The nice thing about LCE is, I had the exposure to this student for several months and so I can get to know the student and know what they've seen throughout the several months. [TL:73]

Adjusting to the learning differences and being adaptable to teaching changes during LCE rotations was challenging, yet rewarding, for Carin.

*Having an awareness of learning styles.* Learning styles, in the researcher's observation, is how a learner understands and processes information, and is another theme discovered in Carin's clinical teaching environment. Learning and personality styles were discussed concurrently in the interview in terms of LCE rotations and professional development. Carin reflected on her opportunities to examine her own beliefs on teaching as well as opportunities to enhance her knowledge and skills through professional development programs. She believed it was important to "design faculty development programs on learning styles which could enhance the LCE experience." In Carin's role as educator it was evident that an understanding of personality and learning styles and training opportunities impacted the success of her students and the rewards of clinical teaching. She was able to understand why there were some students with whom she could not connect with and that it was a "function of they had a different learning and personality style than my personality."

In medical school you train. . . We don't train or. . . haven't trained people to be teachers, we train people to be doctors and some of us happen to teach. And, so trying to figure out, I mean my first really exposure to the whole concept of. . . wow, there's no wonder every so often I get really annoyed by some student, on the rotation who in general is going into some exceedingly detailed oriented sub specialty and their questions drive me batty, because. . . I mean, not that I'm not detail oriented, I'm a surgeon, got to be detail oriented, but you know, I'm a surgeon, this woman needs to be cut. When I was in the Leadership Institute program they talked about different personality styles and kind of the light bulb suddenly went off, the students that I connected well with and the students that were bright students but just couldn't connect with, and that it was a function of they had a different learning and personality style from my personality. Making that awareness and trying to understand let me rephrase the question in a manner that may help students understand the question better. [TL:137, 141, 153]

There were several examples of learning and personality styles applications to Carin's clinical teaching setting including, application to faculty/professional development, communication skills, teaching challenges, and patient interaction. She emphasized how important the on-campus leadership institute training was in helping her understand learning and personality styles and generational and cultural differences stating:

It was really one of the most fascinating courses and probably gave me far more insight. They talked about different personality types and kind of the light bulb suddenly went off on the students that I connected well with and the students that

you know were bright students but just couldn't connect with, and that it was a function of they had a different learning and personality style from my own.

[TL:137]

Having an awareness of learning and personality styles enhanced communication between Carin and her students, helping her to “rephrase questions in a manner that would help the student understand better.”

***Making learning connections.*** Having the ability to connect to students emerged as the third primary theme in Carin's description of an environment of clinical teaching excellence. Identifying how to connect to and learn about the student and allowing time for the student to connect to you as a preceptor is important in clinical experience success. Students often indirectly, through patient interaction, developed an understanding of Carin's role as a preceptor. She stated, “They're oftentimes learning about me from the patients. . .the patient might know who I am as a person.” From a patient care perspective, this represents establishing learning relationships between the preceptor and the patient, the patient and the student, and student and the preceptor building clinical knowledge and skills and human interaction skills for optimal patient care.

Carin's reflection on her basic science and summer clinical exposure in medical school training provided an example of enhancing the clinical learning environment for the student. The LCE program's goal of application of basic science to clinical medicine was brought to life through Carin's reflection of her early clinical experiences. She was able to connect to the LCE student through these experiences demonstrating that you could “actually apply (e.g., pathophysiology) what you'd learned in the first year.”

Connecting in Carin’s clinical learning environment also revealed human interaction, understanding of human behavior and making learning personal, representing basic human development needs, such as respecting the student and being an approachable mentor. Carin stated:

You have got to realize that you can’t make the students like you. You’ve got to make sure you can connect to the students as to who they are. And that’s one of the things about LCE that most of the time, over the course of the LCE, I have a chance to learn more about the student. They certainly learn about me. They are often times learning about me from the patients. [TL:632]

Figure 4 illustrates initial concepts and primary themes from Carin’s responses.

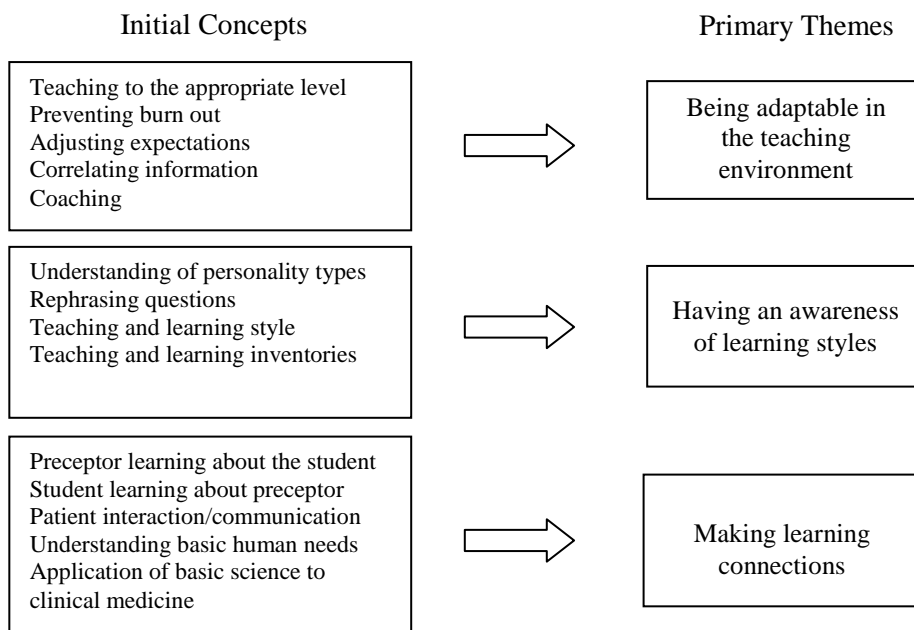


Figure 4. Initial Concepts and Primary Themes from Carin’s Responses

## **Truman: Academic, Specialty Physician**

**Introduction of Truman.** Truman practices specialty medicine in a large metropolitan academic teaching center with a primary affiliation with the study site since 1998. He has been a preceptor in the LCE program since 2001 mentoring one to two students per year, primarily in the hospital setting. He graduated from a California medical school, completed his residency at a county hospital, and a fellowship in Florida. During his time in undergraduate medical school, there was a national focus on training more primary care doctors in what he calls a “gatekeeper phenomenon” even offsetting tuition for graduates practicing in the discipline. However, Truman recognized the opportunities he had by practicing in a specialty area. Truman was one of four academic preceptors identified from the 34 nominees to be interviewed.

**Truman: A synthesis of responses.** Truman’s academic environment was enjoyable to observe and energized the researcher for the interview on clinical teaching excellence. The interview was part of the second selection in the data collection process and the first in a series of four scheduled for the researcher’s travel to Florida during October 2012. After a brief dialogue about the LCE program and thanking Truman for his time, the researcher began the discussion with two demographic questions followed by the main study questions.

The discussion on clinical teaching excellence, working one-on-one with first and/or second year undergraduate medical education students, began with dialogue about the challenges and successes in third year rotations in Truman’s specialty in undergraduate medical school. He commented on the value of his specialty for all

undergraduate medical students including the LCE students and the importance of students experiencing the physician's practice and "mechanics of an operation [surgery]."

We get called in during those rotations and the students come down with us to the emergency room and see somebody with a more acute presentation and your experience in medical school is a referential one. It's certain experiences or presentations that you saw, those are the things that stick in your mind, it helps you remember what those. . . what those medical conditions are. I relied on much more of that than just reading in a book and trying to hold onto that material that you'd soak up and spit back out on a test, that was. . . you have to bring all of those textbooks and all that information to kind of life, to be able to. . . to apply some of that medical. [TL:137]

There was lengthy discussion on essential clinical teaching attributes in Truman's academic setting. Truman believes there is value in the LCE student's exposure to the specialty setting in addition to the primary care setting. Few medical schools have preclinical programs where students are assigned beyond primary care experiences. For example, in LCE students are assigned to disciplines such as neurosurgery, cardiology, and pediatric critical care in addition to internal medicine, family practice, and general pediatrics. Both primary care and specialty setting experiences are part of the broad LCE program's goal, with students experiencing the real world clinical environment, interacting with the office staff and ancillary health care workers (e.g., nurses, physical therapists), and having exposure to the business side of medicine. Truman states, "Having exposure to only primary care can show narrow sidedness where the practitioner can be prone to miss things." For example, Truman referenced specialists who can recognize life

threatening problems such as back pain which could be a ruptured aneurism and an ear, nose, throat practitioner diagnosing a neck mass.” From the clinical education standpoint, there is value in exposing students to specialty practices in addition to learning basic clinical skills that are generally part of the first and second year undergraduate medical education.

Truman identified engaging the learner and providing undivided attention as important teaching excellence concepts in the learning environment. Similarly, he defines two preceptor attitudes and/or behaviors that best or uniquely distinguish excellence in clinical teaching from satisfactory or average performance as the willingness to give time to students and letting students engage in learning, listening and answering questions. Focused teaching time and the ability to engage the learner aligns with feedback from other interviews in the study as well as the literature on sound pedagogical practices. He provides an example of a fourth year medical student, new to an elective rotation, needing a focused patient case status during a surgical procedure and the importance of the preceptor’s undivided attention in the process.

Truman also acknowledged his challenge as a clinical teacher was not being able to give LCE students individual attention and enough patient care time for clinical knowledge building. His most wonderful experience as a LCE preceptor is when he discovers his teaching is valued (validated) by the student. He stated, “I think that it means that you’ve put enough time into it that people thought that...that their experience with you was. . .valuable.” Creating an interesting learning environment where students eagerly participate in the clinical experience is important to Truman. Time and attention



in his teaching efforts he said creates a “socialization” effect on students where there is enculturation into the learning environment of his specialty.

You have to be able to talk. You have to talk to other doctors, you have to talk to nurses, you’ve got to talk to other staff that you’re dealing with. You can’t really teach that in medical school. I mean if you’re teaching somebody how to interact and how to... have compassion and some empathy and understand people and kind of where they’re coming from and how to explain things in kind of standard terms, in laymen’s terms, for them so they can understand their medical problems and can be part of the medical decision making. [TL:309]

This process engages the student (and preceptor) thus reciprocating levels of time and interest, and enhancing clinical teaching effectiveness.

Truman reflected on the similarities and differences between the current LCE program and his own medical school training. As in other interviews, Truman stated he had no similar formal program in his first and second year of medical education. His only clinical experience was a one-time, first year community hospital experience in the fall where students practiced interviewing skills. He called this an “artificial scenario.” However, he also said it was a fantastic experience because he was able to meet with practitioners in the area in which he wanted to specialize. The value of the LCE program is providing students the opportunity to practice their basic clinical skills as well as experience a specialty they are interested in pursuing (or in many cases rule out specialties they are not interested in pursuing).

Truman’s description of a negative experience in his own medical school training was when clinicians did not show up for lectures. Many medical schools include

opportunities in the preclinical curriculum where clinical faculty is responsible for lectures that supplement basic science presentations by the Ph.D. research faculty. The clinical presentations provide clinical application of basic science/book knowledge coursework and help make learning connections to patient case scenarios and real world medicine. Truman stated, “They had seemed to put the material in just a better perspective, easier to grasp, you know. They kind of made that physiology, pathophysiology come to life a little bit more.” For example, a medical geneticist who specializes in the diagnosis and management of hereditary disorders, may teach clinical application in an undergraduate biochemistry course where topics such as autosomal dominant and recessive inheritance and developmental genetics are covered. Truman provided an example in a physiology course where a nephrologist did not show up to lecture on renal physiology, “You really wanted to hear what that person does and what they had to say about the application of renal physiology.” Teaching clinically relevant material in preclinical coursework provided another level of application for student learning and was important to Truman in his own training.

In comparing clinical teaching between first and second year medical students, Truman emphasized maturity and interest levels. He noted each class had students with different learning styles, knowledge and skill levels, and different levels of assimilation ability, however, each caught on quickly to the learning.

Overall, he indicated there were no big differences. His advice to other physicians who might be contemplating becoming a preceptor underscored his comments on time and undivided attention to teaching and to each student’s learning level. This information is important in training new preceptors through professional development programs and

helps prepare the new preceptor for his/her role in teaching. Additional training topics he believes are essential include balancing a busy practice with home life, research and teaching, what life is like for preceptors outside of medical practice, and providing an orientation to the expectations of the preceptor's role.

Truman's interview captured elements of clinical teaching excellence which reinforced the analysis from other interviews. The emerging theme of utilizing emotional activation was identified from the interview and will be explored further.

**Truman: Utilizing emotional activation.**

*Utilizing emotional activation.* Truman consistently described the importance of finding focused clinical teaching time and the ability to engage the student in the learning experience in his clinical teaching environment. The researcher borrows a term called *emotional activation* from research by Sutkin, Wagner, Harris and Schiffer (2008) which identifies a non-cognitive characteristic of effective clinical teachers where a good teacher "has the ability to excite, arouse, and activate his or her students" (p. 453). Utilizing emotional activation was identified as a primary theme that emerged from Truman's interview.

Truman acknowledges some students are more interested in learning than others, and states, "You want to give them every benefit of awarding them for their participation and inquisitiveness." His illustrations of this emerging category essentially defined themselves. For example, in describing clinical teaching excellence in the LCE program Truman references his role as a specialist and being "clinically busy" and as a teacher has to be open to the student's experience, listen to them, give them time, and give them undivided attention. He offered this advice to physicians considering becoming a

preceptor. He enjoys the students that are interested “at whatever level they are able to. . . scrub into a case, maybe let them do some suturing, some cutting. . .certainly the LCE students have enjoyed that. . .kind of being able to be part of the mechanics of an operation.”

Truman offered many observations of the LCE student in his specialty practice environment. Student interest in learning was abundantly discussed illustrating his recognition of engagement and emotional activation. “If they are willing to learn and be participatory you’ve got to put enough time into trying to teach them, show your interest in them and their development. . .teach them how you angle the needle, how you tie the knots. . .these are good experiences.” Truman’s clinical role is typical of the busy academic practitioner in a teaching hospital. Similar to the community-based teaching setting, the hospital setting can be a hectic environment in balancing patient care and teaching. Reilly (2007) interprets this as a “group tango made doubly difficult by conditions on the dance floor: in today’s hurly-burly hospital wards and clinics, getting the work done-taking care of patients-must take priority over teaching” (p. 706) and asks, under such conditions, how do clinical teachers activate learners?

The researcher views Truman’s role as a facilitator of learning. His initiative in providing undivided attention and time is, as he defines, a simple concept but not necessarily easily practiced.

I think also, for me, a willingness to slow down enough to engage a student, let them scrub into an operation, show them how to scrub, show them how to hold an instrument. So not only give them your undivided attention, but give them actually your time and. . .and to try to proctor them a little bit in terms of their

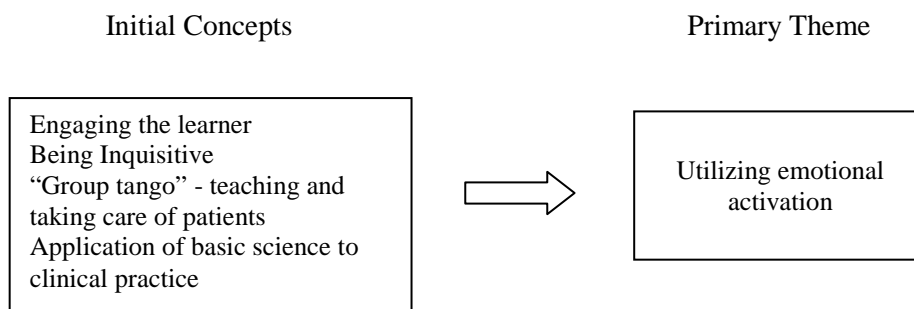
performance. Certainly answering their questions, but the questions kind of come as they. . .as they gain experience, so you kind of have to be just willing to listen to them and engage them. [TL:219]

LCE students on rounds with Truman see experiences that align with the goal of the program and which “stick in their mind, helping them to remember what the medical conditions are and bring textbook information to life.” Seeing real patients allows students to bring the basic sciences and textbook knowledge to clinical practice. They think about the differential diagnosis and directing questions for clinical answers. Truman quickly reflected on the value of providing these experiences to students.

That we’re evolving towards an age when residencies and fellowships, training programs are trying to shorten their curriculum as much as possible, and students have to make very early decisions when they’re going into specific programs and how else are they going to be able to make those decisions without some experience unless they have actually been in some of these various clinical scenarios? And that’s more than just going through their core rotations in the third. . .third year. So I think it’s valuable for. . .for students to see how physicians practice, see how the information that they’re supposed to be learning in the first and second year are going to be applicable to their practice of medicine, to get a . . .just a feel for how doctors practice in various areas, whether those areas are of any interest to them, or not of interest to them if they had some inclinations. I’m not sure what the percentage of students is who. . .who have much experience with physicians prior to getting into medical school. There’s more and more

required with or expected with shadowing those experiences, but many of the students don't have any experience. [TL:37]

The role of the physician in teaching involves more than building knowledge and skills such as teaching how to suture or reading a case diagnosis. The effective clinical teacher also facilitates the non-cognitive elements of learning such as creating an environment conducive to learning and generating emotional commitment through the preceptor's own passion for medicine. Truman consistently illustrated this commitment in his role as a preceptor. Figure 5 illustrates initial concepts and the primary theme from Truman's responses.



*Figure 5.* Initial Concepts and Primary Theme from Truman's Responses

### **Dean: Community-Based, Specialty Physician**

**Introduction of Dean.** Dean is a community-based specialist with a subspecialty discipline who oversees a private medical practice and research institute just outside a large metropolitan area. He has worked as a full time and adjunct faculty member at the study site over the last twenty years, training residents, teaching in the LCE program, consulting, and lecturing. Dean has been a preceptor in the LCE program since its

inaugural year in 2001, mentoring about twenty students. He was one of four community-based preceptors identified from the 34 nominees to be interviewed and one of two nominees who won the LCE clinical teaching excellence award. Because Dean was out of the country at the time of the first interview selection he was interviewed during the second set October, 2012.

He has continually embraced his role as a dynamic, engaged, and enthusiastic preceptor [October field notes], and remembers the name of his first student and the first evaluation he completed for LCE.

**Dean: A synthesis of responses.** A synthesis of Dean's responses began with the researcher's global observation of his precepting role in the LCE program, his passion for medicine and patient care, and ability to embrace teaching and learning. There was immediate energy once the discussion on clinical teaching began. As characteristic of his precepting role, Dean had prepared answers to the interview questions from the confirmation email and had the copy printed and ready for discussion. It was obvious he had spent considerable time reviewing and preparing for the interview [November field notes].

The three attributes dynamic, engaged, and enthusiastic, identified at the onset of the interview by the researcher highlighted the global observation [October field notes]. Dean was dynamic in personality, fully engaged as a teacher and someone who valued life-long learning. His enthusiasm radiated from the moment he walked into the interview. In describing clinical teaching excellence in working one-on-one with first and/or second year undergraduate medical education students Dean states, "It is the ability of a preceptor to share skills, values and knowledge. . .the art of imparting

knowledge, skill, attitude and perception. . .it is beyond being a physician, think very deeply [sic], experiences to share.” Dean’s description captures attributes identified by the researcher. He exemplifies the intrinsic commitment of the preceptor role and practices what he teaches to the students, especially in his subspecialty practice where he looks beyond surface level teaching techniques to teaching the interaction and relationship of the disease process. He believes his training in internal medicine prior to specializing in a subspecialty prepared him in analyzing and recognizing a patient’s problem, a skill he eagerly shares with his students. For example, the ability to effectively recognize and analyze why a patient develops a recurring infection as an immune deficiency helps the physician “get to the root of it.”

Additionally, Dean believes the attributes commitment and conscientiousness help to distinguish the excellent clinical teacher from the average. Commitment, he states, “is not an addition to their CV but an internal commitment and recognizing what they can do for the student.” He states further, “Preceptors should internalize this commitment and recognize that they’re not going to live forever. They need to pass this commitment on in order for the tradition of providing excellent medical care to individuals can be continued.” The “understanding of the serious concept of taking care of someone” is Dean’s “noble” concept, his legacy. Preceptors need to be conscientious in imparting knowledge and experiences for students to carry on, and internalizing the treatment of the patient. He looks to the student to ask, “How can I make the life better for the patient. . .feel the pain of the patient?” His goal is to give them as much as he can, share with them the experiences, knowledge, and idiosyncrasies.



Dean identified “stark” differences between his undergraduate medical education and teaching current LCE first and second year medical students. For example, he went to medical school outside the United States where he states, “Students were not treated like human beings; no gloves, no water in anatomy labs and Monday through Saturday classes. . .only two hours of sleep every day because you will not have enough time to learn everything.” Another significant difference was in the admissions process of his medical school. Dean reflected on the screening process saying his class started with 400 students and dropped to 90 students because of the difficult environment. He believes the current study site has a screening process for admissions resulting in higher quality students and better retention. However, on a much different level and in contrast to his school, LCE students “have some resolve that they want to be in medical school and are serious about wanting to be in medical school.”

His first two years were purely academic, only seeing cadavers, not real patients. His first exposure to clinical medicine was in his internship and studying basic procedures, such as holding a stethoscope. After his undergraduate medical education was completed he received a scholarship to Yale to study music and was out of medical training for four years. He now teaches LCE students who are assigned to clinical experiences in hospitals and the community where much of the basic science knowledge can be applied to clinical situations and where he can share his own learning experiences.

He described one of his positive experiences in medical school where there were teachers who really explained medicine, were understandable, and brought the medical “lingo to the appropriate level.” He vividly described a professor he had in medical school “who once threw his anatomy manual out the window because she didn’t want to

be told a case diagnosis by a student.” He acknowledged this as one of his negative experiences, however, he would always remember the experience and the professor noting, “that’s what made me interested in the subspecialty I am in. . .my instructor was so good at his calling and knew the importance of explaining the disease to the student.”

Dean discovered many wonderful experiences as a LCE preceptor. Another topic that captured much of the interview dialogue was student aspirations. Students who wanted to excel in life and aspire to reach beyond more than being a physician were an important part of his clinical teaching environment, “There is nothing better than to hear what their goals and aspirations are.” *Dean is a true mentor.* He remembers one student who wanted to work for the World Health Organization (WHO) and “globally prepared for the role through learning epidemiology and the demographics of disease.” Being a LCE preceptor allowed Dean to participate in the early education of medical school. Early education has an “impact on the whole person,” the student who has “gone through several walks of life” and thus, a mix of students with different experiences. He says this is his “calling, his reward, being a doctor should be a profession.” Similarly, he says, “You can be a physician but you may never be a preceptor, because we are not taught how to teach in medical school, we were taught how to treat people.” *The researcher notes this comment as a repeating theme in the data analysis.*

Dean mentioned more differences than similarities in clinical teaching between first year medical students and second year medical students, highlighting how each class approaches the basic skills of clinical medicine. Many times second year students are at a different level of skill development with Dean assessing the level and providing a review of basic skills. Because the first year LCE clinical curriculum strives to focus on the

development of basic skills such as communication, this is not always achieved when students are rotating at specialty sites. By the time students get to the second year they have had more clinical experiences and the flow provides an easier route in imparting a complicated concept, one of the differences Dean identified between the two classes. Accordingly, Dean states, “Preceptors should be familiar with where students are in their medical education.” The researcher has identified this concept in previous interviews as a theme termed, being adaptable to level of the learner. *An excellent clinical teacher is attuned to this teaching strategy and assesses where the student is in knowledge and skills so that teaching concepts can be applied to the different learning levels of the student, especially as they move from first to second year LCE.*

Dean attributed the challenges he has experienced as a clinical teacher primarily to the regulations and restrictions such as Health Insurance Portability and Accountability Act (HIPAA) laws. HIPAA has increasingly been an obstacle in health care institutions as patient protected information transitions to an electronic system. Privacy rules also vary between health care institutions, adding to the challenges of clinical teaching. He said, “Regulations can hinder good clinical teaching especially when students are trying to extract information from patients.” Because of this, students have to be very careful in how they extract patient information and clinical teachers have to be more diplomatic in teaching the student this skill. For example, Dean discussed how to appropriately ask the patient the number of sexual partners he/she has. This is a very personal question and there are certain communication skills appropriate to use.

Dean offered helpful advice, regarding teaching excellence, to other physicians who might be contemplating becoming new preceptors.

They should ‘reset’ themselves. If they tried to accept this as their responsibility they need to just...they really need to have an idea or thought process that I am not going to put this student with me just to see that what I’m writing or what, when I’m talking to a patient and this and that. For me, I designate, for instance, Tuesdays from 9:00 to 12:00 for the student. They need to have that dedication of a certain time designated that they will be with the student and they have to be aware that that is a teaching time, that it is not a work time for them. [TL:19, part two]

This advice would be an important program component to professional development training for new preceptors. The role of the preceptor goes beyond a shadowing experience for the student. Precepting involves immeasurable dedication to optimizing the student’s learning environment and identifying where the student is in the learning process. Dean asks his students, “What subjects have you taken? What are you familiar with? Have you taken anatomy?” Assessment of student learning is a key skill in being a preceptor and should be part of preparing the learning environment. Professional development programs offer opportunities for preceptors to learn clinical experience orientation strategies, how to effectively assess students’ knowledge and skills, and as defined by Dean, the importance of being aware of the responsibility and time involved in teaching. Dean personifies the preceptor’s role in clinical teaching. *The researcher reflected on her work with LCE over the years, remembering Dean’s careful attention to detail in preparing the clinical setting for student learning. After every student clinical experience, Dean captured student’s knowledge and skill development*

*through notebooks of case discussions and assessment and presenting the completed work to the LCE office.*

There was much reflection on the interview and final question. Dean illustrated a philosophical point in clinical teaching stating, “Preceptors need to be flexible, always learning, always a student.” Real world exposure to clinical medical is important in the preclinical curriculum and LCE provides the opportunity for students to achieve this. He speaks of a memorable experience in his postgraduate (internship) training where a Viennese cardiologist symbolized humanism in patient care. He was “a very slow guy but when he looks at the patient, that 15 minutes, the patient feels that he had this doctor for a lifetime.” Dean uses his own medical training experiences in teaching students.

I used to tell that to my students, you know, you treat the patient not the electrocardiogram, the heart monitor. . .When you see a patient think about this as you are really communicating with someone who really wanted to. . .to get well and whom you wanted to help. [TL:67, part one]

Dean provided a clear picture of the importance of preparation in clinical teaching through a correlation of a patient diagnosis, treatment plan and an interdisciplinary team approach. He shared a case scenario from a student discussion.

The patient is having abdominal pain, so what did you feel in the belly? Oh, there was some tenderness there. Okay, I go there and verify it and I show him what he may have not come up. . .I mean, come across with [sic] and I try to tell him, yeah, see there, there is a mass there. Now, there is a CT scan of this patient. Let’s go down to the radiologist. Let’s see what you’re. . .what is this mass that you are feeling now. And so I ask to help. . .and then that’s another thing, too. There

needs to be some flexibility of the different personnel or physicians or. . .in the whole hospital. So I bring him to the radiology department and the guy there willingly and enthusiastically for this here [sic] student, explains the detail of that, this is where the mass is and look at that, look at this, look at that, blah. . .blah. . .blah. . .blah. Okay, after that when you hear a murmur I go to the echocardiographer. We go and see what is the murmur [sic]? What. . .See, look at this vegetation, look at this thing that's flapping there in the valve. And they. . .So they see the echocardiogram with the valve flap. . .This is a patient with endocarditis, this is what you're hearing as a murmur there. You see, they correlate it with the. . .with the echocardiography, with their skills of listening and look at the. . .listen to this murmur. This murmur is like this, zub dub, zub dub, zub dub. So there is a sound before the systolic zub, dub. And how you can tell whether this is a systolic or diastolic issue, feel the pulse. [TL:21, part two]

These are experiences that Dean tries to share with his medical students. When students can “feel the mass, see a CT scan, hear the murmur” they can connect and correlate basic science to clinical medicine. This is the typical day he provides the student in the hospital.

Dean is humbled by this field. “Even in music, even Pablo Casals, who is 96 years old, says I still am learning something on my cello. He's 96 years old and still learning something. Knowledge is dynamic, it's always evolving and you never stop learning.”

The interview with Dean was energizing. There was much reflection from the researcher on the interview environment, the data, and most importantly the personal and career elements which motivated Dean in his clinical teaching role. At the end of the

interview, Dean graciously pointed out several paintings/photos of Albert Schweitzer he had acquired over the years that were displayed in his patient waiting area. He spoke highly of this physician who was also a philosopher, missionary, and humanitarian, spending some reflective moments on the impact Schweitzer had on his life. The researcher embraced the harmony of attributes between Dean and his humanitarian mentor capturing important observations for the data analysis. As a result of the interview reflection and review of the data, field notes, and researcher's observations, the themes demonstrating intrinsic value in teaching, demonstrating resetting and preparation in the teaching role, and supporting student's goals and aspirations emerged and are explored further.

**Dean: Demonstrating intrinsic value in teaching, demonstrating resetting and preparation in the teaching role, supporting students' goals and aspirations.**

*Demonstrating intrinsic value in teaching.* After much reflection on the dialogue and findings from the interview with Dean, the researcher believed a core element of demonstrating intrinsic value in teaching could also define Dean's role as a preceptor in the LCE program. Defined in its simplest form, intrinsic value is an "ethical and philosophical property, the ethical or philosophical value that an object has 'in itself' or 'for its own sake'" (Wikipedia, 2012). In the researcher's view, intrinsic value in clinical teaching embraces the guiding principles of passion for medicine, patient care, and teaching and learning. It is driven from the inner self, with heart and soul, and not from the surface level.

Dean brings this passion and inner self to clinical teaching and believes in order to be a preceptor you have to "go beyond being a physician, you need to reach within you,

think very deeply, think about the experiences and skills you want to share in teaching and having the ability to share them.” He also identified internal commitment as an attribute that distinguishes the excellent clinical teacher from the average, thus, referencing another inner self drive important as a mentor and teacher.

Dean’s internal commitment is evident in his subspecialty and the patients he treats who have unique conditions, and who are often alienated from society. He understands the disease process from a holistic perspective, treating the whole patient and analyzing the relationship of the underlying issues. In sharing this internal commitment with his medical students, he reinforces the tradition (legacy) of taking care of the human being, and not a machine, and understanding the serious concept of taking care of someone, which he describes as a “noble concept.” Dean reflected again on his experiences in medical school and discussed how different it was compared to medical school today. Maybe his drive for internal commitment was the result of how he was treated during his training. He said, “They did not treat you like a human being, they were very difficult to approach and they tried to get only the most serious students to graduate. Dean shared his thoughts on this teaching and learning commitment through a story about his son.

I was telling my son. . .he was already a resident, it was 2000, about eight years ago and he said. . .and I said to him, you know son, you know I’ve been in medicine for the longest time and I think I’m just beginning to understand it. I’m just beginning to understand and to appreciate medicine. I could not. . . I did not appreciate it when I was a medical student. When I was a resident I somewhat appreciated it. But now I’m just beginning to. . .to. . .I’m just getting warmed up.



And he says, oh my God, I thought I knew everything already. I said, oh no, when you think that you know everything already, you don't know anything yet. [TL: 41, part two]

***Demonstrating resetting and preparation in the teaching role.*** The researcher chose demonstrating resetting and preparation in the teaching role as the second theme from Dean's interview. Dean described significant elements of the preceptor's role, which aligned with the intrinsic value category and responsibilities of teaching future health care professionals. Resetting and preparation goes beyond the medical student shadowing the physician at the rotation site and even teaching the student how to communicate with the patient. It moves to a deeper level of dedication and passion in teaching, fully committing one's inner desire to prepare and share knowledge, skills, and care of the human being. Dean offered important "resetting" advice regarding teaching excellence for other physicians who might be contemplating becoming new preceptors for LCE saying, "they need to accept teaching as their responsibility and to have that dedication of a certain time that they will be with the student."

Dean promoted the importance of resetting and preparation as he described the preceptor attitudes that distinguish an excellent from satisfactory clinical teacher.

The two preceptor attitudes that should distinguish a preceptor to be . . .to be really excellent would be a commitment. They should have. . .they should recognize that what they're doing is not for them but for someone who is starting up in the medical field. They should recognize that they're not going to live forever so they cannot carry that to their grave and they need to pass it on in order for the tradition of providing excellent medical care to individuals can be continued. So,

they need to be committed, they need to not think about it was being an addition to their curriculum vitae, but. . .but really, internalize it and say, yes, I signed up for this and yes, there is this person who's trying to learn how to see a patient, how to start up with. . .by taking. . .in taking care of the patient, examining the patient, and I need to teach them, I need to give them, I need to be conscientious enough, so commitment and conscientiousness, conscientious enough to. . .to impart to them or to be able to. . .with a. . .[sic]. My goal would be to give them as much as I could, share with them. . .sharing with them my experience, my knowledge, my idiosyncrasies, if you will, or the different things that they should understand in order to. . .for them to be able to carry on the tradition of taking care of human. . .human beings. [TL:41, part one]

A close interpretation of resetting and preparation, and similar to emerging themes in other interviews is Dean's reference to adapting in clinical teaching. He talks about the preceptors' role in being familiar with where students are in their medical education and adapting and teaching to the right level. He asks students, "What subjects have you taken? What are you familiar with? Have you taken anatomy?" Dean uses this assessment when determining the level of knowledge and skills for the first or second year student and preparing the student for patient cases. Teaching to the appropriate level of the student helps gauge application of complicated concepts and amount of knowledge and skill review needed.

Dean's message on resetting is marked, referencing the preceptors' responsibility in clinical teaching. He stated, "Preceptors need to dedicate and designate time for teaching, prepare the student for rounds, and prepare the student for patient care." When

asked about helping to design professional development training opportunities for new preceptors, Dean emphasized the importance of resetting and preparation in the teaching role in the orientation of preceptors for the LCE student rotation. Knowing the expectations of the program and providing the preceptor's practice expectations helps set the stage for clinical teaching success.

*Supporting students' goals and aspirations.* A significant factor in Dean's clinical teaching success can be attributed to his ability to plan ahead and prepare for his role as a mentor and guide in the student's medical career. The third theme of supporting student's goals and aspirations can be closely connected to the second theme of resetting and preparation in the teaching role given a continuum in achieving or attaining identified action steps. The theme, supporting student's goals and aspirations, expands the definition to include the commitment of the student, and not just the preceptor, to plan ahead and carefully consider their own personal and professional accomplishments. Additionally, in the researcher's perspective, goals and aspirations have a more global, holistic designation serving as a catalyst in one's personal or career direction. There is also a philosophical component, crossing intangible elements such as values, cultures, or beliefs that add intrinsic meaning to life. Accordingly, the third theme of supporting student's goals and aspirations compliments other findings in the thematic development of the data analysis from Dean's feedback.

One of Dean's most wonderful experiences as a LCE preceptor was witnessing a student's aspirations in reaching beyond being a physician to globally preparing for a role in the public's health through the World Health Organization (WHO).

There's nothing better than to hear what their aspirations are and hopefully they will realize. One of them as I mentioned wanted to work. . .she wanted to work with the WHO in Geneva, she said. And so I told her, you know, to prepare for that you need to. . .you need to know. . .to have a good grasp about public health, about community health, basically, more than an individual health of a person. Or, what happens in the demographic [sic]. . .What is the demographic. . .the epidemiology of certain diseases as it relates to the whole world? And I was giving him a perspective of that based upon my training, not as a physician but as a. . .in training in the School of Public Health at Yale. You know, knowing the demographics, the. . .the demographic of certain diseases for instance. And so it's a much more of a global approach rather than an individual approach. But she was a. . .She's a very bright student and I hope that she's continuing to pursue that.

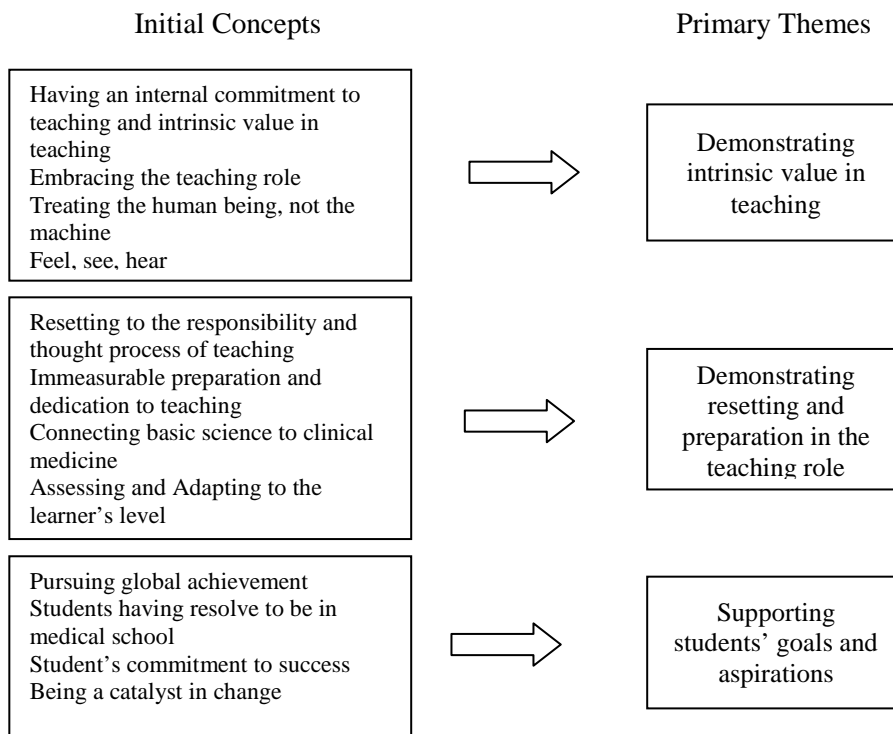
[TL:83, part one]

Dean remembers another time when he provided guidance to a student pursuing global aspirations. The student was studying the differences between two districts in India and their ability to get gynecological care. He mentored her with the project and said those were "very rewarding times as a clinical teacher." He encourages students to think on a global scale and not just practice medicine to make money. To Dean it was more rewarding to see that students were goal oriented on a global scale, beyond goals as a medical student. Dean's role was to help the student prepare for these aspirations which he says is his "calling, his reward." [TL:83, part one]

It was clear that Dean had his own intrinsic motivation in supporting student's goals and aspirations. Undoubtedly, this was a catalyst in his personal and professional path. He spoke proudly of his son's struggles and accomplishments in college.

After his undergraduate at Yale, he got a scholarship to study piano in Italy, so he was there as a pianist. He lived there for about a year, he spoke fluent Italian, did nothing but just played the piano, and then when he came back, he was of course his colleagues were already in the second year and but he's younger, he was. . .he was 17 when he finished college. And so he didn't get accepted here and he went to the NIH to study. . .to work there as a . . .in the neuroscience laboratory, head of publication in *Science* magazine in Science, and then went to. . .got the QMDMJ in New Jersey [sic]. [TL:115, part one]

The core of Dean's teaching culture represents many of his own goals and achievements as well as his family's and his student's life changing aspirations. He reflected on several illustrations of global achievement with his LCE students and with his son. It is evident that his motivation to succeed guides others' motivation to succeed. Clearly, there is a fundamental lesson in discovering the value of supporting student's goals and aspirations in the interview with Dean that speaks of conviction and passion for achieving great things in patient care and humanity. Figure 6 illustrates initial concepts and primary themes from Dean's responses.



*Figure 6.* Initial Concepts and Primary Themes from Dean's Responses

**Judy: Academic, Specialty Physician**

**Introduction of Judy.** Judy works in the academic setting in a fellowship-trained, specialty field with a primary faculty role at the study site since 2005. She is also a consultant to several other health care institutions including a large teaching hospital, cancer hospital and local health department. She has mentored fourteen first- and second-year LCE students [October field notes] and was one of four academic preceptors identified from the 34 nominees to be interviewed. She was one of two nominees who won the LCE clinical teaching excellence award and was in the second selection of interviews.

**Judy: A synthesis of responses.** Judy's accommodating nature was evident from the moment the researcher discussed the interview arrangements over the phone through the last question at the interview session. The interview took place in Judy's office and after conversation on her travels and worldly mementos adorning her office walls and desk, the dialogue began on clinical teaching excellence.

The interview was fast-paced; however, it was punctuated with powerful descriptions of clinical teaching excellence. At the end of the interview, Judy highlighted several discussion points reflecting her passion for teaching and the LCE program. Judy's passion for teaching was rooted in her personality and clinical teaching competence and also represents an emerging attribute found in other interviewees. This was one of several interviews conducted in an academic office and noteworthy of the researcher's appreciation of an environment of educational research in the medical sciences.

When asked to describe clinical teaching excellence in working one-on-one with first and/or second year medical students, Judy shared several illustrative examples: (a) fun and exciting, (b) passionate, and (c) a relaxed environment of learning. The researcher acknowledges Judy's comments regarding a learning environment which should resonate with the excitement of clinical science application, through teaching that is interesting and fun, and teachers who are passionate about their role as preceptor. Creating an atmosphere of fun and learning and where the patients are not hurried is "where the excellence comes in. . .because the stress goes away, then students relax and learn. To accomplish this Judy tells her LCE students, "You need to follow your heart. . . pick something you are passionate about. . .love what you do. . .passion is contagious."

See what you fall in love with and do it. That way it's not going to be a job the rest of your life and you're going to want to get out of bed. So if you pick something you're passionate about, you don't have to work at it. You don't have to work at being enthusiastic, it just happens. So, if I am excited and I love what I do and I meet my students at the height of my excitement for rounds, they have no choice but get excited with me. [TL:58]

When asked about her most wonderful experience as a LCE preceptor, Judy carried the passion and love of teaching into her answer and articulately said, "There is not just one wonderful experience, everything about LCE is wonderful." She is appreciative of several of her first LCE students who keep in touch with her, "My first LCE student, I still remember, is now very successful finishing his ENT fellowship." She remembers advising a pre-med student considering osteopathic or allopathic medical school, "She called me internationally to tell me that she got accepted into medical school."

Students want reinforcement of real world clinical application. LCE provides exciting opportunities for students to take basic science knowledge and practice its' application with real medicine, designating a reason for being in medical school. For example, microbiology/immunology, and pharmacology, two courses generally taught in the second year medical school curriculum have wonderful application to Judy's discipline in treating immune-compromised and/or transplant patients.

Having them see the clinical world it almost gives them a hope, a light at the end of the tunnel and a reinforcement of, okay, this is why I am here. So I think it . . .it makes it easier for them to go through their first and second year because I



am the weekly reminder of, hey, this is how this is going to be like, look how much fun it can be. Look at all the things you're going to be doing, how you're going to be helping people. And that's why you have to go through the basic sciences. It's just a boot camp to train for this. [TL:52]

The clinical application opportunities that abound in LCE experiences were the missing piece to Judy's own first and second year of medical school. She had minimal clinical experiences in undergraduate medical education (a negative experience in Judy's medical school training) and thus, limited exposure to simulated or real patients. Her only experience in her first and second year of medical school outside the "book" environment was a one-half day a week exposure to health maintenance organizations (HMOs), which offered a field experience for administrative exposure (e.g., listening to claim denials) but no patient care opportunities. She did not see any patients until her clinical wards (third year rotations).

As an osteopathic physician (D.O.), Judy practices a more holistic approach to medicine than the allopathic trained physician (M.D.). There was additional dialogue on this concept relative to her role as a LCE preceptor, acknowledging a more hands-on method and increased comfort level with patients, also mentioned as a positive experience in her own medical school training. Her additional Osteopathic Manipulative Medicine (OMM) training in medical school and OMM's hands-on patient care provided a better experience compared to what she sees in the allopathic medical student, helping to "color how we practice the rest of our lives." Judy believes the osteopathic training helps build rapport and comfort with patients.

It is interesting to note that Judy is an osteopathic physician working in an allopathic medical school (Researcher's Journal). The researcher reflected on her own work in an osteopathic medical school that has teaching faculty from the allopathic world (Researcher's Journal). There is value to both medical training philosophies as well as value in the medical expertise each has to offer patient care. *It is interesting to comparatively appreciate differences between the two philosophies and understand how both can work together effectively.*

Judy described the comparisons of clinical teaching between first and second year by saying the two classes are very similar, however, dependent on the student's previous LCE rotation experiences, preceptor(s), and amount of patient contact. She considers the limited time in clinical teaching as a challenge in the LCE program. Finding the balance between teaching and seeing patients is important in a successful learning environment. Promoting academic balance is the second theme identified in Judy's interviews. Finding balance and being flexible in clinical teaching and patient care parallels a work-life balance philosophy and should be carefully considered in descriptions of clinical teaching excellence and development of preceptor training programs. Balance and flexibility provide an environment where students (and preceptors) are happy and eager to learn.

An additional factor (challenge) for Judy in creating a successful learning environment is the impact of transitioning from paper to electronic medical records (EMR) in health care. EMR is gradually filtering into all aspects of health care teaching and patient care. The EMR movement in patient care presents challenges in consideration of confidentiality, costs, and clinical teaching. The learning curve and transition of records can be a barrier in regards to teaching time and interaction with LCE students.

Judy acknowledges that the EMR process “has not helped with teaching efficiency” and as a barrier to teaching should be carefully addressed so that teaching programs can be in balance with patient care.

Judy offered helpful advice for other physicians who are contemplating becoming a preceptor. Her advice illustrated the understated inner power to teach and shape future health care practitioners. She stated, “Students know if you don’t enjoy teaching and those who really want to teach.” She described teaching as a “long term commitment” with the “right attitude.” Her advice also underscores the importance of a relaxed atmosphere, patience and understanding as a clinical teaching attribute. It is important to prepare for the teaching role by allocating the time to teach and where teaching fits in the preceptors patient care schedule. Professional development on becoming an effective teacher and a well-designed student orientation can help prepare clinical teachers for their role in the LCE program.

The interview with Judy generated important insight into clinical teaching excellence, much of it capturing intrinsic elements of successful learning environment development. The themes which emerged from the analysis of Judy’s interview data (a) demonstrating passion for teaching, (b) promoting academic balance and, (c) promoting holistic medicine are described below. Each theme is illustrative of a powerful energy from within, which can have the capacity to be a catalyst in personal and professional development.

**Judy: Demonstrating passion for teaching, promoting academic balance, promoting holistic medicine.**

*Demonstrating passion for teaching.* Judy's passion for teaching was woven into every element of her learning environment and emerged throughout the interview. Her response to the question, How do you describe clinical teaching excellence, was "fun." She illustrated this through several eloquent words such as enthusiastic, excited, contagious, and follow your heart.

The fun in clinical teaching is very important to Judy, generating a relaxed environment conducive to learning.

Even if I have the students coming skeptical, they see me excited, they see us laughing on rounds, having fun, seeing patients, all within reason, and of course, not being disrespectful to a patient. But, I try to create an atmosphere of. . .of fun and learning that. . .I think that's where the excellence comes in. Because the stress goes away, they are not, you know, on their toes to be pimped and, you know, put on a spot and ridiculed for not knowing something. And they relax and then they learn. So, I think that's why when I think of excellence, I think relaxed, fun, excited and that's when you learn, that's when they actually realize they know more than they thought they knew. [TL:62]

It is evident that her teaching foundation is based on a genuine bond linking character to competence in clinical medicine, encouraging her students to find a career and discipline they are passionate about. Judy carries this enthusiasm over to her non-clinical, academic work.

And the same thing goes for lectures, you know, I never agree to lecture about something that I'm not passionate about. Because if I'm not passionate about it, how can I possibly make somebody else learn it and be passionate about it. So, I only lecture about the things I . . .I love and feel strongly about and it's not always all infectious diseases either. [TL:60]

There is reflection by the researcher at this juncture, reflection on the dissertation journey. The journey is energized by the researcher's passion for clinical teaching excellence (Researcher's Journal).

Finally, Judy reflected on the passion for teaching when she describes her advice for other physicians contemplating becoming a preceptor.

Make sure you love to teach because you won't be able to fake it. The students know if you're not enjoying being with them and then it's downhill from there. It's the best advice, make sure you. . .that something [sic]. . .you're doing it for the right reasons. . .because you really want to do it, not because you want to put it on your CV or whatever other agendas you may have. Because, you know, you can maybe do it for a day or two but it's a long term. . .long haul. So if you don't love it, you know, you're going to feel like the students are slowing you down, they are in your way, and the students will feel it and then, you know, it's just not going to be a good relationship and not a good teaching alliance. [TL:246]

***Promoting academic balance.*** Academic balance in reference to the study represents finding the right combination of patient care and clinical teaching time, knowledge, and skills to provide the student an effective training environment.

“Academic medicine has been described as a three-legged stool with one leg each for

teaching, patient care, and research” (Wilson, 2006, p. 12). Historically, the equilibrium has been in constant flux with funding, accreditation, technology, and other external and internal forces impacting how it is defined. Research has usually been the “shortest leg of the stool” (Wilson, 2006, p. 12) and teaching and patient care in constant, delicate balance in the academic world. Judy has approached this balance carefully and enthusiastically showing genuine passion for best practices in medicine and teaching. For example, she offered flexibility in learning for the LCE student, balancing teaching and patient care.

My schedule is very valuable and I do different things so I tell them as long as we meet for the amount of time that we need to meet as long as we’re at the end of the rotation full and have the exact contact hours or more. Because I found that if they have a major exam that week, I would rather have them come in twice the following week than have them totally brain dead and spaced out following me the day before of an exams. So I make it very flexible and that way I get a very happy, eager to learn, student, open-eyed. . .students and I don’t think they are missing out on anything because we still have the same amount of contact hours as we would otherwise, yet it’s not on this rigid every Thursday afternoon, rain or shine, no matter what goes in your life kind of a thing. [TL:20, 22]

Judy articulated academic balance in many of the interview question responses. When she described clinical teaching excellence, she described the importance of being in a fun environment as well as the importance of students finding a career they are passionate about. Creating an atmosphere of fun and learning she says is “where the excellence comes in. . .that’s when they actually realize they know more than they

thought they knew.” She explained how a stressed environment impacts teaching, “When I feel stressed that’s going to rub off on everybody and then everybody’s going to be stressed. . .nobody’s going to be learning.” When describing important attributes in clinical teaching excellence, she described patience and attitude, “It’s one thing what you teach and I think. . .but it’s more important how you teach. It’s not what you know, it’s how you relate to others. . .patience and attitude set the mood.” Judy sees limited time between teaching and patient care as one of her challenges as a clinical teacher. She has found the right balance to successfully train medical students and provide the needed care to her patients.

I need to see a certain amount of patients every day, yet, combining efficiency, time and teaching, it’s. . .it’s every day I am trying to reinvent the balance. Make sure I do the justice to the patients and spend enough time with them and also with the students. [TL:242]

The integration of electronic medical records (EMR) over the last several years has also had an impact on balancing teaching and patient care time, notable among Judy’s interview responses, even counteracting productivity in the clinic.

I mean the studies that I have looked at just to see if my experience [sic] different, you know, it seems like, you know, we spend one-fifth of the time with a patient and four fifths in front of a computer. So to me that truncates my patient experience and my student experience. Because it’s hard to interact with the students when I have to type, you know, and if they have to watch me type. So I think that’s the biggest challenge is the electronic medical records and. . .and just

balancing the amount of time spent with each on teaching and patient care.

[TL:244]

***Promoting holistic medicine.*** As an osteopathic trained physician, Judy exemplifies holistic practices which consider the whole patient, the concept of wellness, and the body's structure as a facilitator of healing mechanisms and treating disease. Judy completed her undergraduate medical education at an osteopathic school and her residency at an allopathic school (M.D.). This is not uncommon as osteopathic and allopathic graduates often attend dual residency programs. Working in osteopathic and allopathic medical schools over the last twelve years, the researcher believes there are benefits to both practices and philosophies and exposing the LCE student to both patient care frameworks. Judy described her experiences in osteopathic training and practice in several of her question responses, with her additional training in osteopathic manipulation and hands on patient care providing better experiences, "We get indoctrinated during the first two years in osteopathic school that changes. . . colors how we practice the rest of our lives."

A significant osteopathic benefit to her practice and to mentoring medical students is the rapport and comfort level with patients regarding hands on care.

I still had better rapport with the patient, until today I'm more comfortable putting my hands on the patients than my colleagues. I see it with the osteopathic fellows when I have the D.O.s. I mean I just somehow [sic]. . . The difference just never goes away. They are just more comfortable with patients, and they are constantly looking at the whole picture. While the allopathic students seem to concentrate on



kidneys, lungs, body organs, they're more impersonal, less holistic, if you will.

[TL:172]

Osteopathic physicians offer allopathic medical students a unique training environment with a focus on holistic patient care. Treating the whole patient, inclusive of cultural, family, and other non-clinical influences, contributes to the professional development of students and acquisition of humanistic knowledge and skills. As such, osteopathic medicine has an important role in building student success through professionalism competencies reflective of the power of humanism in medicine and teaching excellence. The researcher enjoyed the discussion of how Judy utilized osteopathic (holistic) training with her allopathic LCE students (Researcher's Journal).

From its inception, the osteopathic profession has been smaller in numbers than its allopathic counterpart and has worked hard to secure a place in American medicine. Over the past 100 years or so, these efforts have produced a profession that is highly competent and growing, with 23 colleges of osteopathic medicine at present and more in development (Morzinski & Henley, 2006).

Another interesting observation from Judy's feedback on the osteopathic profession and medical school training is the profile of the osteopathic student. She finds a higher maturity level among many osteopathic students mainly because, for many, it is their second profession. She found this to be a challenge (negative experience) in her own undergraduate medical education. The competitive nature of osteopathic students, because many were in their second profession, made Judy and others in her class grow up much faster.

But I think what also is in play that [sic] from osteopathic schools you get people a little bit more mature, for many of them it's a second profession. So this is people who really want to know, want to. . .really know what they are doing and why they want to do what they do. Like for example in my medical school class, I mean there was. . .It was very hard. That was a first profession for me, I didn't have any other degrees or anything, so I, you know, after undergrad was my medical school. And there was never a curve in my class. Because in every subject that we were being tested on, somebody in the class had a Ph.D. So they killed the curve. You know, we have biochemistry everybody's struggling and we have a guy with a Ph.D. in biochemistry sitting next to me. Well, you know, he's going to get 100 or 99. [TL:190]

Judy reflected on the challenges of mentoring the allopathic student and connecting to the patient.

I find the students in the allopathic school still kind of green. They come straight from undergrad, some of them very smart, accelerated programs. Amazing, brains, yet, no street smarts, so they have a really hard time connecting with the patients. I try to teach them, it's not how much you know, you could have a beautiful plan of what you're going to do with a patient, but if you cannot convince the patient and connect with the patient that's what we need to do, who cares. . .how smart you are and how much you know. [TL:192, 194]

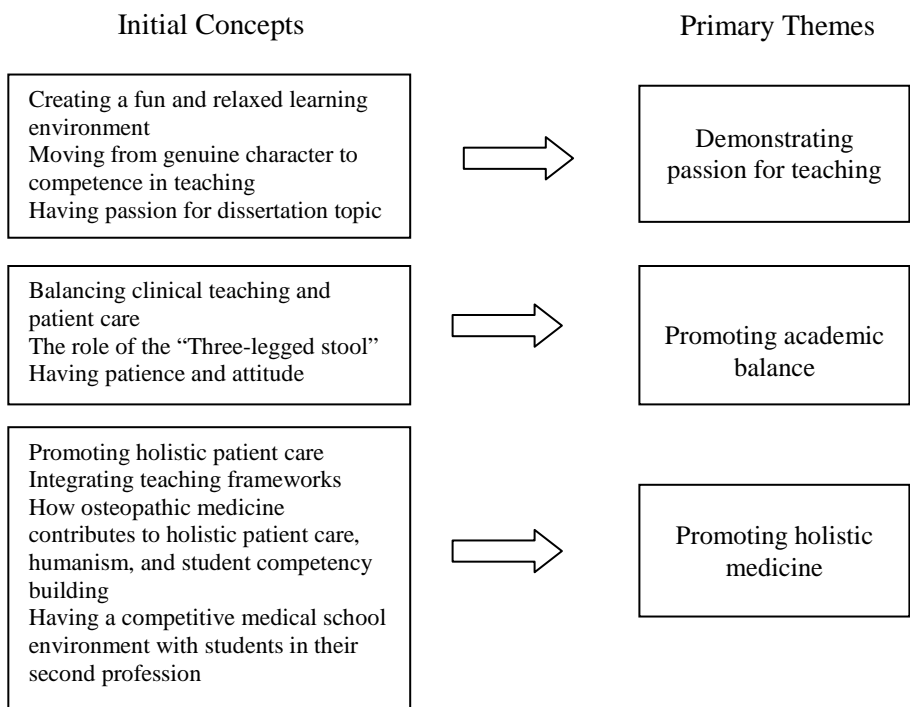
Judy elaborated on connecting with the patient and learning people skills, and why it is important in her teaching role as a preceptor. The osteopathic profession favors an atmosphere of treating the whole person inclusive of their mental, physical, spiritual,

and emotional health. There is a strong sense of the impact that family and other support units have on the patient's health. Its' integration into patient care is instrumental in the treatment plan. In keeping with the holistic approach to patient care and the climate of osteopathic principles, Judy provided an illustrative observation of the physician as lawyer and the power of negotiation in health care practice.

So, I always tell them the first two years it's basic science and it doesn't really matter how good you are in science because really if you go into medicine and treating patients, provided if you go to research and other places that's [sic] you can work in cubicle and really your smartness can come out, but if you're going to be dealing with people, you're really going to be a lawyer. Because what you're going to do for a living after your first two years of school are done, you're going to negotiate all day long with your patients, with your colleagues, with your students, with everybody negotiating for you, for them to see your point-of-view. It's kind of interesting because I was originally going in my country before I moved here to law school [sic]. And then I went to medicine because it came easier and I realized I'm a lawyer. How much science do I really use every day? Not much. I have my things that I know, right, and I keep up with, but the skills I'm using are not scientific skills, these are people skills which are really more of a lawyer than a doctor, when you think about it. So I find that people who are very good their first, second years, they have a hard time in their [sic] when they become doctors. The people who are barely making it the first two years, they excel. [TL:198]

The interview with Judy captured vivid, heart-felt descriptions of teaching

excellence. She exemplified a valued combination of two different medical practice frameworks that transcend her role as clinical teacher. Reflecting on her interview, Judy provided the following advice for clinical teaching, “follow your heart, have the right attitude, and make sure you love teaching before you put yourself in any teaching positions.” As a result of the data analysis, the researcher generated the emerging themes of demonstrating passion for teaching, promoting academic balance, and promoting holistic medicine. Figure 7 illustrates initial concepts and primary themes from Judy’s responses.



*Figure 7. Initial Concepts and Primary Themes from Judy’s Responses*

## **Adelane: Academic, Specialty Physician**

**Introduction of Adelane.** Adelane is a female surgeon, wife, and mother and works in an academic hospital setting in a specialized surgical field affiliated with the study site. She is a high energy clinician with a demanding schedule who is extremely devoted to the surgical care of her patients. It is worth noting at this early juncture, Adelane's gift of humanity.

Anybody can cure somebody but it takes somebody really special to let them die with dignity and I have that gift. I'm not afraid to talk (with patients) about dying and being ill and, you know, being at the end of our proverbial rope with being able to. . .to do anything, but I never take away hope. [TL:222, part two]

She has been a preceptor in the LCE program since its inaugural year in 2001, mentoring eight to ten students [October field notes], and one of four academic preceptors identified from the 34 nominees to be interviewed.

The interview with Adelane was rich, inviting, and thought provoking with Adelane's generosity evident from accommodating a longer than planned interview. A memorable observation from the interview was the reflective practice used by Adelane and hearing often that the interview provided a good opportunity for her to look back at the LCE moments, her career, and her own medical training. There was much discussion on family and work and its influences on Adelane's life and the demands of a busy surgeon in a specialized hospital setting. The researcher reflected on her admiration for Adelane's work with, at times, terminally ill patients and her passion for medicine and patient care. *The researcher was glad to be ending the exhaustive series of three interviews in one day, yet, appreciative of the rich data from each preceptor.*

**Adelane: A synthesis of responses.** The interview took place in Adelane's academic office and was rich with articulated words of teaching wisdom, competence, and reflective moments. Conversation was intense, often diverting to other discussion areas, yet, maintaining an interactive atmosphere of camaraderie between two women connected to life-long careers. This was one of several interviews conducted in an academic office and noteworthy of the researcher's appreciation of an environment of educational research in the medical sciences.

Adelane's descriptions of clinical teaching excellence reflected the researcher's observation of her teaching environment. When asked how she would describe clinical teaching excellence, Adelane stated, "The preceptor needs to be interested, available, motivated to teach, and receptive to these teaching behaviors." It was evident from the interview that she embodied these same principles as a clinical teacher and strived to create an environment where students are actively engaged in learning. She believed the LCE program "does a good job of trying to pair students with people for whom there would be some inherent value." She was steadfast in her opinions and fully committed to the value of passion in her medical field from both the physician and the student.

There's nothing more disheartening as a person who has dedicated their career to being a, at least in part, a teacher whether that's of the students, residents or patients for that matter and then have someone who's just not interested or receptive or kind of is the know-it-all. [TL:21, part one]

The attitudes and behaviors Adelane used to describe how she distinguishes excellence in clinical teaching from average performance include enthusiasm and an interest in teaching, which, she said, go "hand-in-hand." Her greatest satisfaction is the

student having an “aha moment” with preceptors dedicated to achieving these moments. She termed this distinguishing element “separating the wheat from the chaff,” also noting that it is hard to be a good teacher.

In thinking back to her first and second year of undergraduate medical education and comparing similar and different experiences, Adelane talked about the visibility of faculty and students at her school where everyone knew each other. However, she acknowledged, because of her specialized medical field (surgery subspecialty), she is more isolated than others in medical academia. Another difference from her medical school was its culture of verbal and emotional abuse. She stated, “There was a lot more emphasis, particularly in the surgical disciplines, in using teaching techniques such as humiliation and coercion.” It was different from today’s medical school where it would not be an acceptable method of teaching.

We used to have a saying when I was an intern that the interns and the medical students are on the part of the totem pole that they drive into the dirt. And that was. . .Like that. . .You expected that. And, in fact, in some respects it was. . .It was a. . .It was a motivator. It was, okay, I am. . .I am in the dirt, my job is to crawl out of the muck and be recognized when I did that and congratulated and kind of welcomed into the fraternity. [TL:20, part two]

Adelane understood the stigma from the older school’s teaching environments and emphasized that ultimately what matters is the patient. She pointed out that she is tough, yet, fair (as indicated in feedback from her students.).

There were similarities between her preclinical training and teaching with current LCE students. She had clinical exposure opportunities with physicians in a private

practice partnership in gastroenterology where there was practical application of basic science coursework similar to an introduction to clinical medicine course. She described this opportunity as a positive experience in her training, recognizing her own comfort level in the surgical procedure setting where she had to wear a mask, stand in the heat and watch people. Her undergraduate medical school was very clinically-oriented (third and fourth year) where she learned the most, and by the time she was an intern “There wasn’t anything we couldn’t figure out or wasn’t comfortable doing.” She was also given the opportunity to meet a patient, practice history and physical skills, and attend rounds at the hospital. The exposure to clinical medicine in the practice setting was instrumental in Adelane’s training, both in the first two years as well as the third and fourth year clinical clerkships.

Adelane reflected on the discussion and stated, “It is fun to talk about this.” She diverged throughout the interview to reflect on her past experiences in medical school and her current role as a preceptor in the LCE program. This reflective practice was a powerful tool for rich data, fostering engaging dialogue and critical links to the data’s meaning. As a result of this process, utilizing reflective practice emerged as a theme in Adelane’s interview.

Adelane found it difficult to identify a negative experience in her medical school training. She remembered “feeling awkward when having to impose her need to educate herself on real individuals who were sick, regardless of their desire to consent.” However, it provided an opportunity for her to “grow as a medical student by learning about herself, how to talk to people, how to introduce herself, and how to make them feel comfortable.” She stated, “It is not the most pleasant thing in the world to have to be thrown into a



situation like that.” These experiences were “positive reinforcement” for Adelane and not representative of negative experiences.

Adelane was articulate in describing each response from the interview questions. Her high energy personality was refreshing and vibrant. She spoke of one of her funny LCE experiences with a student with long hair. After commenting to the student, he arrives at rotation with his whole head shaved. It was one of her most memorable experiences, “taking a step back and saying, even though I didn’t mean it, I recognized this as having a lot of power over how these students react.” Adelane provides an effective mix of humor in her interactions with people, making her more comfortable with patients. This humor helps with the “necessary decompression” that is a part of the medical environment. Another wonderful experience for Adelane was receiving a “heartfelt” gift from a student who recognized her for providing a great rotation experience and making a difference in her life. This student was one of Adelane’s first LCE students who eventually went into the same medical field

Adelane believes first and second year LCE students both start at the “same zero point” with the same skill level on her rotations. She doesn’t see much difference in teaching the two different classes, yet, acknowledges the importance of students having some clinical experience. She also correlated the LCE students to residency students by saying advanced clinical concepts can be structured so learning can take place when students are more “senior.” She never considered the differences to be a barrier in teaching. Similarities between the first and second years included the interest level of the student. She was always fortunate to have students who were interested in her discipline, who embraced learning, and had a good exchange of information and ideas. This shows

the student wants to learn. Her biggest challenges are students who are not prepared or don't want to be on her rotation. This ultimately impacts patient care. Adelane was clear on her expectations of LCE students during clinical rotations.

I do not expect people to come into my operating room and not know anatomy, not know the basics. Because if I have to. . .There's nothing more frustrating for a professor than to have to go back and teach the 101 course because students haven't kept up with the data and the information. [TL:284, part two]

During the discussion on offering helpful teaching excellence advice for new preceptors, Adelane referenced an institutional issue common in many higher education settings. The pressures on the competing faculty role and compensation present challenges which impact the learning environment and teaching motivation.

At this level of training, at this level of expertise, at this level of dedication to an academic career, there should be a. . .an inherent expectation on the part of academicians and on the part of administrators in the medical school setting that the desire to give back, the desire to educate is. . .doesn't need. . .you don't need to necessarily be rewarded. [TL:298, part two]

This practice, she stated, tends to put a "value unit on spending time with medical students." An educator, she believes should not be in it for self-serving purposes. Her helpful advice to new preceptors is for them to teach because of their own desire, for the honor and privilege of being in the academic setting, and not for secondary gain (e.g., promotion and tenure). In essence, preceptors are mentors and career counselors who are "able to affect a change in somebody's life in a positive way."

When asked how to help design a professional development training program for new preceptors, Adelane emphasized the importance of recruiting faculty who are enthusiastic about the program and receptive to new ideas and challenges, including topics on developing communication skills and setting expectations and who are willing to put their “heart and soul” into teaching. This intrinsic (inherent) value describes one of the emerging themes from Adelane’s interview. The other themes identified from dialogue with Adelane are having and awareness of the student’s interest in learning and utilizing reflective practice.

**Adelane: Demonstrating intrinsic value in teaching, having an awareness of the student’s interest in learning, utilizing reflective practice.**

*Demonstrating intrinsic value in teaching.* Adelane’s interview was dynamic with many visible messages, as well as underlying themes extracted from the dialogue. As in Dean’s interview findings, an emerging category for Adelane was intrinsic (inherent) value, embracing the guiding principles of passion for medicine, patient care, and teaching and learning.

In a comparative moment from the literature (Chapter 2), the qualitative study by Starr et al. (2003) identified “feeling intrinsic satisfaction” as the most common factor in clinical teachers’ identity and how they viewed themselves as teachers. (p. 820). Adelane conveyed enthusiasm and dedication to her profession and to teaching medical students. Both were driven by her passion for patient care and bringing a skill set to the surgical setting which set her apart from other female surgeons.

Similar to the study by Starr et al. (2003), Adelane clearly found intrinsic satisfaction in her role as a preceptor. She described many examples ranging from descriptions of her own medical school training to teaching LCE students.

To me, there's no greater satisfaction than having what I describe as sort of the "ah ha moment" with the student when they get it. Like, whatever it is that we're working on, that when they get it, they're. . .that. . .[sic]. And I think just the dedication to wanting to get the student to the ah ha moment is really. . .I think separates the wheat from the chaff. [TL:77, part one]

She described herself as "an ambassador to her medical field" teaching the students one-on-one in the clinical setting and operating room and encouraging mentorship between the residents and students. She was often surprised by the amount of appreciation she received from LCE students on her rotations and the difference she made in their training.

*There was genuine reflection and thought by Adelane during the dialogue on this recognition.*

It's nice to be recognized. Because we get so little of it and I think things are changing so drastically, the pressure's on us to perform and to provide and to be. . .to be. . .to have [sic], medicine's changed. We used to be. . .we used to be alleviators of the suffering and suffering of patients, and now we're expected to be miracle workers and that's just because of the way medicine is changing, and so if you can give somebody an inherently valuable experience without doing much. . .without much effort on my part other than to allow that person into my world and see how it functions, I think that's nice. [TL:184, part two]

As an educator, Adelane took pride in the value of teaching medical students. It was important for her to be remembered by students that her teaching inherently guided her life, “I mean you live life well lived, wanting service to others and touching their lives in a positive way.” The interview process promoted rich thinking in Adelane’s interview question reflection that progressed in descriptive elements with each question. She carries intrinsic value into her personal life as well, providing examples of other responsibilities in life and states, “We don’t exist in a vacuum.” She acknowledged challenges, hurdles, and successes in her life, saying, “I still question myself, I still second guess myself all the time, even though I’m supposed to have more answers now, I think actually I find out that I have less answers now than I did 10 or 15 years ago.” She seems humbled by the interview process, learning life’s lessons from teaching and taking care of patients. *She exemplifies the gift of humanity with her cancer patients.*

Finally, Adelane shared the intrinsic value of teaching with her students. She is tough, yet, thoroughly demonstrative of this quality which places her above many others in medicine.

You’ve got to choose to do what you love because you’re going to do a hell of a lot of it, and if you don’t love what you do, then you’re going to be miserable. And so you don’t do it for the money, you don’t do it for the fame, you do it for the sheer joy of doing something that you absolutely love. And I can’t think of anything that I love more than doing what I’m doing. Are there good days? Yes. Are there bad days? Yes. But in the end when I sit back, it’s like this is a cherry life. I mean this is a great life. [TL:304, part two]

*Having an awareness of the student's interest in learning.* Having an awareness of the student's interest in learning overlaps with other interview concepts in the study such as emotional activation and active learning. It was important for the researcher to identify interest in learning as a theme in the interview so that it could be examined relative to Adelane's role as a preceptor. She discovers many opportunities in teaching where students can show their level of interest in learning. She is direct on her stance of their emotional and cognitive contributions to the practice environment. For example, she stated her biggest pet peeve is when students come to clinical rotation ill prepared.

I tell them point blank, like, if you aren't going to put any effort in, I'm not going to put any effort in. So, at this point, until you earn it, you know, you may be irrelevant. I may not address you. Because if you don't want to be here, I have to be here, so, you know, I'm going to be here whether you want to be or not. And if you don't want to be here then, you know, we're all adults here and you're paying to be here, so you decide. But, if you are going to be here, you need to pony up something. So people that don't want to contribute to the conversation in any positive way are difficult. [TL:274, part two]

She finds it frustrating to have students who are not prepared for her rotations, surgery, and conversation. She is prepared and expects the same from students. Conversely, she is thrilled when students embrace learning. Students who generate new ideas, bring something to the table, and are motivated are "phenomenal." She values the exchange of information between her and the students, which shows they want to learn. This interest in learning also has an impact on the patient. Adelane's most important role is in caring for her patients, many who are terminally ill. She expects this same level of care from her

students and their genuine interest in being a part of her learning environment, she believes, ultimately impacts her patients.

One of the challenges in teaching second year students is their preconceived expectations for her rotation experience. She said, “By the second year or end of the second year they might have already made a decision about their career path and are not as interested in her discipline.” However, with rare exception, she has been “very fortunate to always have students that were interested.”

Adelane’s interview clearly indicated her expectations of students on rotations. Having an awareness of the LCE student’s interest in learning is a foundation for communication, conversation, and contributions to patient care. For Adelane, it is the impact on patient care that ultimately defines the teaching environment.

*Utilizing reflective practice.* Osterman (1993) defines reflective practice as a “means by which practitioners can develop a greater level of self-awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development” (p. 2). Adelane embraced reflective practice throughout the interview, generating self-awareness of her teaching abilities and professional competence. For example, when asked to compare her first two years in medical school and current LCE students’ first two years, she provided thoughts on her own clinical experiences, how negative experiences are suppressed, and then offered additional reflective moments. When asked to think back about negative experiences as a medical student she provided insight on how she believed practicing on real patients who were sick was an imposition for them. She remembers her own imposition, being the

recipient as a patient and how it provided a growing experience for her personally and professionally.

Now when I look back on it, I realize that there were a lot of things that I learned about myself and about how to talk to people and how to introduce yourself and how to make them feel comfortable. [TL:100, part two]

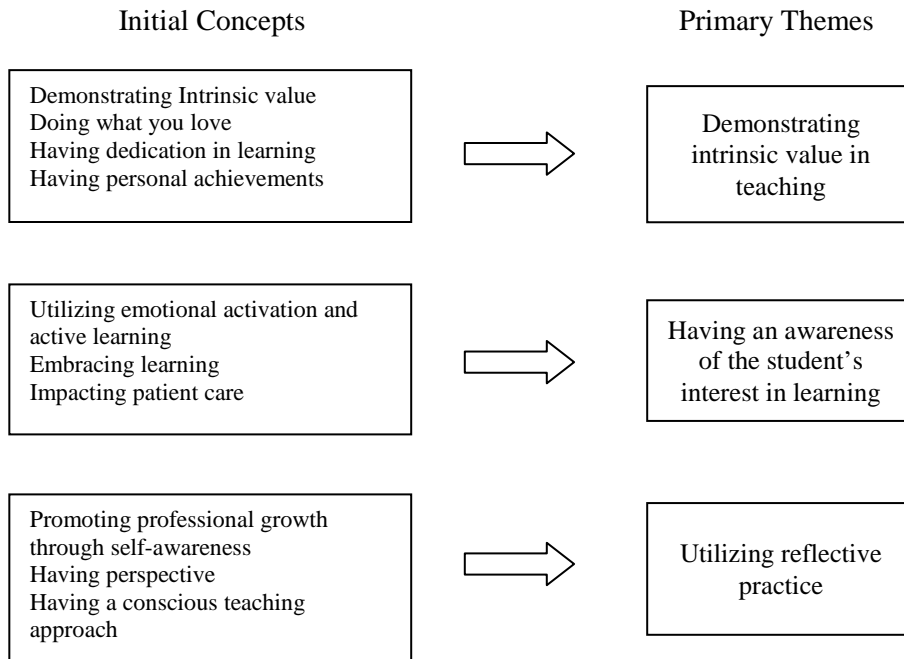
Adelane uses this self-awareness as a teaching tool for students, encouraging them to turn the imposition, the unpleasant growing experience, into a positive experience. Another example of one of her reflective moments during the discussion on her own medical school experience was her statement, “It is kind of fun though to talk to you about this because it brings back to the forefront” where she acknowledges her digression of topics on teaching excellence. These digressions allowed Adelane to achieve awareness of her own thoughts on clinical teaching and inspired a deeper reflection of her role as a preceptor and her academic career. Adelane offers philosophical reflection on questions about her own experiences, profession, and teaching role.

Maybe my ability to be clinically excellent is because if I can see further it’s only because I’m on the shoulders of giants and they’ve carried me with their excellence, you know. And so, part of it is a duty. I’ve had professors tell me that you have a gift and it is your duty and obligation to make it up to me and what I’ve given you by passing it forward. [TL:116, part two]

Adelane’s reflective practice was a global discovery from the researcher’s observation of the setting, data analyses, and conceptual aspects from the interview.

Figure 8 illustrates initial concepts and primary themes from Adelane’s responses.





*Figure 8. Initial Concepts and Primary Themes from Adelane's Responses*

### **Trevor: Community-Based, Specialty Physician**

**Introduction of Trevor.** Trevor, a community-based specialist, works for a private intensive care group in a large metropolitan location overseeing pediatric patients from birth to eighteen years of age at two children's hospitals. He has been practicing medicine in the area since 1986 and has a clinical appointment with the study site, teaching LCE students, fourth year elective students, and residents. Trevor has been a preceptor in the LCE program since its inaugural year in 2001, mentoring about two students a year. He was one of four community-based preceptors identified from the 34 nominees and in the second set to be interviewed. An immediate observation by the researcher was the disposition of Trevor and the noted calmness of the dialogue [November field notes]. Trevor's patient care population is demanding of the most critical and sensitive care one would expect in medicine. There was much admiration by

the researcher for this service to humankind. It was easy to sense the competence Trevor had in providing his patients and families with comfort and respect; attributes important as a practitioner in this field (Researcher's Journal).

The interview took place at a children's hospital and flowed nicely with conversation on aspects of Trevor's work in dealing with patients and families in traumatic situations. The researcher was in awe of the pediatric hospital environment, and quickly reflected on her own experience as a parent with a newborn in the same environment twenty years ago (Researcher's Journal).

Trevor was articulate and thoughtful in his feedback, pointing out several examples and scenarios from student's experiences with patient cases.

**Trevor: A synthesis of responses.** Trevor's clinical teaching environment suggests incredible attention to sensitive patient care issues among the most vulnerable of patients: infants, children, and young adults. His role as a preceptor in the LCE program brings together communication and sound judgment in medical decisions, evident in the interview dialogue, patient care, and how he teaches students. Trevor embraces the true essence of medicine using evidence-based practice of clinical problem solving in diagnosis, treatment, and the care of patients from birth to age eighteen, and their families. In caring for his burn and trauma patients he practices his own advice in clinical teaching excellence in showing a commitment to his patients and utilizing effective communication skills and adaptive teaching strategies.

Some of the patients can't communicate, they're on life support and stuff like that, so there's other issues that you can deal with that are beneficial to these students even though it's way above their 'pay scale'. . .to actually take care of

them or make any real decisions, but there's a lot of things that you can talk to them about, expose them to. . .it's just a step in a whole continuum that somebody will pick up after they're through with me and take 'em further. [TL:199]

Trevor's calm manner and confidence in his medical care experience was reflective of his residency training and life skills acquisition of real world critical care. The researcher's observation in dialogue with Trevor generated an emotional bridge to her own personal challenges and provided important insight into the medical team as caregiver [Researcher Journal].

In describing clinical teaching excellence in working one-on-one with first and/or second year undergraduate medical education students Trevor conveyed two key points (a) to consider the student's level of knowledge, and (b) being able to communicate at the student's level of learning. He stated, "Because they [students] do not know the doctor lingo yet, you have to take them back to some point where they can understand what you are talking about." His two points intersect at the communication juncture illustrating the importance of information exchange and targeting the level of the learner in medical training dialogue. For example, he discussed the role of communication in the first year LCE setting.

You may get a student who has only been in medical school for two months and doesn't really know any of the vocabulary, any of the science, but they are able to reason. So there is always something that you can present to them or discuss with them that pulls into their consciousness reasoning, working through problems.

[TL:57]

Trevor's perspective of clinical teaching excellence and communication resonates in his clinical teaching environment, branching out to the families of his patients who are important in the medical care process. LCE students experience unique family dynamics through his direction that impact their emotional, spiritual, and cognitive development.

I think if you recognize those two things [teaching to the student's level and communication], and then you're not afraid to let the student experience sort of what you're [sic] experience. . . even knowing they won't understand the whole thing, then I think they're really appreciative because there's a lot of things other than the medical science that they learn just by watching you, how you communicate with the families, how you deliver information whether it be good news or bad news, how you deal with the emotional side of what we do, and those are all good things that they can perceive that if you think about it then you can sit down and talk with them. What'd you think about the way we presented this horrible information to the family? So there's always something for them to get out of it. [TL:85]

As the past director of a clinical problem solving course for medical students, Trevor guided students through skill building techniques in diagnostic reasoning, used as a core element in the medical management of patients. He uses the same process in guiding students in the LCE learning environment. Clinical problem solving, communication skills, and the processing of patient care information was acknowledged by Trevor as being similar in clinical teaching of first and second year medical students. This is a critical concept in how doctors think about clinical situations and understanding patient symptoms, complaints, differential diagnosis, and treatment and, when applied

beginning in the first year of medical school, can be instrumental in the student's progress. This also became evident in discussions of clinical teaching excellence with Trevor and the importance of students acquiring the skills in clinical problem solving and communication. The dialogue with Trevor had illustrative themes in clinical reasoning, patient care and student learning.

In the discussion about attitudes and/or behaviors that distinguish excellence in clinical teaching from average performance, Trevor highlighted his perspective regarding understanding the stage of the learner. He also stressed the importance of instilling a student's sense of responsibility in his/her own education and learning, especially in the preclinical years. For this to succeed, preceptors should show their own commitment to patient care and provide opportunities for the student to observe and learn from this behavior. For example, he stated, "The commitment to patient care should encompass the entire well-being of the patient. . . is this hospitalization stressful? Is the patient pain-free?" The preceptor's initiative in his/her commitment to patients is a teachable moment for the student showing them that "you can't just focus on 'this is a bad gall bladder. . . you have to also focus on how it affects the patient and their families."

Trevor's own experience in clinical rotations during his medical training was similar to other interviewed preceptors having little or no exposure to real world medicine or patient care in the first two years of school. He reflected on even more limited opportunities in practicing clinical application of basic science knowledge because of the lengthy amount of lecture time involved and no summer clinical setting exposure. There were no structured preclinical or shadowing experiences similar to the LCE program until his clinical rotations began which interestingly, took place over a 15-

to-18 month timeframe. Most current medical school curriculum includes a two-year clinical program where students are full time in clinical practice settings. Trevor's only basic clinical skills practice took place in the classroom on each other [classmates].

And all you listen to each other's hearts and lungs and stuff, but you didn't really have any clinical exposure outside of. . . somebody might come in and give you a lecture on. . . tuberculosis, and they'd show you some. . . a patient with tuberculosis on a still slide. Or every now and then somebody might bring in a patient with cerebral palsy, so you'd see. . . They'd go through an exam, but you were in still a huge classroom looking down to the front. [TL:105]

Ironically, current clinical training can be limited due to the challenges of today's health care environment. Trevor discussed the role litigation has in the clinical landscape and how clinical training opportunities have been "taken away from medical students."

Trevor mentioned many wonderful experiences as a LCE preceptor. However, he spoke of a memorable moment when a first year student shared in the emotional pain of a young burn patient. He remembered, unbiasedly, the student as having a liberal arts background and long, poofy hair. The inexperienced student recognized his role in taking responsibility for the care of the child.

We had a patient over at [hospital] who was burned pretty badly, a little child, and it was a flame fire and her hair was burned off. We were sitting down, I said okay, [student], what did you think about that? And he said 'I just kept thinking I wanted to cut my hair and give it to that child.' I think from that moment on, it sort of opened his eyes up to the suffering of others, and how he had to have some responsibility for knowing how to take care of them. That he would have to

pursue on his own. But I just remember his eyes sort of lit up after that day and they stayed that way the whole time. [TL:167]

Challenges in Trevor's clinical teaching environment paralleled his theme of bringing clinical information to the level of the learner. He talked of teachable moments affluent in the patient care setting which are not always obvious to the clinical teacher. He states, "There's literally always one in any patient encounter. . .How powerful it is depends on what the level of the learner is." For example, Trevor compared the first year medical student with the fourth year student and the opportunities at both levels for clinical discussion of the cerebral palsy patient. Getting to know your learner and balancing patient care time within the framework of teachable moments are continuous challenges and contributed to the emerging thematic development.

Trevor talked of his formal training in teaching and how this has helped him be a better clinical educator. He believes professional development programs which include topics on communication skills, adult learning principles, effective feedback, and teachable moments are important in creating a rich learning environment for the student. He stated, "If we're the ones that are training these doctors of the future to be efficient and better communicators, all the things the public wants, why don't we have any formal training in how to do this? And in my case it's an activity that fits my personality really well." Providing meaningful feedback to the student, knowing who your learner is, and their expectations, are all elements in assessing and understanding the student's learning level and should be integrated into the training of new preceptors. Professional development venues identified by Trevor included online internet programs that are easy

to access, can fit into the busy practitioner's schedule, and are required prior to taking a student on rotation.

The emerging themes of demonstrating an awareness of the student's learning level, implementing clinical reasoning practices, and creating teachable moments were identified in the data analysis from Trevor's interview and will be discussed next.

**Trevor: Demonstrating an awareness of the student's learning level, implementing clinical reasoning practices, creating teachable moments.**

*Demonstrating an awareness of the student's learning level.* The importance of teaching to the student's learning level was emphasized throughout the interview dialogue with Trevor. The first interview question, How would you describe clinical teaching excellence in working one-on-one with first and second year undergraduate medical education students, initiated rich insight into Trevor's teaching process. In the clinical environment, a student's level of understanding is dependent on many influences such as, prior clinical experiences, school and rotation expectations, and cognitive development. Additionally, preceptors should be attuned to these influences in the teaching setting. "Teachers need to understand their learners' prior knowledge as well as their conceptions and misconceptions of the subject matter" (Irby, 1994b). An understanding of the learning level of the student helps guide the preceptor's clinical instruction and when identified as a tool in teaching can promote teaching excellence.

The researcher has career experience in the value of understanding the student's learning level through a decade of feedback, training, and observation of the clinical education setting. The experience was framed by being in the role of a clinical rotation coordinator, program director, program evaluator, and liaison to several hundred



academic and community-based preceptors. For example, a recent needs assessment of preceptors in the community-based setting conducted by the researcher showed the preceptor development topic of most importance was *assessing the knowledge and skills of rotating students*.

Trevor referenced vocabulary, basic sciences, and sound reasoning in understanding the learning level. Many first year students do not have the vocabulary needed for high level clinical dialogue or a solid understanding of basic science knowledge in order to correlate to a clinical environment (e.g., pathophysiology). Even when students do not have the vocabulary or basic science knowledge, Trevor said, “They are able to reason.” There is additional reflection on learning levels when Trevor describes the attributes and behaviors important in clinical teaching excellence. He states, “I just can’t emphasize enough how important it is to understand the stage of the learner.” Having the ability to understand learning levels is an important skill for clinical teachers.

The experiential opportunities and attitudes a student has acquired prior to a rotation provide a different set of skills that Trevor acknowledged has an impact on learning level and how to adapt to the clinical teaching situation. *Understanding and adapting to the learning level of the student is a recurring category in thematic development*. In most instances this surfaces as a difference between the first and second year medical student.

So you can have a bit of a more of a, this is probably not the best way to describe it, an adult conversation with a second year. It’s more advanced than if you were with a first year. I can almost have the same discussion with a first year student and a high school senior that comes to rotate with me. I mean the way I teach

people doesn't really change. I just. . .I adapt it to where they are in their whole education sort of transformation. But I think it's a common mistake clinical teachers make. . .they don't really think hard about who the learner is and then a lot of stuff just passes by 'em. [TL:173]

Understanding student's learning level is an important part of clinical teaching and can separate the average teacher from the exceptional teacher. Trevor finds it a continuous challenge in balancing the number of patients and clinical training; however, getting to know the learner, using communication skills, and making a commitment to teaching can foster clinical teaching excellence. He acknowledged the importance of providing professional development opportunities for preceptors such as how to teach, setting learning expectations, and student rotation orientation to equip themselves with effective teaching tools and strategies.

***Implementing clinical reasoning practices.*** Clinical reasoning has a broad framework in the health sciences including nursing, dentistry, and veterinary medicine and embraces a deep, critical thinking process of nonlinear steps in the patient diagnosis and treatment plan. "Acquiring such reasoning skills is a key requirement at every level of medical education and is grounded in several fundamental principles of educational theory" (Kassirer, 2010). One example of a clinical reasoning instructional strategy is case-based, clinical learning models, such as the One-Minute Preceptor, developed from real world patient cases and scenarios. The instructional models offer the student pattern recognition and other critical thinking opportunities in fostering a diagnostic process. Trevor utilized a solid platform of clinical reasoning in his teaching role noting students in the LCE program are "transitioning from regurgitating basic science information to

applying information to make decisions.” He stated, “The best doctors are not the smartest, they don’t make the highest test scores, but they make good decisions based on sound reason.” He also linked this process to the learning level of the student through decision-making and communication skills and the preceptor’s role in understanding how first and/or second year students process the information.

The issue about processing information, decision making, is similar [between first and second year students]. The communication is similar. Second years have a better vocabulary, a little bit better fund of knowledge in some specific things, so you can take them to different places that you can’t take a first year to because they have a larger body of knowledge. But that just puts the onus on the preceptor to sort of understand that and then be able to kind of move the questions or move the discussion in a realm that they can use that information, or you ask them to try to use that information. [TL:171]

Trevor’s confidence in clinical reasoning is based on his training and medical practice experiences, as well as lessons gleaned from his directorship and facilitation of a clinical problem solving course in the medical school curriculum. As a small group facilitator he guided the student’s reasoning process of judgment, clinical cognition, causality, and other critical thinking skills in making organized formulations of patient case diagnosis and treatment. Preceptors with a robust teaching framework of clinical reasoning skills offer students incredible opportunity in preclinical rotation experiences and patient care.

***Creating teachable moments.*** Creating teachable moments is the third emerging theme from Trevor’s interview analysis with opportunity to be implemented in any educational setting including a broad range of clinical teaching disciplines. Rich (2009)

described how to recognize and define a teachable moment as it relates to athletic training and captures an applicable definition from a mixed-method design study. In her study, she says a teachable moment “occurs when a clinical instructor and an athletic training student work together to enhance learning and foster intellectual curiosity in the clinical education environment.” She also recognizes that “instructors or students may have difficulty recognizing a teachable moment when it occurs” (p. 295).

Trevor merged his thoughts about awareness of student learning levels, communication, and teachable moments into a central discussion point in the interview dialogue. The three concepts easily align in clinical teaching and should be approached together as a training tool. He talked about the student’s experiences in the clinical setting and the ability of the preceptor to “recognize and appreciate” teaching moments. For example, when students have the opportunity to apply medical science knowledge to patient care there is also the opportunity for the student to practice communication skills and deliver difficult and emotional news to families. Assessing medical student competence can be easier than assessing the delivery of difficult news. However, teachable moments in communication skills and humanism can offer valuable learning opportunities sensitive to improved patient care outcomes (e.g., the first-year, LCE student who was exposed to the suffering of the young burn patient). *Trevor’s teaching environment was inspirational to the researcher who has a passion for humanism in medicine and its’ shaping of future medical practitioners.*

The analysis also revealed being sensitive to a lack of teachable moments, which could result in lost student learning opportunities. When asked about his own undergraduate medical education and how it compared to the LCE preclinical experience,

Trevor reflected on his lack of clinical experiences. His preclinical time was consumed with classroom and lectures, leaving little opportunity for clinical application and teachable moments.

We sat in rooms and listened to lectures for eight hours a day, five days a week.

And, I can distinctly remember getting very discouraged because you didn't really feel like that's what you were there for. You'd just done that for four or five years in college so why are we doing this all again? [TL:101]

The value of the LCE experience is real world exposure to patient care, health care practices, and an interdisciplinary clinical approach to medicine. Students find teachable moments interacting with non-physician health care professionals (e.g., nurses and office managers) as well as interacting with physicians, pediatric patients and their families. Teachable moments are not always between the preceptor and the student. Many times simple interaction can foster teachable moments important in life decisions and life-long learning practices. For example, Trevor remembered a pivotal point in his life when he became interested in medicine.

I had an uncle that's a doctor and we talked about it some as I was growing up and I just sort of liked the science and the interaction of people, so that sort of drew me into it. I became interested in medicine from discussions with an uncle and liking the science and interaction with people. [TL:129]

Trevor identified teachable moments as an important part of the LCE learning environment and acknowledged the challenges many preceptors face in recognizing instructional opportunities. He believes balancing patient care and teaching time, the understanding level of the learner with complex patient cases, and professional

development programs with adult learning theory plays a major role in overcoming the challenges. Trevor’s teaching setting was rich with teachable moments. For example, there is similar immeasurable value in experiencing a correct diagnosis as there is in experiencing empathy for a young burn patient and his family. It is the ability to find the opportunity to foster the teachable moments which creates excellence in clinical teaching. Figure 9 illustrates initial concepts and primary themes from Trevor’s responses.

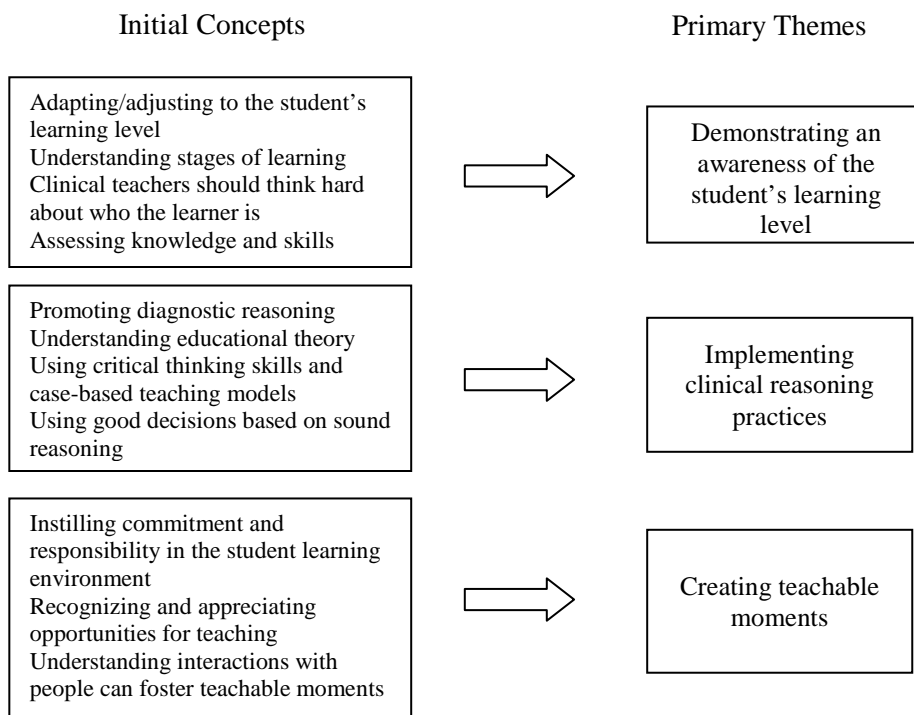


Figure 9. Initial Concepts and Primary Themes from Trevor’s Responses

**Arthur: Community-Based, Specialty Physician**

**Introduction of Arthur.** Arthur is a male practitioner who works as a specialist in a hospital setting on the gulf coast of Florida. He is a recent graduate of the study site and was also in the inaugural class of LCE students in 2005. He has been a preceptor in

the LCE program since 2009 mentoring four students over the last three years. Arthur became a preceptor with the LCE program after completing his residency program at USF and beginning his medical practice at an area medical center (hospital). The researcher remembers Arthur from his medical school class and LCE experience and notably his correspondence with the LCE director in 2009 expressing an interest in giving back to the LCE program by participating as a preceptor and mentor. *It is rewarding to see former LCE students come back to practice medicine in a teaching role in the same program (LCE).*

Arthur works in a newly established specialty field which is experiencing rapid growth in the hospital setting. He was one of four community-based preceptors identified from the 34 nominees and was interviewed during the third selection set.

The interview was conducted at the hospital-based, practice office and began after a short conversation about former LCE times. The interview was noticeably fast-paced; ending fifteen minutes early. Arthur was concise in his feedback and did not diverge much from the focused questions.

**Arthur: A synthesis of responses.** The first interview question on how Arthur described clinical teaching excellence in working one-on-one with first and second year undergraduate medical education students was discussed and answered with a focused response.

I think first and second year students don't have knowledge base yet, so the key is to try to get them engaged and make them understand why you learn the basic sciences, explain how it relates to clinical medicine that we see in everyday

practice, and making sure that you keep it at their level, and not try to over speak them because they haven't had the years of experience yet. [TL:7]

Arthur's response on learning level was quickly compared by the researcher with other similar interview responses in regards to teaching to the level of the learner. The ability of the preceptor to adjust teaching to the knowledge and skill level of LCE students plays an important role in an environment of clinical teaching excellence. Arthur identified his role as a tutor for athletes in undergraduate school as a pivotal moment for his role as a preceptor, helping him learn to communicate effectively and teach at the appropriate level.

In order to adjust teaching to the knowledge and skill level of the student, an assessment should be considered. Beckman and Lee (2009) used a "diagnose the learner" approach where "teachers identify deficiencies in students' medical knowledge and skills (p. 341). Parallel to the current study's data analysis, Beckman and Lee state, "Diagnosing the learner is a crucial step. . .just as physicians must diagnose diseases before treating patients, teachers must diagnose learners before improving learner's clinical development and diagnostic reasoning abilities" (p. 341).

Arthur described a process he uses for "diagnosing the learner" at the beginning of the LCE student's rotation during orientation. He has the first or second year student be a part of a patient admission at the hospital which provides an opportunity for an assessment of knowledge and skill level. For example, he reviews the student's history and physical and presentation of the findings to the attending, determining if they have already learned applicable information. If the student has not learned the information, he makes a decision on the teaching plan (e.g., shadowing or seeing the patient on their



own). The initial “learning diagnosis” and assessment becomes an integral component to the clinical teaching environment and captures re-occurring themes such as “being adaptable in the teaching environment” and “demonstrating resetting and preparation in the teaching role” from previous interviews.

When asked about attributes essential in his role as a community-based specialist, Arthur described the importance of having patience and understanding as a teacher and medical practitioner. He stated, “You’ve got to be able to have the time commitment and understand that students are going to have lots of questions, they are going to slow down your day.” However, if students are engaged in the learning process they become more involved as a learner. He acknowledges the frustration of balancing student learning time and patient care. Having compassion, patience, and understanding as preceptor attributes helps one work through the challenges in the teaching environment.

Arthur provided a unique perspective of comparisons of his own first and second year of undergraduate medical education and his current LCE students. As an alumnus of the first class of LCE graduates in 2005, he spoke with reflection on his LCE experiences in two different sub-specialty practices. He described similarities in the teaching setting, stating, “All my LCE rotations were in the hospital (inpatient) doing similar things with histories and physicals and going over exactly what we saw in the patient.” He mentored LCE students now who are doing similar things in the inpatient setting at his hospital. He explained the differences between the two in consideration of the change in rotation schedules. His LCE experience involved a series of three rotations over two years. Current LCE students rotate at two sites over two years. In some ways, the current rotations are better because students spend a longer time with the preceptor, and the

preceptor gets to know the student, how they learn, how to teach them, and what they expect from them as a clinical teacher.

Another benefit of a longer rotation at Arthur's practice site is the opportunity for interdisciplinary experiences (e.g., exposure to anesthesia patient care). The student has more exposure to patient care from a team approach with multi-specialty physicians and thus, more integrated clinical application. The interdisciplinary exposure for LCE students and the student's acknowledgment of the opportunities it provides is mentioned as Arthur's most wonderful experience as a preceptor. When students are connected to another specialty of interest through the LCE rotation (e.g., anesthesiology) Arthur observes, "Probably the most wonderful experience is watching these students get into what they want to do and get excited about medicine."

When asked to describe one especially positive experience in his first and second year of undergraduate medical education Arthur identified the time he learned how to look at EKGs (Electrocardiograms) during his LCE course.

The cardiology preceptor I had and the PA (physician assistant) had me sit down with one of the telemetry techs and we spent almost the entire day looking at different strips and went over all the rhythm strips. That helped a lot with looking at EKGs. And then my preceptor sat down with me and went over EKGs. So that was a great learning [experience], how to look at EKGs and everything, which has helped, obviously, for the rest of my career. [TL:75]

As a student in the LCE program, Arthur had the opportunity to experience real world medicine in the inpatient setting, the same environment he is now practicing. He clearly understood the advantage of early clinical exposure through LCE and the impact it can

have on a medical student's career. A positive experience for Arthur in his current role as a clinical teacher was watching his LCE students learn, "You watch them the first day when they take a history, you see what they're missing and, usually, by the end of the rotation they are presenting as if they are more or less an intern." Because he experienced the same opportunity in his first and second year of medical school, he understands how to teach, how they learn to make histories and physicals more precise, and how to present effectively.

Arthur identified time commitment as a negative experience in both his undergraduate training and LCE preceptor role.

It's the same thing when you're a first and second year student, your main goal is you want to study and learn and try to take out of your day to go to do LCE. You don't see the value in it as a first and second year student, I don't think. Now it's similar in that when you're an attending, the time commitment is similar, especially in private practice when you had to do admissions and you get back to admissions, you'd still have that time commitment where you've got to spend time with the student and make sure they learn. [TL:89]

Time commitment in clinical teaching parallels other interview findings. However, in Arthur's discussions there is considerably more insight from the teacher as well as the learner point of view. Arthur was able to reference experiences as a LCE student and the challenges of time commitments. For example, he has experienced the logistical challenges of travel and expenses to three LCE rotation sites and the academic challenges of study time combined with LCE obligations. He is also able to reference the time commitment challenges as a LCE preceptor and balancing teaching and patient care time.

Arthur reflected on his LCE training in medical school when describing similarities and differences in teaching first and second year students. He says the similarities are illustrative of the acquired (or lack of acquired) level of clinical skills such as in performing patient histories and physicals. Both classes “take a lot of time taking a history, haven’t figured out how to be more concise and what questions to ask, and what’s important, what’s not.” He described the process of learning clinical medicine in the preclinical courses through a systems approach. The preclinical program is “all about the student learning the basic sciences, understanding the organ systems, and memorizing information. . .efficiently.” Students spend a lot of time asking questions, trying to connect the basic sciences and clinical medicine. Arthur believed the excellent clinical teacher spends the time to figure out how to make the questions and application more concise. First and second year students have similar challenges with clinical skills because of limited pathology, physiology, and pharmacology knowledge early in the LCE rotation. However, towards the end of the rotation second year students generally have acquired enough for clinical application.

In addition to balancing the time commitment of teaching and patient care, another challenge for Arthur was ensuring he had the recall and understanding of basic science information from his preclinical training in order to help students with their understanding and before he can teach the clinical application. Preceptors often lose basic science concepts over time and as they replace the foundational elements such as physiology with clinical diagnosis and treatment. For example, homeostasis is a fundamental principle of physiology, emphasizing diet and lifestyle interventions as a

way to restore normal physiology and mitigating the knee jerk reliance on pharmaceuticals so prevalent in medical practice today (Lingappa & Farey, 2000, p. x).

Arthur emphasized when the second year student understands physiology components (e.g., beta blockers) they have a better understanding and there is less time spent on basic science review. Additionally, most LCE students in their second rotation have a prior LCE clinical experience where they have done some histories and physicals (H & Ps). The preceptor does not have to spend a lot of review time: instead, the time can be spent on advanced clinical application such as treatment and differentials.

Arthur recognized many challenges in his role as LCE preceptor. However, he is rewarded by “watching the students grow, watching them learn to do histories, and talk to patients.” Reflecting on the interview, he captures a memorable moment from one of the LCE rotations.

One of the first students I had came back to me and said the patient’s sleeping and by the end of the semester it didn’t make a difference, he just walked in the room, woke up the patient and started taking a history. So it’s amazing to watch them change and their attitude starts changing and they start becoming more. . .not as timid, I guess, and becoming more clinical. [TL:183]

The interview with Arthur generated the following emerging themes which will be explored further (a) demonstrating the ability to diagnose the learner, (b) utilizing interdisciplinary teaching and, (c) making a time commitment.

**Arthur: Demonstrating the ability to diagnose the learner, utilizing interdisciplinary teaching, making a time commitment.**

*Demonstrating the ability to diagnose the learner.* A discussion of the first theme which emerged from Arthur's interview, demonstrating the ability to diagnose the learner, reflects on the previous reference to Beckman and Lee's (2009) article entitled, *Proposal for a Collaborative Approach to Clinical Teaching*. Their statement, "Diagnosing the learner is a crucial step. . . Just as physicians must diagnose diseases before treating patients, teachers must diagnose learners before improving learner's clinical development and diagnostic reasoning abilities" (p. 341). Their description is analogous to the current study's analysis of Arthur's interview. From the researcher's perspective, demonstrating the ability to diagnose the learner is about assessment. The preceptor must assess the medical students learning needs just as the physician must assess the patient's medical needs. Arthur made several references to this assessment process throughout the interview dialogue. Early in the discussion he talked about keeping the student engaged in learning and keeping the instruction at the student's learning level. He explained the importance of the basic sciences and how it relates to clinical medicine, however, keeping the application at the learner's level in order for the student to understand the connection. Arthur's plan for assessment of the student's needs included having the student take a history and perform a physical examination on a patient when his patients are admitted to the hospital and then going over the steps and finding out what parts of the history the student has not learned.

Arthur discussed the student's learning level in terms of communication. He states, "I think being able to explain, being able to keep it down to the student level,

understanding that it has to be. . .Don't try and show off to the student. You've got to be able to communicate effectively." He reflects on his tutoring experience from undergraduate school and how that process helped him communicate effectively and the importance of keeping the conversation "to the point". His tutoring experiences have helped him teach and explain concepts effectively between first and second year LCE student learning levels. For example, the first year student taking a patient history and performing a physical examination may not have the clinical skills yet to efficiently go through the "laundry list" (checklist) of steps. Arthur's communication skills' practice through tutoring facilitates the student's processing of information in efficiently asking patient history questions (e.g., family history, medications, etc).

*Utilizing interdisciplinary teaching.* An interdisciplinary approach to clinical education is recognized as an important learning tool in the health sciences and for patient-care improvement efforts. An initiative by the Institute of Medicine (IOM) in 1998 to identify and correct gaps in health professions education brought interdisciplinary education to the forefront of healthcare delivery. The IOM identified core competencies including working in interdisciplinary teams where individual health professionals bring their discipline's expertise and knowledge to an interdisciplinary team to better meet patient needs (Wheeler, Powelson, & Kim, 2007).

Interdisciplinary clinical education affords students an opportunity to recognize the unique contributions of each discipline and to learn collaboration. When these students become professionals, they will be better prepared to effectively work on an interdisciplinary team, potentially optimizing future patient care. (p. 140)

Arthur illustrated an interdisciplinary element in his teaching role as a preceptor and explains how it represents one of his most wonderful experiences as a LCE preceptor. He reflected on the e-mails from the students regarding an interdisciplinary learning experience. For example, one LCE student was interested in anesthesiology and had an opportunity to shadow an anesthesiologist in Arthur's inpatient setting. "Watching these students get into what they want to do, getting excited about medicine about learning is probably the most wonderful experience." He embraced moments where students interact with others on the healthcare team (e.g., nurses) and encourages the collaboration between those involved in the patient's care. He stated, "This is more of a team effort where nurses are involved, physical therapists are involved, everybody's involved in taking care of the patient." The medical team or interdisciplinary team of healthcare professionals is becoming increasingly important in medicine.

The interaction of different clinical disciplines such as the critical care doctor and the respiratory therapist, the orthopedic surgeon and the physical therapist, and medical practice manager and private practice doctor are important elements of patient care. They are also important in facilitating successful real world medicine learning among medical students. Each has their own unique expertise, views, tolerances, and attitudes, which through a common vision can have a positive impact on patient care outcomes and cost-effective medical care.

***Making a time commitment.*** Arthur referenced the importance of setting aside teaching time in LCE rotations and the importance of preceptors taking responsibility to understand how to balance patient care and clinical teaching time.



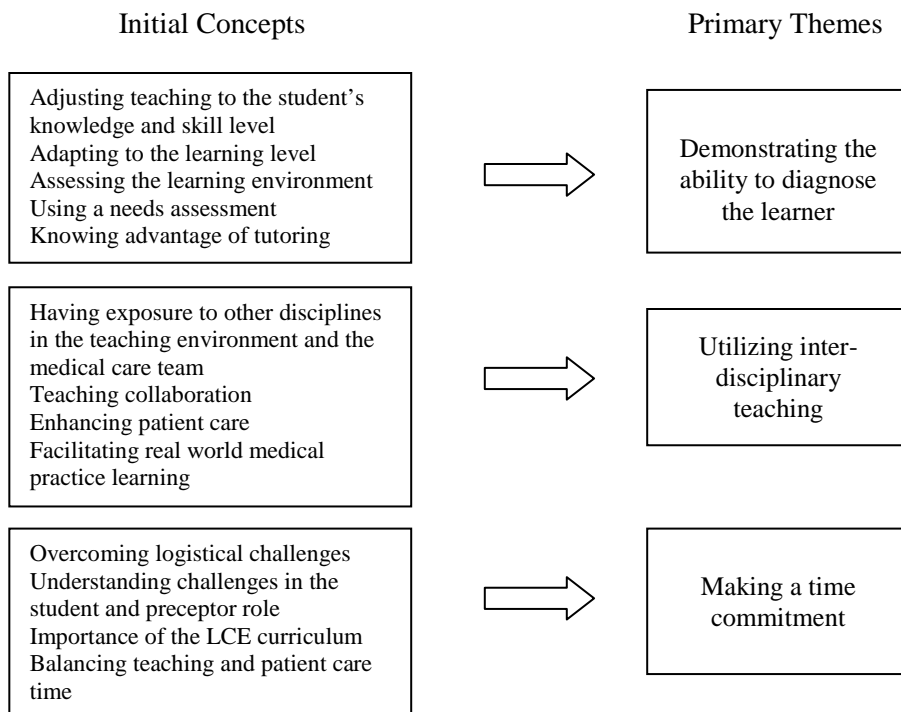
The biggest thing from a clinical standpoint, from a preceptor's standpoint is the same thing. You've still got to make sure you spend time teaching, they've got to understand, students have to understand that pagers are going to go off, the cell phone's going to go off, it's a little different than back when you're sitting in a classroom where you have that lecture time. In the clinical setting you don't have that sit down and lecture time. You do have the pagers' going to interrupt you, you have to keep track of your thoughts, and make sure it's not disruptive to teaching. [TL:149]

Time impacts the preceptor's role as a teacher as well as the student's role as a learner. Even the change in the LCE curriculum had an impact on time commitment in the rotation schedules. Arthur discussed the challenges of limited time in his own rotations in undergraduate medical education and how changing from a three rotation cycle to a two rotation cycle in LCE made a difference for student learning. With longer rotations Arthur stated, "preceptors get to know the student better, how they learn, how to teach them and what they expect from you." Clinical teaching time can burden the already busy practitioner with students asking questions and time needed for ensuring an understanding of the instructional message. He considered the attribute of patience and compassion an important part of the teaching environment in overcoming barriers to limited teaching time. Arthur offered helpful advice for new preceptors.

Their job is to learn from you. And, as long as you can show them how when you examine patients, you should show them different clinical skills and show them how to listen to the heart and take the time to sit there and show them correctly

how to do the physical diagnosis, take a proper history and everything. I think that goes a long way. [TL:13]

Arthur highlighted the importance of preceptors learning how to be good teachers, “It’s easy to have a knowledge base. . .the harder part is trying to teach it. . .I think as physicians seeing our patients we’ve got to teach them about the disease process as opposed to just dictating to them.” His advice for professional development opportunities for new preceptors includes a focus on being a good teacher as well as other topics such as learning styles and communication skills to optimize clinical teaching. Figure 10 illustrates initial concepts and primary themes from Arthur’s responses.



*Figure 10.* Initial Concepts and Primary Themes from Arthur’s Responses

## **Eaton: Community-Based, Specialty Physician**

**Introduction of Eaton.** Eaton is a male practitioner who works as a specialist in a private practice setting. He travels between two practice locations providing highly specialized care as well as consultation with other specialists because of his experience and knowledge of his medical discipline. He is a graduate of Harvard Medical School and completed his residency and a two-year fellowship at a California training program. He began private practice in Florida in 1994 and with the LCE program in 2002 mentoring ten students over the last ten years [December field notes].

Eaton was one of four community-based preceptors identified from the 34 nominees and was interviewed on Christmas Eve at his private residence, during the third selection process. Eaton was glad to be a part of the study and was familiar with Institutional Review Board (IRB) procedures from involvement in clinical research studies in his medical field. The interview pace was quick with brief, yet, concise responses on clinical teaching excellence and was completed in forty-five minutes. The first impression of the interview environment gleaned a sense of a strong family foundation and importance on the value of international travel and cultural exposure.

**Eaton: A synthesis of responses.** When asked to describe clinical teaching excellence in working one-on-one with first and/or second year undergraduate medical education students Eaton referenced the goal of the LCE program in providing a clinical experience where the student had one-on-one exposure to a practice setting. He believed it is important for the student to see how the practice works and not necessarily understand the details of a specialty practice. However, he provided training on basic exams so that the student will have exposure to basic patient care principles, such as the

interview, within his specialty. Since Eaton is a practitioner within a highly specialized field of medicine, there are limited patient care opportunities for the student.

Accordingly, keeping the teaching environment interesting and educational is a challenge and an important consideration in his description of clinical teaching excellence. He was appreciative of the opportunity students have in LCE to select his specialty for a rotation, reducing the challenges in interest levels.

When asked what clinical teaching attributes he considered most essential as a specialist working in a community-based setting, Eaton emphasized being comfortable with patients as a preceptor and as a student, the importance of student-patient introductions, the ability to adapt teaching, and the ability to teach in a busy practice. In teaching in a busy practice setting he also emphasized the importance of understanding the teaching curriculum (LCE course) and its relationship with the practice. For example, he uses a “wave” scheduling approach for LCE students, which provides an efficient strategy for balancing patient care time and protected student teaching time. Wave scheduling maximizes guidance and feedback for the preceptor and student as two patients are seen simultaneously (e.g., the first twenty minutes the student sees patient one while the preceptor sees patient two, the next twenty minutes patient one is seen by the student and preceptor together, next the student writes in the chart for patient one while the preceptor sees patient three). In identifying attitudes and behaviors that distinguish teaching excellence from average performance Eaton discussed the importance of taking the time to research an approach to a medical diagnosis. Enhancing student involvement and being humble in the process also takes teaching excellence to a higher level.

Eaton described his own medical school training as very different from teaching first and second year LCE students. As reflected in previous interviews, Eaton did not have any clinical experiences in his preclinical medical education, except for a distant comparison of an anatomy dissection lab; one of his positive learning experiences in medical school. His first two years were traditional, basic science classes such as, anatomy, physiology, and pharmacology, with no clinical application. He remembered an ENT (Ear, Nose and, Throat) rotation in his third year of medical school which was an especially positive experience. He also reflected on case studies from his undergraduate medical education at Harvard and on a pre-med advisor who was pivotal in guiding him to his current specialty. When asked about any negative experience in his first two years of medical school, Eaton could not remember any; however, he described how he “ran out of energy” in anatomy class thinking he could “pass without learning the foot.”

Eaton described one especially positive experience, and his most wonderful experience as a LCE preceptor, mentoring a student who always showed genuine interest in learning, an interest in his specialty, and always carried a learning notebook during rotations. Eaton noted this student several times throughout the interview as well as the one “bad” student who was not interested in learning, was “clearly out of the range of whatever the Bell curve should be for behavior,” and presented significant challenges for him as a preceptor. The emphasis on the LCE student’s interest in active learning was a key clinical teaching excellence descriptor and was identified as an emerging theme in the interview.

Eaton was asked about any similarities or differences in teaching first and second year LCE students. He finds teaching to be similar between both student levels since few

have previous background information in his specialty. Most students begin his rotations with the same level of knowledge. The major difference in teaching first and second year students is their adaptability to the training and instruction. Second year students adapt and catch on at a faster pace.

The challenges (barriers) for Eaton focused on similar discussions as his advice for new preceptors. Active learning opportunities for students were a key finding especially in consideration of the limited practice and patient care time and scheduling available for teaching. Eaton found that identifying potential tasks for students in the clinical environment was valuable. For example, he provided students patient education material, student level medical books in his specialty, and opportunities on basic exam equipment to keep their interest and to “keep their hands busy.” He also offered the same advice for physicians who would be contemplating becoming a new preceptor.

Professional development is an important yet underutilized tool in preparing preceptors for their role as a clinical teacher. With the shift to more student clinical experiences in the community-based setting and the increasing challenges in patient care, new approaches for effective teaching should be carefully considered. Eaton identified several instructional elements important in preparing preceptors for their role including time management, communication skills and how to talk to patients, how to effectively evaluate students, and teaching doctors how to teach. He also commented on restructuring LCE rotations (e.g., blocks) so that there are identified timeframes and communicated clinical teaching concepts for preceptor planning and assessment.

Finally, in closing the interview session, there was reflection on Eaton’s key theme of providing an active learning environment. He stated, “The student is here to

learn and not to be entertained.” The interview with Eaton resulted in robust theme development on clinical teaching excellence. Constant comparative analysis through memo-writing and the researcher’s observations brought the data to a higher interpretive level and identified the emerging themes of (a) utilizing active learning and (b) creating teachable moments.

**Eaton: Utilizing active learning, creating teachable moments.**

*Utilizing active learning.* Keeping the learning environment interesting with opportunity for the student to engage in their own learning was a key concept in Eaton’s interview findings. His specialized practice provided important opportunities to learn, however, it was a constant challenge to balance early application of knowledge and skills with complex learning from the specialty and maintain student’s interest. For example, history taking and basic eye exams provided opportunities for students to practice basic clinical skills and communication. However, balancing basic skills with advanced skills typically practiced by residents, constantly presented careful assessment of student learning level and available patient cases to keep the student’s interest.

The researcher references a common term in teaching and learning called *active learning* in discussing the first theme to emerge from Eaton’s interview. Promoting activities where students take an active role and interest in their learning enhances clinical knowledge and skill development. Irby’s (1994b) qualitative study of six distinguished clinical teachers identified “actively involving learners as the most common articulated general principle of teaching using questioning as a method to achieve active involvement” (p. 336). Bonwell and Eison (1991) described active learning as an instructional technique involving higher-order thinking such as analysis and evaluation.

Whether in the classroom or the clinical practice setting, active learning has been shown to be a powerful strategy in knowledge and skill competency. Eaton promoted active learning by consistently encouraging student-patient interaction, hands-on activities such as eye exams, and having students exposed to unique and interesting patient cases.

I'll try to move interesting patients into the room with the teaching scope when there's something clinically interesting, and then the other patients are just routine. I try to get the student comfortable on the equipment. Which again, I've sort of over the years developed, which I didn't initially. The first week I have them just going to patients with me the first couple visits so it's not weekly. The first two visits they'll come see patients with me and then the next two they'll start to learn just what we call a slip lamp so they can look at the microscope, and then after that they'll start learning to look at the retina. [TL:126]

The specialty practice setting is not the easiest environment for the student to learn basic clinical skills. The LCE program's broad goal encourages student's learning of the practice setting and application of basic science to clinical medicine. The new LCE curriculum (implemented after the start of the study) has a skills-based focus and presents even greater challenges for first and second year student learning in the specialty setting. Eaton has successfully assessed his patient care setting, recognizing active learning opportunities for LCE students. He provided another patient care example of active learning where the student uses a reflective (higher-order thinking) process of note writing to distinguish between two very rare cases presented in Eaton's setting. He commented further and suggested an interesting study would be to compare engagement in active learning among students (whether they pay attention) who pay their own tuition



and those who have it paid. He said, “If they’re carrying loans or they’re actually aware of the cost of schooling versus not. It seems like if you’re aware of how incredibly expensive everything is, you would pay more attention.”

Eaton provided opportunities where students are exposed to unique and interesting patient cases in his practice and instrumental in keeping the student’s engaged in learning. There are teaching challenges in the specialty practice setting in promoting basic clinical application learning; however, the same environment can expose the student to a pedagogical treasure in developing new knowledge and skills. For example, Eaton described a unique patient learning case for an LCE student of a guy who presented with cancer (melanoma) in both of his eyes.

Keeping learning interesting and the student actively engaged helps overcome the challenges of teaching in the specialty setting. Eaton used several techniques including hands-on activities, providing student level medical books in his specialty, practicing on equipment, and exposing the student to unique patient cases to promote active learning and building of new knowledge and skills.

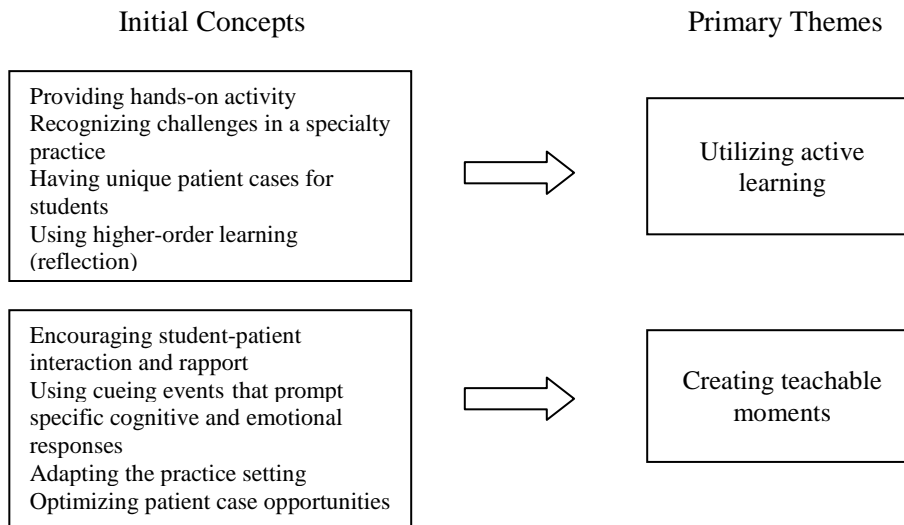
*Creating teachable moments.* Eaton was able to identify teachable moments in his practice even with the challenges from his very specialized medical field. The researcher observed this early in the interview and confirmed Eaton’s challenges in teaching opportunities. For example, Eaton used a wave scheduling approach that allowed an efficient process for student teaching and patient care. This process provided more time for teaching and learning opportunities and the student’s ability to succeed at developing clinical knowledge and skills.

I think there're two things they want to learn. One is about how to practice with patients, just the one-on-one in the office, and then the other one is something about what I'm doing (retina), which for me is very specialized. So, as far as teaching them the interview, they'd come with me to see all the patients and then we talk about some of what we did in between, because there's a lot of down time between patients. And then the second thing is I try to get them, depending on how long they're going to be with me, to learn a little bit about ophthalmology and how to do an exam. [TL:68]

In assessing for teachable moments, Eaton was effective in maintaining a comfort level between the student and the patient. As an important attribute in clinical teaching, he believes the "ability to introduce the students to the patients and to make them comfortable" offers opportunity for teachable moments. Without the established rapport in student-patient interaction, it would be difficult to have successful teachable moments. Eaton also adapted the practice environment by setting up patient cases where the student could experience unique cases and practice on basic exam equipment by moving clinically interesting patients into the room with the teaching scope. In addressing one of the challenges in a busy clinical practice setting, Eaton adapted patient schedules to accommodate student teaching and enhanced teachable moments.

I mean it really does slow you down. Even when I'm trying not to slow down I try to purposely keep the schedules a little light initially with the students because I can move patients a little bit, but then once we get rolling especially in the busy season, you know, nowadays if I have a full load and there's a student with me, I'm always backed up a little bit. [TL:328]

Eaton’s specialty practice environment is challenging for teaching and learning. He overcome many barriers through assessing opportunities, adapting schedules, and optimizing teachable moments for the LCE student. Figure 11 illustrates initial concepts and primary themes from Eaton’s responses.



*Figure 11. Initial Concepts and Primary Themes from Eaton’s Responses*

### **Synthesis of the Presentation Data**

In developing a synthesis of the data findings presented in Chapter 4, the researcher identified primary themes and thematic categories which originated from the manual and electronic analysis of transcripts. The development of themes and categories is described and shows the emerging clinical teaching excellence descriptions from the perspectives of physicians who excelled as clinical teachers in the academic and community-based settings in undergraduate medical education at the study site.

### **Analysis of data presentation findings from manual coding of transcripts.**

The analysis of the manual coding from transcripts produced initial concepts (Appendix P) and primary themes from each interview and was represented in one of two preceptor settings; academic or community-based. The development of concepts and primary themes from each interview was a fluid process over several phases of re-examination of the data in congruence with grounded theory methodology. Four subsequent thematic categories were identified from the primary themes and will be discussed in Chapter 4. Table 4 summarizes primary theme development from manual transcript coding among interviewees, relevant to the academic and community-based clinical teaching settings.

### **Analysis of data presentation findings from Atlas.ti<sup>®</sup> data management.**

After electronically highlighting the free quotations and identifying notable themes from the transcripts, the researcher used a simple, five-point ranking process to summarize the prominence of each interview's theme(s) and aid in the building of grounded theory. If an interview did not include a single instance of that theme, it was represented by "0." If an interview included 1-2 instances of the theme a rating of "x" was assigned. Inclusion of 3-4 instances of a theme was assigned a rating of "xx" and a rating of "xxx" assigned if there were 5-6 instances of the theme represented in an interview. The highest (most prominent) ranking was represented by "xxxx" for seven or more times the theme was identified. Table 5 summarizes the themes and ratings from the Atlas.ti<sup>®</sup> electronic management of interview transcripts.

Table 4

*Summary of Theme Development from Manual Transcript Coding among Interviewees in the Academic and Community-Based Settings*

Clinical Teaching Setting and Primary Themes	
Pseudonym	Academic
	Being adaptable in the teaching environment
Carin	Having an awareness of learning styles Making learning connections
Truman	Utilizing emotional activation Demonstrating passion for teaching
Judy	Promoting academic balance Promoting holistic medicine Demonstrating intrinsic value in teaching
Adelane	Having an awareness of the student's interest in learning Utilizing reflective practice
Community-Based	
	Demonstrating intrinsic value in teaching
Dean	Demonstrating resetting and preparation in the teaching role Supporting students' goals and aspirations Demonstrating an awareness of the student's learning level
Trevor	Implementing clinical reasoning practices Creating teachable moments Demonstrating the ability to diagnose the learner
Arthur	Utilizing inter-disciplinary teaching Making a time commitment
Eaton	Utilizing active learning Creating teachable moments

Table 5

*Summary of Themes and Ratings from Atlas.ti<sup>®</sup> Electronic Management of Interview Transcripts*

Pseudonyms								
Themes	Carin	Truman	Dean	Judy	Adelane	Trevor	Arthur	Eaton
Adapting								
Teaching to the Student's Learning Level	xxxx	xx	x	0	xx	xxxx	xx	xx
Application of Basic Science to Clinical Rotations	0	xxxx	xxxx	x	xx	0	xxx	xxx
Utilizing Learning Styles in Clinical Teaching	xxxx	0	xx	0	0	xx	x	x
Creating a Pedagogical Learning Environment	0	xxxx	0	xx	xxxx	0	0	xx
Mentoring for Student Success	xxx	xx	xxx	x	xx	0	xx	x

Table 5—Continued

*Summary of Themes and Ratings from Atlas.ti<sup>®</sup> Electronic Management of Interview*

*Transcripts*

Themes	Carin	Truman	Dean	Judy	Adelane	Trevor	Arthur	Eaton
Understanding the								
Importance of								
Student Readiness	xx	xx	x	x	xxx	x	x	xx
in Learning								
Appreciation of								
Teaching Rewards	xxxx	0	0	x	xxxx	0	x	x
Addressing Time								
Management in								
the Clinical	x	xxx	x	xx	0	xx	xx	x
Teaching Setting								

As can be seen in Table 5, the rating process helped identify important themes from the electronic data analysis of interviews. For example, two of the eight interviewees (e.g., Carin and Trevor) emphasized the preceptor’s ability *to adapt teaching to the student’s learning level* in describing clinical teaching excellence. Four of the eight interviewees (e.g., Truman, Dean, Arthur, and Eaton) highlighted the importance of optimizing the learning environment through the *application of basic science to clinical rotations*. Truman and Adelane highlighted the importance of *creating a pedagogical learning environment* in increasing opportunities for the student to be eager participants through the application of best practices in teaching and learning. Two of the eight interviewees (e.g., Carin and Dean) identified *mentoring for student success*

as an important characteristic in facilitating an optimal learning environment of inspiration and knowledge and skill development. Adelane emphasized how an *understanding of the importance of student readiness in learning* impacts the motivation of the clinical teacher in facilitating the transfer of new knowledge and skills to the student. Intrinsically driven, *appreciation of clinical teaching rewards* was identified by two of the eight interviewees (e.g., Carin and Adelane) as contributors in the engagement and dedication of preceptors in their role as clinical teachers. Truman identified *addressing time management in the clinical teaching setting* in effectively balancing the role of teacher and patient care provider. The theme *understanding the importance of student readiness in learning* was identified at least once in all interviews.

The free quotations from electronic analysis and the iterative coding process in the manual analysis method identified similar themes. It should be noted that one of the limitations in the electronic analysis was its use as an alternative method to the manual coding, providing a different way of discovering dimensions. Its purpose helped achieve a comparison to the connecting themes from both analyses tools and to aid in the development of emergent categories and theory. The themes from the electronic data analysis are presented in Table 6 with a brief description for reference to the emerging themes and categories.



Table 6

*Summary of Themes and Descriptions from Atlas.ti<sup>®</sup> Electronic Management of Interview Transcripts*

Themes	Description
Adapting Teaching to the Student's Learning Level	<p>First and second year medical students bring different sets of knowledge, skills, and experiences to the clinical environment. The ability of the preceptor to adapt teaching to these varying levels can foster student success and clinical teaching excellence.</p>
Application of Basic Science to Clinical Rotations	<p>One of the goals of the LCE program is to provide experiences where basic science knowledge can be applied to the clinical setting. The student's ability to learn is optimized when preclinical, book knowledge such as physiology concepts can be correlated to a clinical scenario such as a patient with a hereditary disorder.</p>
Utilizing Learning Styles in Clinical Teaching	<p>Personality and teaching inventories provide a tool for understanding the student as learner in the clinical teaching environment.</p>
Creating a Pedagogical Learning Environment	<p>A pedagogical learning environment (e.g., active learning) promotes opportunities for the student to be engaged participants in learning</p>

Table 6—Continued

*Summary of Themes and Descriptions from Atlas.ti<sup>®</sup> Electronic Management of Interview Transcripts*

Themes	Description
Mentoring for Student Success	The true mentor of medical students in clinical settings facilitates the building of an optimal learning environment through their own knowledge and skills, and inspiration; impacting the success of the student, as learner, in his/her medical career.
Understanding the importance of Student Readiness in Learning	The medical student’s readiness to learn in the clinical environment helps facilitate the motivation of the preceptor and thus the transfer of new knowledge and skills to the student.
Appreciation of Teaching Rewards	Clinical teaching rewards which are intrinsically and holistically driven contribute to the engagement and dedication of preceptors in their role as clinical teachers.
Addressing Time Management in the Clinical Teaching Setting	Addressing time management challenges such as patient flow in the clinical teaching setting helps to balance the role of the preceptor, as teacher and patient care provider, and promote an optimal environment for learning.

**Identification of similarities and differences among interviewee responses.**

*Similarities.* As nominees of a teaching excellence award, all preceptors were identified as exemplifying the qualities of a good physician with patients, and who exceeded expectations as a clinical instructor. Preceptors found their role to be rewarding

in their professional careers and personal growth, which was demonstrated through the accommodating interview process. The analysis identified several common elements among preceptors in their clinical teaching.

Preceptors were able to recognize where each student was in his/her medical education. For example, Carin's ability to teach to the appropriate knowledge and skill level of students was the result of years of patient care and development of communication techniques transferrable to teachable moments. Trevor gained formidable experience as a facilitator of clinical problem solving and its application to student rotation learning opportunities. Eaton was able to identify student knowledge levels and seek teachable moments in a challenging learning environment.

Preceptors were able to overcome teaching challenges with an awareness of the student's readiness to learn. It was important for students to be prepared for their role in learning (e.g., having an understanding of the role of physiology in patient care) however, the preceptor who excelled as a teacher was competent in assessing the knowledge and skill level of students formatively during rotations. For example, Arthur would have students perform an initial history and physical on patients to diagnose their knowledge and skill level. Dean was attuned to the differences in knowledge and skill level between the first and second year student and optimized the learning environment by identifying where the student was in the learning process. Identifying where each student was in his/her learning including, knowledge and skill level, helped preceptors adapt their teaching between the two preclinical years. For Carin this was challenging, yet she found it rewarding, balancing between teaching to the student's level of understanding and coaching them on advancing to the next level for learning. She stated, "As a preceptor it

is important to sit back and analyze why you are teaching, what makes you happy or change the way you are teaching.” Adelane found differences in learning levels between first and second year students however, believes the bigger challenge is ensuring students are prepared for the rotation. The ability to have an awareness of, and adapt to, the student’s readiness to learn was identified as an emerging theme from the interviews.

Intrinsic commitment to clinical teaching was another theme discovered in the eight interviews. Through the examination and awareness of their own teaching skills and behaviors, preceptors were able to identify areas for improvement and implement innovative strategies. For example, preceptors recognized their own holistic philosophy of patient care in treating the whole patient through mental, physical, and emotional health and encouraged students to see the benefits of this medical paradigm. Dean looked beyond surface level teaching techniques and described clinical teaching excellence as, “the ability of a preceptor to share skills, values and knowledge. . .the art of imparting knowledge, skill, attitude and perception. . .it is beyond being a physician.” Judy acknowledged the importance of “following your heart” illustrating the inner power to teach and shape future health care practitioners. Adelane embraced reflective practice in her interview, showing her ability to generate an awareness of her teaching abilities and professional competence. She uses this self-awareness tool to teach students how to turn learning opportunities into positive experiences. Intrinsic commitment in teaching is guided by an internalized drive and desire to embrace the sharing of knowledge and skills for student success and ultimately, patient care. Preceptors demonstrated and encouraged having passion for the profession, being dedicated to humanity, being enthusiastic about their role as a teacher, and demonstrating a powerful energy that can be a catalyst in

teaching. The researcher identified this core element as demonstrating an intrinsic commitment to teaching and will be explored further as a theme in theory development.

The preceptor's description of teaching excellence also identified their ability to create supportive learning environments. These descriptions exemplify student engagement in the learning experience, balancing teaching with patient care, promoting communication, and showing respect for students, colleagues, and staff. Additionally, they optimize the learning environment through work-life balance, doctor- student-patient interaction, and promoting an office family. Judy's passion for teaching and creating a captivating and fun place for learning, was woven into every element of her clinical environment. Eaton discovered tasks for students to keep their hands busy and minds engaged. Dean optimized the learning environment through immeasurable dedication and opportunities for students to experience interdisciplinary medicine. Truman facilitated learning through a hands-on, surgical setting, promoting energy and student participation.

Preceptors utilized sound pedagogical practices in clinical teaching. There were various approaches such as, active learning, reflection, clinical reasoning, providing feedback, and emotional activation. Many preceptors used their own challenges in medical school training in seeking tailored best practices in the LCE rotations. For example, the ability to apply and integrate basic science into clinical medicine was limited in the preceptor's first two years of training due to limited exposure to patients. Adult learning theory suggests students learn better when what they are learning applies to real life scenarios. Preceptors created clinical teaching environments of real world medicine, basic science and clinical medicine integration, and opportunity for hands- on

learning; approaches they may not have experienced in their own medical education. Trevor created teachable moments for students to practice communication skills and deliver difficult news to families of young trauma patients. Eaton utilized active learning by assigning students to a clinically interesting case even though his specialty practice was challenging for the student to learn basic clinical skills.

*Differences.* In addition to their work in different disciplines and teaching settings, there were several observations from the eight interviews that yielded noteworthy differences in the preceptor's clinical teaching role. First, although the four emerging categories had similar concepts and elements, there were differences in approaches with each preceptor. For example, Carin emphasized professional development and training in teaching and insights learned from personality inventories in her awareness and ability to adapt to the student's readiness to learn and their learning levels. Truman approached student's learning level through identification of time and attention in the teaching process, creating a surgical training environment conducive to learning. Dean stressed the importance of resetting and preparation where the new preceptor recognized the commitment to contribute to the medical student's career in health care. Trevor's approach was to assess the student's level of reasoning and clinical problem solving, basic skills students need in the medical management of patients.

Another difference in findings from the interviews is a reflection of the practice setting. These situational differences included geographical and practice management challenges such as regional locations of the practice settings and balancing teaching time and patient flow. Additionally, higher costs, lower reimbursement rates, and policies and procedures, have created challenges for clinical teaching in the private practice setting,

especially primary care practicing physicians (Kumar, Kallen, & Mathew, 2002). Academic clinical training sites are traditionally associated with medical schools and teaching hospitals and, therefore, have expected teaching roles and dedicated time in the training of medical students. Of the eight interviewees, four were defined as community-based and of the four, two accommodated students in a non-academic setting (e.g., private practice). As a preceptor in private practice, Dean attributed one of his challenges as a clinical teacher to privacy regulations and restrictions (e.g., HIPAA), which are increasingly obstacles in health care for patients as well as clinical teachers. Arthur works in a non-academic hospital setting and also experiences challenges in clinical teaching due to time constraints and balancing teaching and patient care time. Eaton's challenge was finding learning opportunities for the student in a highly specialized practice. None of the preceptors identified these challenges as significant in their role as a clinical teacher. Rather, the rewards of teaching such as personal satisfaction and giving back to medicine outweighed the challenges identified.

Overall, there were significantly more similarities than differences among the interview findings and preceptor roles. The review of the presentation of data and identification of similarities and differences brought the researcher to another interpretive level in the grounded theory design.

**Development of primary themes and thematic categories of clinical teaching excellence descriptions from the presentation of data.** The researcher examined each of the interviewee's presentation of data, simultaneously with reflection on career experience in medical education, similarities and differences in the findings, observations from the interview settings, field notes, and the literature. As a result, the researcher

discovered initial concepts which generated primary themes from each interview (Appendix P). The primary themes reflected a lengthy, constant comparative analysis process of re-examination that considered elements from each interviewee such as practice setting, personality, teaching beliefs, and teaching strategies. Four thematic

Primary Themes from the Eight Interviews							
Carin	Truman	Dean	Judy	Adelane	Trevor	Arthur	Eaton
Being adaptable in the teaching environment	Utilizing emotional activation	Demonstrating intrinsic value in teaching	Demonstrating passion for teaching	Demonstrating intrinsic value in teaching	Demonstrating an awareness of the student's learning level	Demonstrating the ability to diagnose the learner	Utilizing active learning
Having an awareness of learning styles		Demonstrating resetting and preparation in the teaching role	Promoting academic balance	Having an awareness of the student's interest in learning	Implementing clinical reasoning practices	Utilizing interdisciplinary teaching	Creating teachable moments
Making learning connections		Supporting students' goals and aspirations	Promoting holistic medicine	Utilizing reflective practice	Creating teachable moments	Making a time commitment	

- Four Thematic Categories
- Preceptors are aware of, and adapt to, each student's readiness to learn
  - Preceptors demonstrate an intrinsic commitment to teaching
  - Preceptors create supportive learning environments
  - Preceptors utilize sound pedagogical practices

*Figure 12.* Demonstrating the Development of Primary Themes and the Four Thematic Categories from the Presentation of Data



categories of clinical teaching excellence descriptions, identified from the analysis of manual and electronic methods, were considered for emerging theory development and are summarized in Figure 12.

**Descriptions of the four thematic categories of clinical teaching excellence from the presentation data.**

*Preceptors are aware of, and adapt to, each student's readiness to learn.* Having an awareness of students' readiness to learn was identified as an emerging category early in the interview process. The initial transcript coding and field notes from Carin's interview captured a key element of teaching to the appropriate level in her rotations. She also identified the attribute "adapting" when asked what distinguishes excellence in clinical teaching from satisfactory performance. Adapting and adjusting teaching and learning expectations and bringing lessons to the appropriate student level are the result of how ready the student is in learning clinical application. Carin was able to overcome clinical teaching challenges by addressing student readiness and learning level. She acknowledged the importance of professional development opportunities such as the Leadership Institute program and training in learning and personality styles inventories as an approach to self-awareness and adaptation. The training helped her to understand generational and cultural differences and gave her insight into making learning connections between the student's knowledge and skill level and clinical experiences in LCE. Dean emphasized the responsibility of the preceptor to understand student readiness and learning levels when discussing the teaching differences between first and second year LCE students. Adelane did not see the student's learning level as a challenge as long as they were prepared for her rotations. As a clinical teacher in a subspecialty surgical

field, she was consistently clear on student expectations on knowledge and skills, especially with basic first and second year information. She was able to determine student readiness through these expectations and their interest in her specialty. Trevor conveyed two relevant points in his interview discussion on describing clinical teaching excellence; consideration of the student's level of knowledge and, being able to communicate at the student's level of learning. He elaborates by identifying the role of reasoning in student learning and the ability to work through clinical problems. Trevor's illustration captures the importance of adapting student learning levels in his patient care population through the student's exposure to unique family dynamics. Preceptors should promote these experiences (e.g., delivering bad news) and opportunities for students to develop an understanding of the emotional side of medicine. Arthur describes a process he uses for determining the student's learning level and readiness to learn at the beginning of the LCE student's rotation during orientation as "diagnosing the learner." His hospital patient admissions provide an opportunity for making a decision on the teaching plan based on the assessment of the knowledge, skill, and performance level of the student.

The ability of the clinical teacher to assess the student's learning, determine their readiness to learn, and adapt/adjust their own teaching behavior conducive to the clinical environment is a key element in clinical teaching excellence. Each preceptor reflected on and identified his/her own approach in addressing these challenges. Having an awareness of, and ability to adapt to, each student's readiness to learn is a major category identified from the presentation and analysis of the data.

*Preceptors demonstrate an intrinsic commitment to teaching.* Preceptor's demonstrated an intrinsic commitment to teaching, reflective of an inner strength, the

ability to dig deep from within, and an internalized commitment to create a rich learning environment for the student. In the researcher's view, intrinsic commitment in clinical teaching embraces the guiding principles of passion for medicine, holistic patient care, and humanism.

Dean illustrated this intrinsic commitment throughout his interview, embracing his role as a dynamic, engaged, and enthusiastic preceptor. He looks beyond surface level teaching techniques to the attributes of commitment and conscientiousness, recognizing the need to pass on this commitment to ensure excellent teaching for students and excellent medical care for patients. He reinforces the art of medicine by treating patients as human beings and not machines, and shares this philosophy with his students. Adelane called this inherent value. She embraces the guiding principles of passion, patient care, and pride in teaching and learning in medicine, referring to herself as an ambassador to her medical field. Most notably, she demonstrates an intrinsic commitment through her love of teaching, love of caring for her patients, and reflective moments on her career and personal life. She was often rewarded by the "ah ha" moments from the LCE student and finding inherent satisfaction in her role as a preceptor. She reinforced the importance of preceptor's examining why they are teaching and what makes them happy. Truman's intrinsic commitment to teaching was identified through the student's exposure to the specialty practice setting, emotional activation opportunities, and discovering the validation of his teaching by students. Judy's passion for teaching was evident throughout the interview, deeply rooted in her personality and clinical competence and, her desire to create a fun learning environment. Her medical school training as an osteopathic physician, favoring a holistic approach to patient care, was a core element in her teaching

role and exemplified intrinsic philosophical values in the professional development of the medical student. Finally, Arthur, as a recent alumnus of the LCE program, used his knowledge and skills from his early clinical experiences in promoting the benefits of interdisciplinary medical education for the LCE student. This intrinsic commitment to integrated clinical application was his most wonderful experience as a preceptor.

*Preceptors create supportive learning environments.* A supportive clinical learning environment was easily identified from the eight interviews. Preceptors created an optimal learning atmosphere through many noncognitive as well cognitive attributes. For example, intrinsically driven characteristics enriched the learning setting through preceptor's enthusiasm, humanism, reflective abilities, and philosophical approaches to medicine. Cognitive attributes such as, clinical competency, doctor-patient communication skills, and ability to set goals and expectations with students instilled a professional atmosphere of medical management and patient care. Preceptors noted the importance of the patient in the dynamics of teaching and the medical practice, never losing sight of compassionate care and considering patients as partners in the health care team including, the teaching and learning environment.

Finally, a supportive learning environment could not be achieved without the contributions from support and office staff, colleagues and allied health professionals working with LCE preceptors. This support was observed and especially noted in the private practice setting where interviews were graciously accommodated and office staff offered friendly dialogue. The interdisciplinary teams in the hospital and academic settings offered opportunities for students to learn about patient-centered, evidence-based care and the importance of comprehensive and coordinated services. Preceptors created

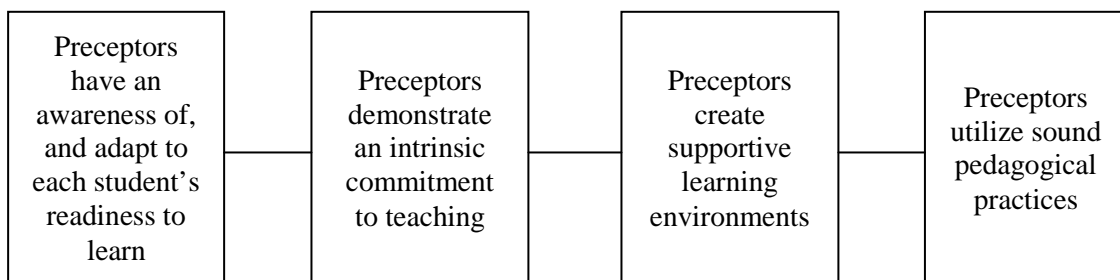
this supportive learning environment for their LCE students by embracing the challenges and successes of balancing teaching with patient care, promoting energy and participation in student learning, and embracing their role as a clinical teacher.

*Preceptors utilize sound pedagogical practices.* Preceptors demonstrated an ability to utilize sound pedagogical practices in teaching and learning such as, adult learning theory, application of different approaches in teaching, and engaging the student in the learning experience. For example, active learning, a key instructional strategy that takes the learner from a passive approach to a more engaging approach, was utilized in the academic and community-based setting. Preceptor's demonstrated the use of pedagogical practices through different approaches, reflecting the individual learning needs of the LCE student. Carin highlighted active learning through promoting patient-student interaction and developing critical communication skills. Truman promoted an active learning environment through opportunity to engage the student in hands-on learning in the operating room, a term the researcher designated as emotional activation. Dean encouraged students to think on a global scale as a future medical practitioner, promoting reflection as an instructional strategy. Judy approached her clinical teaching through two different philosophies of medicine. As an osteopathic physician teaching allopathic medical students, she brought holistic patient care to practice in the teaching setting. Adelane encouraged students' use of reflective practice to turn impositions into positive experiences. The critical care of young patients in Trevor's LCE rotation provided opportunity for students to demonstrate humanism when delivering bad news to patients and their families. Arthur encouraged students to experience other disciplines

they were interested in while on his rotation. Eaton provided opportunity for students to observe and assess unique patient cases.

Sound pedagogical practices were illustrated in each of the eight LCE preceptor's clinical teaching environments, bringing clinical teaching to a higher pedagogical level in the medical education framework. Preceptors demonstrated competency in clinical knowledge, skills, and performance, and had the ability to combine these competencies with learning theory skills such as, active learning, assessment, and feedback, in strengthening their own clinical teaching and the transfer of knowledge and skills for student learning.

As a result of analysis of the presentation data, preceptors describe clinical teaching excellence as (a) having an awareness of, and adapting to, each student's readiness to learn, (b) demonstrating an intrinsic commitment to teaching, (c) creating supportive learning environments, and (d) utilizing sound pedagogical practices and are shown in Figure 13.



*Figure 13.* Thematic Categories of Clinical Teaching Excellence Descriptions from the Presentation of Data

**Analysis of student nomination comments.** The researcher conducted a brief review of student comments from the LCE award nomination data for comparative analysis with the interview findings. In addition to the secondary data of nominated preceptor names, it was important to see what could be gleaned from the student generated themes which could add value to the study findings and recommendations. The review included an analysis of the student comments and identification of broad thematic descriptors from the comments on the eight, nominated preceptors who were interviewed.

There were two main themes from the student comments. First was the commitment of the preceptor to patient care. Almost all of the students reflected on their preceptor's genuine love of being in the profession and helping patients and their families. One student commented, "I watched her comfort her patients and their parents, listen with empathy, answer questions, follow up on patients with phone calls and treat her staff with care and respect." Compassionate, empathetic, strong doctor-patient relationships and communication skills, ethical, and respectful are common descriptors from the comments as well as the coded elements. In addition to being competent physicians who were vastly knowledgeable in each of their disciplines, preceptors were negotiators of medical issues, always going above and beyond in making sure patients and their families understood the complexities of the illness. Preceptor's treated the patient and not the disease and made patients their number one priority.

Second, nominated preceptors exemplified a passion for teaching and examining every opportunity to engage the student in learning. Preceptors were inspirational, knowledgeable, accessible, and skilled at making learning clinically relevant and at the appropriate level of the student. For example, one student commented, "He always made

a special effort to explain everything about a procedure to me...he would take me to look at the MRIs before surgery.” Preceptors were skilled at finding the right balance of teaching and patient care time, teaching by example and, providing opportunity for students to practice history and physical exams, suture during surgery, and techniques of doctor-patient communication. The learning environments promoted active learning, student learning engagement, interdisciplinary medical care, and trust, successfully bridging basic science coursework and real world medicine.

The analysis of the student nomination comments yielded consistent and complimentary findings with the interview data. For example, the preceptor’s commitment to humanistic patient care and teaching was consistent with the preceptor’s demonstration of an intrinsic commitment to teaching. Creating an environment of engagement and assessment of clinically relevant learning was consistent with the preceptor’s awareness of the students’ readiness to learn. Finally, student’s recognized the ability of preceptors to apply and integrate basic science concepts such as, physiology, into clinical practice (e.g., homeostasis).

### **Peer Review of Transcripts**

The peer review process was instrumental in providing a level of consensus and consistency to the study, helping to remove opportunity for bias and adding credibility to the findings. Transcripts completed after each of the eight interviews were emailed to the peer reviewer. Review and discussion of the transcripts was conducted over the phone at three intervals during data collection: (a) after the first set of two interviews, (b) after the second set of four interviews, and (c) after the third set of two interviews. The peer reviewer was a Ph.D. colleague and friend of the researcher who had expertise in



qualitative research as well as exposure to similar content in clinical teaching through focus group facilitation.

The process for peer review of transcripts included the following steps: (a) review of uncoded transcripts by the peer reviewer, (b) initial and focused coding of transcripts by the peer reviewer, (c) review of the peer reviewed analysis of coding and brief summary by the researcher, (d) discussion, clarification, and verification of the findings by the researcher and peer reviewer, and (e) consent form signature by peer reviewer (See Appendices N and O).

During the discussion, clarification and verification of the findings from the transcripts, the researcher and peer reviewer discussed global and detailed findings from each of the interviews and from the eight interviews together. Concepts, emerging themes and categories were in agreement with minimal contrasting elements. Similar to the researcher's individual interviews, there was energy and topic immersion in the peer review process. Similarities and differences in emerging themes were discussed and clarified, including potential areas for future research and clinical teaching excellence in medical education.

### **Chapter Summary**

Eight preceptors from a student award nomination process in the LCE program were interviewed for this study. The preceptors were clinical teachers from the academic and community-based settings in the preclinical undergraduate medical education program at the University of South Florida, Morsani College of Medicine. The grounded theory process provided a constant, and fluid, comparative approach to data analysis with the synthesis producing rich examination of perspectives from physicians who excelled

as clinical teachers. As a result, preceptors described clinical teaching excellence as (a) an awareness of, and ability to adapt to each student's readiness to learn, (b) demonstrating an intrinsic commitment to teaching, (c) creating supportive learning environments, and (d) utilizing sound pedagogical practices. A summary of theory development relative to the four thematic categories and the primary and subsequent exploratory questions, along with a discussion on relevant literature, and implications and recommendations for future research and professional development will be presented in Chapter 5.

## **CHAPTER FIVE**

### **CONCLUSIONS AND RECOMMENDATIONS**

#### **Introduction**

This final chapter brings together highlights and final thoughts from the study and includes two major sections and several subsections. The first major section, conclusions, provides a discussion of the response to the primary exploratory question and the resulting four thematic categories from the presentation of data, response to the subsequent emerging question, summary of emergent theory, and response to the literature. In addition, there is discussion on the assessment of the theoretical process, impact of the study on the researcher, and final thoughts from the researcher's reflective journal. The second major section, recommendations, presents the implications for practice and future research and discussion of recommendations for professional development for preceptors.

This study described and explained descriptions of teaching excellence, through thematic analysis, among first and second year academic and community-based preceptors at the University of South Florida (USF), Morsani College of Medicine. The higher level, interpretive process from the thematic categories and the exploratory questions generated a theoretical explanation of clinical teaching excellence.

The primary, exploratory question that guided the study was:

How do academic and community-based clinical preceptors in years one and two of undergraduate medical education describe teaching excellence?

The subsequent exploratory question for the study was:

Are there similarities or differences in the themes emerging from the descriptions of teaching excellence between academic and community-based preceptors in years one and two of undergraduate medical education?

## **Conclusions**

**Summary of the findings.** Providing answers to what makes a good clinical teacher in medicine “is important to the field of medical education and to every institution of medical education responsible for creating knowledgeable and compassionate doctors” (Sutkin et al., 2008, p. 452). Identifying factors that influence the physician as an exemplary teacher is a continuous journey, with recent advances in qualitative methodology, including the overlapping, grounded theory approach, adding to the existing literature on clinical teaching excellence. “Grounded theory is uniquely suited to form the basis of research programmes that arise from theory grounded in the medical education experience, and then build toward implementation of practical educational innovations” (Kennedy & Lingard, 2006, p. 106). The shifting climate of clinical teaching from inpatient to include more community-based, ambulatory settings and changes in medical practice (Kumar et al., 2002; Carney et al., 2005; Irby et al., 1991) signifies a need to continue research to examine best practices to improve teaching and ultimately patient care.

This study demonstrated that rich descriptions of clinical teaching excellence in the first two years of undergraduate medical education could be discovered through a

thematic analysis of, and emergent theory from, the views and perspectives of academic and community-based preceptors. Aronson (1994) describes thematic analysis as “identifiable themes and patterns of living and/or behavior” and “identifying all data that relate to the already classified patterns” (n.d., para. 3). The interviews generated identifiable data supporting “operations needed for development of theory; asking questions and making comparisons” (Strauss & Corbin, 1998, p. 73). Preceptors identified as excellent clinical teachers by medical students demonstrated they had a self-awareness of their unique role in early clinical experiences and the clinical teaching environment, practiced reflection, and were reframers in utilizing new ways to strengthen clinical teaching, supporting the identified primary themes, thematic categories, and emergent theory from the presentation of data.

**Response to the primary exploratory question.** In response to the primary exploratory question, “How do academic and Community-based clinical preceptors in years one and two of undergraduate medical education describe teaching excellence?”, the analysis of the presentation of data revealed four thematic categories for discussion: (a) preceptors have an awareness of, and adapt to each student’s readiness to learn, (b) preceptors demonstrate an intrinsic commitment to teaching, (c) preceptors create supportive learning environments, and (d) preceptors utilize sound pedagogical practices.

***Preceptors are aware of, and adapt to, each student’s readiness to learn.*** In the clinical learning environment, preceptors should be attuned to the student’s readiness to learn in the teaching setting and assess the learners’ prior knowledge and skills at the start of, during, and at the end of, clinical rotations. Henning, Pinnock, Shulruf, and Hawken’s (2013) identified issues from a student dialogue that supports the monitoring of learning

needs stating, “clinical teachers need to assess individual needs of students so that the transmission of knowledge resonates with the developmental stage of the student” (p. e59). Collaboration between the preceptor and medical student on identifying learning needs and adapting these needs to the clinical experience promotes student engagement and learning (Chipchase et al., 2012). The preceptor’s role includes understanding student engagement and learning, including how first and/or second year students process new clinical information, transition from regurgitating basic science information to applying information to make decisions, and respond to diagnostic reasoning situations.

The exemplary clinical teacher continually self-evaluates his/her understanding of the student’s knowledge and skill level as well as the learning environment. In their descriptions of clinical teaching excellence, LCE preceptors used terms such as adapting, assessing, connecting, and adjusting to illustrate expectations and targeted learning strategies meeting the needs of students. For example, complex patient cases are provided to second year medical students who had previous LCE rotation experiences with higher level clinical reasoning and diagnostic understanding. Carin’s descriptions of adapting to student learning levels highlighted the importance of self-awareness and the emergent reframing approach as evident in her statement, “adapting is having the ability to sense when something is not working and understanding how it should work.” She described the role of professional development in providing training on learning styles, personality inventories such as the Myers-Briggs Type Indicator (MBTI). One of the most popular personality assessment instruments, the Myers-Briggs Type Indicator (MBTI), offers tools to help educators with an understanding of personality type. Winn and Grantham (2005) discuss the Myers-Briggs Type Indicator as an important tool in helping to

establish educational rapport in the clinical learning environment and the importance of observing student personality and learning styles, and being aware of his or her own personality preferences.

In their retrospective, descriptive study among health sciences students, Hardigan and Cohen (2003) define learning style as the “composite characteristic cognitive, affective and physiological factors that serve as relatively stable indicators of how a learner perceives, interacts with, and responds to the learning environment” (p. 1) and state that “research indicates a dominant personality type among students enrolled in medicine” (p. 2). The preceptor’s ability to examine their own instructional style through self-awareness and reframe the learning environment helped address the challenges of teaching limitations in student readiness to learn.

Ramani and Leinster’s (2008) review of AMEE Guide no. 34 references Irby and Papadakis’ (2001) list of skills that make a clinical teacher excellent. Examined qualities that learners value in their clinical teachers include “targeting teaching to the learner’s level of knowledge” (p. 348). Dean describes one of his positive experiences in his medical training where the teachers explained medicine and brought the medical ‘lingo’ to the appropriate level. He also recognized knowledge and skill level differences between first and second year students and finds an important attribute of the preceptor is being familiar with where students are in their medical education in order to target clinical teaching. The reflective opportunity provided by the interview questions was valuable for Dean, as a community-based preceptor, in identifying his teaching limitations and the skills important for professional development with new preceptors. Skeff et al. (1999) indicate the importance of faculty development in improving

knowledge and skills of community-based teachers and enhancing their potential as clinical instructors. Thus, one strategy for future professional development would be training academic and community-based clinical teachers on the value of self-awareness and self-evaluation of their teaching abilities.

In describing clinical teaching excellence in working one-on-one with first and/or second year students, Trevor conveyed two key points: (a) consider the student's level of knowledge and (b) ability to communicate at the student's level of learning. The role of communication transcends medical education and student competencies. Communication and student learning levels work collaboratively in dealing with the emotional needs of critically ill children and their families in Trevor's clinical teaching environment and in Arthur's teaching through his tutoring experiences. Exemplary clinical teachers understand the learning level of students and consider factors such as prior clinical experiences, medical vocabulary, clinical reasoning skills, and cognitive development in their self-awareness of teaching abilities. The challenge in the clinical environment is balancing the assessment of student learning levels with patient care, patient flow, and time management in the practice setting.

The ability of the preceptor to have an awareness of student readiness, identify student learning levels, and adapt their teaching abilities accordingly to promote an effective clinical learning environment is an important finding in the study. The role of reflection and reframing was clearly articulated in the discussions on student learning levels and was brought to a higher level of understanding through constant comparative analysis.



***Preceptors demonstrate an intrinsic commitment to teaching.*** “Curriculum design begins with the writing of philosophy and the selection of objectives for the program. . .the philosophy must include a statement of beliefs and intrinsic values about human being, nursing, and teaching-learning process” (Shin, 1993, p. 93).

Intrinsic commitment was identified by all preceptors. For Dean, intrinsic commitment is exemplified in his role as a preceptor and someone who practices what he teaches to the students; looking beyond surface level teaching techniques to strategies that personify interaction and the relationship of the disease process. Intrinsic commitment is having passion for the profession and recognizing the value of tradition in clinical teaching. In a study on teaching satisfaction with volunteer, office-based faculty, highly regarded intrinsic benefits included (a) giving something back to the profession, (b) showing future physicians what medicine is all about, (c) demonstrating how good medicine should be practiced, and (d) interacting with students (Kumar et al., 2002). Accordingly, preceptors approached intrinsic commitment through passion, enthusiasm, and energy, all vividly illustrated in different ways in their clinical teaching setting.

The intrinsic commitment to teaching and learning is also captured in each preceptor’s role as a physician. Their patient care efforts go beyond the average in medicine, exemplifying the humanistic side of medicine and treating the whole person, the human being, and not the disease. Reilly (2007) terms this *linking learning to caring* where patient-centered care is a defining characteristic and physicians prioritize the patient and not the disease. The researcher’s most noteworthy description of intrinsic commitment was discovered through Trevor’s role in patient care which embodied moral fortitude in the most critical care treatment of pediatric patients. By virtue of his

specialized medical field, he represents intrinsic commitment at the highest, humanistic, level. Adelane exemplifies intrinsic commitment through her continuous reflections of the interview discussions, always seeking to answer questions that surface from the original interview questions and embracing reflective practice as a powerful tool in identifying her own descriptions of clinical teaching excellence. Hewson's (1991) observation of reflection-in-action practice suggests teaching and satisfaction with the teaching process would be greatly improved with increased use of reflection (p. 231). As such, reflective practice, satisfaction in teaching, and intrinsic commitment play an important role in achieving teaching excellence.

*Preceptors create supportive learning environments.* The health care landscape continues to change and academic and community-based teaching programs face ongoing challenges in patient care, business management, cultural dynamics, and economic impacts on resources. It is important for learning needs and the role of the learning environment to be continually re-examined, in consideration of its' uniqueness and impact on students (Henning et al., 2013). The clinical teaching role and quality of clinical teaching are influenced by conflicting demands in the teaching environment (Lambert & Glacken, 2005). These demands can have the same negative impact on the academic and community-based settings by weakening strategies for student success. "Clinical teachers face a daunting challenge of simultaneously caring for patients and teaching learners in a time constrained environment" (Irby & Wilkerson, 2008, p. 384). For the academic clinical teacher the conflicts include the demands and constant flux of the research, teaching, and patient care paradigm. For the community-based clinical teacher this discord includes the dynamics of balancing clinical practice and patient care,

shrinking teaching time, and declining reimbursement rates for patient care services. Research by Woolliscroft, Harrison, and Anderson (2002) suggests clinical education is being negatively influenced by continued clinical financial pressures, however, not yet critically. They support ensuring the “goals, processes, support, and rewards for clinical teaching be monitored and proportionate to those for clinical care” (p. 77). Buchel and Edwards (2005) identified availability as an attribute of effective clinical teachers where they are easily accessible, allow adequate time for teaching, and are not hurried or rushed in creating a supportive learning environment.

The four academic and four community-based preceptors identified similar teaching environment needs including the challenge of balancing teaching and patient care, addressing time management concerns, and promoting communication skills. Judy resolved this challenge by carefully and enthusiastically finding the right combination of patient care and clinical teaching time, knowledge, and skills to provide the student an effective training environment and, thus, balancing the constant flux of funding, accreditation, technology, and other external and internal forces as an academic preceptor. For example, she offers flexibility in the LCE students’ schedule, respecting their time and workload, the patient’s time, and still meeting the LCE learning goals. Arthur, one of four community-based preceptors, reflected on his limited time in his own rotations in undergraduate medical education and recognized how the new LCE curriculum’s change from a three rotation cycle to a two rotation cycle made a difference in student learning. The attributes, patience and compassion, help him overcome many time management issues in the teaching environment and is a skill he shares with medical students. Preceptors recognized time limitations and the complexities of a busy practice.

However, careful planning and the rewards of teaching far outweighed the negatives. “Taking the time to develop an optimal climate for learning will pay off for all persons involved” (Burns, Beauchesne, Ryan-Krause, & Swain, 2006, p. 178).

Finally, preceptors encouraged LCE students to be part of the healthcare team including, interdisciplinary teaching, where students frequently had opportunities to spend rotation time with faculty in other disciplines as well as, nursing and office staff. For example, Dean promoted a team approach to learning through the students’ exposure to the practice of radiology during his hospital rounds. “Medical students highly value a learning environment in which they feel part of the health care team, their views are valued, and they make significant contributions to the care of the patient” (Raszka, Maloney, & Hanson, 2010, p. 194).

*Preceptors utilize sound pedagogical practices.* From teachable moments to case-based, clinical teaching models, sound pedagogical practices are an important tool in the clinical teaching toolbox and in the development of successful medical school graduates. LCE preceptors brought clinical teaching to a higher pedagogical level in the medical education framework, utilizing their knowledge and skills and learning theory concepts such as, active learning, to reinforce clinical information in academic and community-based environments. Pedagogical practices represented a wide variety of instructional approaches in support of student-centered learning where the role of the teacher is one of supporting students’ learning efforts (Stenfors-Hayes et al., (2011). Instructional approaches identified from the interviews included, teachable moments, active learning, reflection, communication, emotional activation, and clinical reasoning.

In a literature review designed to assess the uses for reflective practice in health professions education, Mann, Gordon, and MacLeod (2009) suggested physicians use reflection to “inform practice through an anticipatory phase, where past experience informs planning” (pp. 601-602). Reflective practice is a powerful tool in teaching and learning and is growing in popularity in the medical education field. In a survey of distinguished clinical teachers, Irby and his colleagues reported on the successes of reflective practice as a professional development strategy and achieving teaching excellence among clinical teachers (Pinsky, et al., 1998). Taylor et al. (2007) explored teaching beliefs of pediatric clerkship faculty in the preparation of future physicians through a more conscious teaching approach, suggesting educational approaches such as reflective practice can better equip teachers of medical students.

A systematic review of the literature by Lawson and Flocke (2009) on the “teachable moment” in clinician-patient interaction, suggests poorly developed definitions both conceptually and operationally. The review resulted in teachable moments being defined as (a) synonymous with opportunity, (b) a context that leads to a higher than expected behavior change and, (c) a phenomenon that involves a cueing event that prompts specific cognitive and emotional responses. In their article on teaching medical students and residents skills for delivering bad news, Rosenbaum, Ferguson, and Lobas (2004) discussed the “opportunities to teach and reinforce skills in the direct context of clinical care” and the importance of “assessing learning needs and comfort levels with the task” (p. 113). Additionally, “faculty who have the skill to recognize and capture these teachable moments in the context of clinical rotations can help learners discuss these issues and hone their skills” (p. 115). Trevor utilized this skill through

student-patient communication with young critical care patients and their families. This teachable moment offered students valuable learning opportunities in humanism, sensitive to improved patient care outcomes

Research by Sutkin, et al. (2008) identified a non-cognitive characteristic of effective clinical teachers called emotional activation where a good teacher “has the ability to excite, arouse, and activate his or her students” (p. 453). Reilly (2007) identified elements of activated learning, and in the researcher’s perspective, aligns with emotional activation in regards to the current study’s emerging category. Reilly states in his editorial viewpoint on the *Inconvenient Truths about Effective Clinical Teaching*, “The dance will fail, no matter how expert the teacher, if the learner is not actively, even passionately, engaged” (p. 2). Additionally, as a fundamental first step, “effective teachers insist on a learner’s motivation as a precondition for their activation. . . unmotivated learners waste teacher’s time” (p. 2).

Skill building techniques such as clinical reasoning, used as a core element in the medical management of patients, challenge the medical student to develop deep levels of thinking and application and, support sound pedagogical design. Clinical reasoning, the examination of a single patient (Irby, 1994b), is one of the most common instructional methods utilized to promote learning transfer in health profession education (Speicher, Bell, Kehrhahn, & Casa, 2012). It is a critical concept in how doctors think about clinical situations and understanding patient symptoms, complaints, differential diagnosis, and treatment and, when applied beginning in the first year of medical school, can be instrumental in the student’s progress. Preceptors maximized clinical reasoning opportunities in the LCE environment by ensuring students had exposure to patient cases,

practical experience in application of evidence-based information, and guidance in diagnostic options. Trevor's clinical setting exposed students to unique clinical cases and family dynamics, providing the student opportunity to "develop the character and relational skills that enable them to perceive and understand their patient's needs and concerns" (Benner, Hughes & Sutphen, 2008, p. 1).

The analysis of the eight interviews of academic and community-based preceptors yielded descriptions that aided in re-examination of themes and categories, and addressed the primary exploratory question, How do academic and community-based clinical preceptors in years one and two of undergraduate medical education describe teaching excellence? The findings were rich with illustrative demonstrations from eight clinical teaching environments, reflecting hallmark teaching strategies for learning opportunities.

**Response to the subsequent exploratory question.** The study included interviews with four academic preceptors and four community-based preceptors. The subsequent exploratory question for the study asks, Are there similarities or differences in the themes emerging from the descriptions of teaching excellence between academic and community-based preceptors in years one and two of undergraduate medical education? In a global review of the thematic categories from Table 4, academic and community-based preceptors had similar themed descriptions of clinical teaching. Reflective practice was a foundational approach in the teaching environment utilizing self-awareness in assessing teaching abilities. Self-awareness was also important in preceptor's identifying their strengths and weaknesses in clinical teaching. This attribute was present with academic and community-based preceptors. There was commonality between both groups in consideration of the themes identified in the analysis. Having an awareness of

students' readiness to learn and their learning levels, and intrinsic commitment were closely represented by physicians in both groups, however, a few as narrowly defined terms. For example, the theme "making learning connections" from Carin's (academic preceptor) interview is reflective of "diagnosing the learner" in Arthur's (community-based preceptor) interview findings. Truman's "emotional activation" can be closely linked to "active learning" in Eaton's interview. Judy's (academic preceptor) "passion in teaching" is a core, holistic theme woven throughout both academic and community-based preceptor's clinical teaching role.

There were limited themed differences between academic and community-based preceptors, with the clearest distinction being the challenges of practice time in clinical teaching. This is understandable given the responsibilities of faculty in academic medicine with allocated time for teaching, research, and clinical practice. Community-practice sites, including ambulatory centers, hospitals, and private medical practices are constantly challenged with balancing patient care and costs and how to integrate clinical teaching in a busy practice environment.

There were also situational differences between the two groups. The LCE program assigns students to preceptors across a large geographical area with one of the requirements having students drive to a community-based site out of the county for at least one rotation. This presents logistical challenges for students as well as preceptors who may feel an institutional disconnect because of distance. Practice management differences such as patient flow and billing seemed to be of more concern to the community-based preceptor.



Finally, even though there were themed clinical teaching practices in both groups, there were different approaches to these practices. For example, while adapting to each students' readiness to learn was a thematic element across teaching environments, the process in determining the student's learning level to adapt to was different. Carin utilized a professional development approach through training in personality types. Arthur would determine the student's level of knowledge and skills at the beginning of the rotation through a case presentation of a patient admitted to the hospital. Dean was proactive in his preparation of his teaching role by being aware of institutional expectations of the LCE program. Academic and community-based preceptors had similar, global themes in clinical teaching excellence descriptions with the few differences reflecting logistical, practice management, and teaching approaches.

**Emergence of primary themes supported by preceptors' reflective and reframing practices.** Preceptors' descriptions of clinical teaching excellence (primary themes) were supported by their reflective and reframing practices, including a self-awareness of their unique role in early clinical experiences and the clinical teaching environment. For example, reflection on his/her own journey as medical students and how these experiences compared to their role as a clinical teacher in the LCE program challenged them to examine and self-evaluate teaching abilities. Correlating the current findings to the patient care environment, research by Borrell-Carrio and Epstein (2004) suggested teaching strategies based on developing physician insight and self-awareness can cultivate conscious attention in reducing medical errors in clinical situations. They termed this "reframing to arrive at a more accurate understanding of the situation" (p. 312), applying an "emotional self-awareness to help physicians function better in clinical

situations” (p. 310). Another comparison utilized a personal awareness approach to gain insight and reflection of physicians in enhancing communication and patient care and reducing burnout. The authors encouraged an organized continuing education curriculum for physician training to “calibrate their instruments” with ongoing self-awareness and examination in the diagnostic process (Novack et al., 1997).

From the teaching literature, Freese (2006) provided a perspective on the complex process of learning to teach through a collection of observations, journals, reflective practice, and self-study. This process of discovery captured the importance of examining teaching practices in an effort to understand and reframe the challenges and successes of learning experiences. Plack and Greenberg (2005) described reflective practices’ potential impact in the pediatric clinical setting where physicians use evidence-based practice and client-centered care and tools such as problem solving, questioning, and professional development to enhance patient care. They also addressed reflective practice from the trainees (residents and medical students) and assessment of analytic skills for achieving medical education competencies.

Table 7 summarizes the identified primary themes from the interviews supported by preceptors’ reflective and reframing practices.

**Emergence of theory from the presentation of data.** The researcher references several established theoretical constructs in the social sciences to broadly frame the emerging theory in the study of clinical teaching excellence. Charmaz (2009) identifies the broader definition of Positivist Theory from the social sciences described as, “a statement of relationships between abstract concepts that cover a wide range of empirical observations” (p. 125). Phenomenology, “the study of structures of consciousness as

*Table 7 Summary of Identified Primary Themes from the Interviews Supported by Preceptors' Reflective and Reframing Practices*

Primary Themes Supported by Preceptors' Reflective and Reframing Practices	Preceptors							
	Carin	Truman	Dean	Judy	Adelane	Trevor	Arthur	Eaton
Being adaptable in the teaching environment	x							
Having an awareness of learning styles	x							
Making learning connections	x							
Utilizing emotional activation		x						
Demonstrating intrinsic value in teaching				x		x		
Demonstrating resetting and preparation in the teaching role				x				
Supporting students' goals and aspiration				x				
Demonstrating passion for teaching					x			
Promoting academic balance					x			
Promoting holistic medicine					x			
Having an awareness of the student's interest in learning							x	
Utilizing reflective practice								x
Demonstrating an awareness of the student's learning level								x

Table 7—continued

*Summary of Identified Primary Themes from the Interviews Supported by Preceptors’*

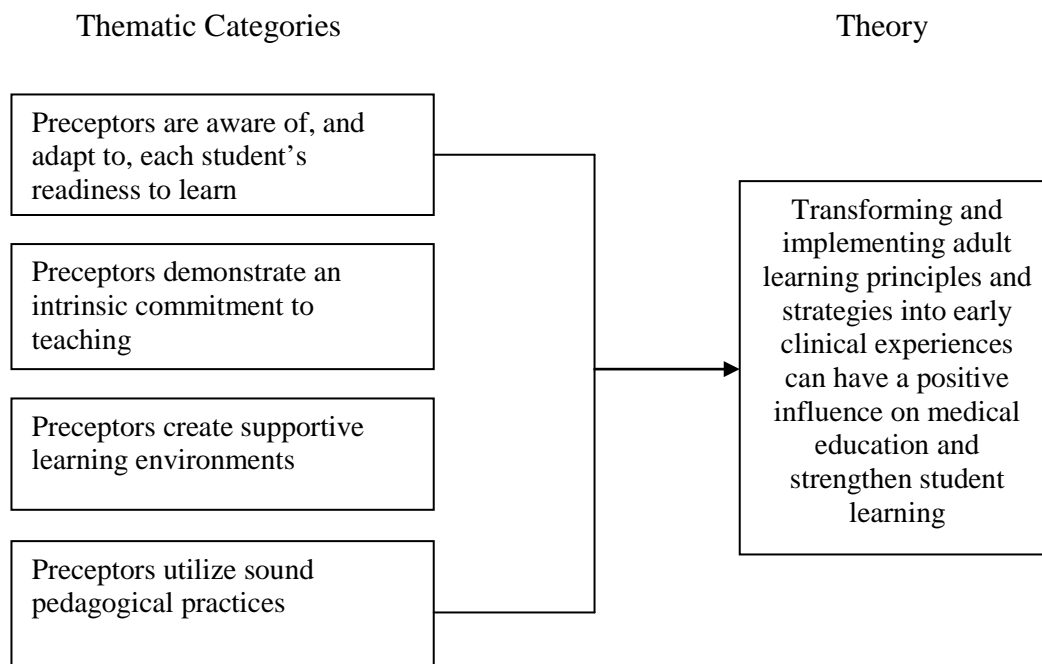
*Reflective and Reframing Practices*

Primary Themes Supported by Preceptors’ Reflective and Reframing Practices	Preceptors							
	Carin	Truman	Dean	Judy	Adelane	Trevor	Arthur	Eaton
Implementing clinical reasoning practices						x		
Creating teachable moments						x		x
Demonstrating the ability to diagnose the learner							x	
Utilizing interdisciplinary teaching							x	
Making a time commitment							x	
Utilizing active learning								X

experienced from the first-person point of view” (Smith, 2011) offered important insight and structure, however, was not utilized since it lacked the opportunity for the researcher’s creative interpretation of the data. Bandura’s contributions to the field of psychology including his influential social learning theory, offered a model that “emphasizes cognition and information-processing capacities that mediate social behavior” (Grusec, 1992, p. 776). The work of Malcom Knowles focused on the foundational differences between adults and children, identifying characteristics of adult learners, such as being actively involved in the learning process (Harper & Ross, 2011).

The models offered an opportunity for the researcher to broadly integrate theoretical constructs of similar dimensions in the social sciences in the analysis and development of a personal framework for understanding the study's emerging theory process and development of a higher order construct to explain the phenomenon of interest. The researcher utilized a constant comparative analysis of professional and personal experiences and thematic analysis of the interviews and presentation of data, supported by the preceptor's reflective and reframing practices. Critical examination of observations and analysis of concepts from the presentation of data, including primary themes and thematic categories helped to describe relationships and identified a comprehensive construct (theory), explaining the phenomenon of clinical teaching excellence. This grounded theory study found that the four thematic categories (a) preceptors have an awareness of, and adapt to each student's readiness to learn, (b) preceptors demonstrate an intrinsic commitment to teaching, (c) preceptors create supportive learning environments, and (d) preceptors utilize sound pedagogical practices influenced clinical teaching and learning in the preceptor's LCE setting. In addition, there was an overriding influence of adult learning theory and process which helped to explain the clinical teaching excellence phenomenon. As a result, transforming and implementing adult learning principles and strategies into early clinical experiences can have a positive influence on medical education and strengthen student learning. Figure 14 shows the emergent theory from the four thematic categories.

**Assessment of the theoretical process.** In order to provide an avenue for establishing verification of the data interpretations of this grounded theory study (Creswell, 1998), and in addition to establishing trust and credibility through member



*Figure 14.* Demonstrating Emergent Theory from the Four Thematic Categories.

checking, peer review, and critical self-reflection (Chapter 3), the researcher used a systematic process identified in the work of Charmaz (2009). The four criteria and a brief description below serve as a suggested framework to evaluate the research and help guide the reader in judging the usefulness of the method (Charmaz, 2009, p. 182).

#### Criterion 1: Credibility

The study used a constant comparative analysis approach with the interview findings, the literature, field notes, transcript coding, electronic data management, and the researcher's career experiences and reflective journal to interpret and discover meaning in the data. Additionally, in achieving familiarity with the setting and topic, the researcher used prior work experience as a liaison between the medical school and the practice sites in relationship building, conducted the interviews at each preceptor's

practice setting, and produced logical links between the gathered data and analysis.

Credibility was also established through participant member checks, and peer review and debriefing of transcript data.

#### Criterion 2: Originality

This grounded theory study helped to challenge and refine current concepts of clinical teaching excellence. The literature is rich with key word descriptors such as inspiring and enthusiastic and student perspectives on what makes a good teacher. Findings from the current study identified a deeper interpretation of the learning environment through comparative examination of data and its meaning, discovery of hidden dimensions such as clinical teaching reframing, and development of theory. For example, the interview process provided a way for preceptors to reflect on their own medical school training in their contributions of reframing the clinical teaching environment. Thus, reframing the clinical teaching environment through critical self-reflection offered refinement of existing descriptors of clinical teaching, such as “enthusiastic” and “mentor”, providing richer illustrations of clinical teaching.

#### Criterion 3: Resonance

The richness of the studied experience represented emotional and cognitive connections of each preceptor as they reflected on their medical school training and careers. For example, the emotional experience in the critical care of young patients heightened the cognitive response in clinical problem solving in the care of patients and their families in Trevor’s practice. This self-awareness process captured emerging categories and themes that revealed intrinsic characteristics, such as passion for medicine and humanism, for deeper insight into clinical teaching excellence.

#### Criterion 4: Usefulness

The study generated several findings valuable in medical education and patient care. First, identifying descriptions of clinical teaching excellence and the unique role of preceptors in early clinical experiences can yield important curricular design features, such as syllabus development, integrating basic science content, and early clinical experiences, in preparing future medical school graduates for patient care. Second, in examining the emerging data on student learning levels, LCE preceptors demonstrated an awareness of assessing the knowledge and skill level of students, formatively, during rotations.

**Response to the literature on the role of preceptor's reflection and reframing practices in the clinical teaching environment.** Reflection and reframing provide effective teaching frameworks for the clinical teaching setting, facilitating assessment, re-examination, and self-awareness to optimize the learning environment. The literature is expanding on reflective practice descriptions in the clinical teaching environment. For example, Ramani and Leinster (2008) discuss the role of self-reflection as essential to educating physicians and even more crucial for clinical teachers in adopting a professional approach of reflective practice to their teaching. Mann et al. (2009) conducted a systematic literature review of 29 research studies in health professional education and practice to explore whether reflective practice could be demonstrated in practicing professionals. The findings suggest reflection is demonstrated consistently among practicing professionals, such as “developing practical knowledge” (p. 601); however, the literature is early in its development and the need for more rigorous studies is indicated. Only two of the 29 studies in the review were specific to clinical teaching in



medicine and described the role of reflecting on instructional success in teacher professional development. There is also increasing emphasis on reflective practice studies in educating health professions students such as using portfolios to improve students' ability to integrate theory with practice (Buckley, Coleman, & Khan, 2010). Plack and Greenberg (2005) identified strengths and gaps of reflective practice in clinical teaching through a framework of the pediatric learning environment and stress its importance in mastering medical education competencies. They state, "Although much has been written about reflection and its importance in the learning process, what is yet to be fully explored is the impact of reflective practice on clinical practice" (p. 1550).

The reframing literature is limited and mostly applicable to disciplines outside of medical education such as organizational leadership, management, and the general teaching environment. Freese's (2006) article on preservice teachers' reframing of their own teaching produced important insight into the journey of discovery, through a student's struggle to find his identity as a teacher. The findings offer suggestions for improving teacher education practices through insight, reflection, and reframing and "encouraging teacher educators to be sensitive to the range of experiences and emotions preservice teachers confront as they enter the culture of the schools and move from being a student to a teacher" (p. 116).

Bolman and Deal (1991) used reframing as a leadership and organizational tool in creating awareness, examination, and understanding of factors that influence situations. "It is the awareness of the external world (or some aspect of it), through one or more of our senses and the interpretation of these by our mind." Their concept of reframing reflects the value of preceptors using more than one lens to strengthen their

understanding of clinical teaching challenges and opportunities. For example, preceptors who utilized a structural frame (Bolman and Deal, 1991) were able to describe rotation expectations for their students and how those expectations impacted the student's readiness to learn (e.g., Adelane's surgical teaching environment).

Understanding reflection and reframing from a broader perspective of other disciplines helps in gaining perspective in the clinical teaching setting. O'Sullivan and Irby (2011) reframed faculty development in a broader conceptual framework to expand on educational process and outcomes models in the faculty development and workplace communities to better guide programmatic activity and research. As a result, old faculty development models are redefined to reflect new practices, components, relationships, and social environments to create new frameworks and guide current practice (e.g., faculty development as a social enterprise). Borrowing from Borrell-Carrio and Epstein's (2004) description, "reframing to arrive at a more accurate understanding of the situation," (p. 312) provides a simple, yet concise, contextual application. LCE preceptors who discovered their teaching style did not work with their student were able to review and redesign their instructional practices, such as implementing strategies from the MBTI training (Carin), to enhance the teaching and learning environment. The MBTI training provided an opportunity for Carin to increase her awareness of her previous teaching method and how to teach in relation to the student's personality type.

Webster-Wright (2009) reviewed the literature across professions to explore reasons for continuation of didactic practices in professional development and the argument for a shift in discourse and focus to understanding authentic professional learning. For example, in reframing professional development and, accommodating the

shift from teaching to learning in higher education, the focus on learning redefines the terminology as well as the conceptualization of the ‘container’ of knowledge (p. 714).

Similar to Harris’ (2013) strategic vision of AAMC on diversity initiatives that will impact the future of medical education and health care equity, reframing clinical teaching practices such as in the LCE setting can provide new direction in the medical education domain. Harris’ ‘Reframing the Narrative’ references the importance of continually understanding the evolving landscape and alignment of medical education and health care in addressing diversity and inclusion challenges.

Simply, reframing is a “way of changing the way you look at something and, thus, changing your experience of it” (Scott, 2011). This study brings the concepts of reflection and reframing to a higher, integrated level in the clinical teaching environment, especially in the first two years of undergraduate medical education and redefines the clinical teaching environment with lessons learned to improve practice and professional development activities. For example, redefining new approaches to clinical teaching as identified in the rich interpretations of the data, themes, and category development provides opportunity for the preceptor to become a better practitioner as well as, a more effective teacher. The eight LCE preceptors who utilized effective instructional frameworks within their practice also approached patient care with a higher level of humanistic care.

**Response to the literature on the emergent theory of clinical teaching excellence.** There is a growing literature on the benefits of adult learning principles and medical education (Carlin, 1989). The study’s emergent theory of transforming and implementing these principles and strategies into early clinical experiences, a subset of

medical education, is limited, yet, can have a positive influence and strengthen student learning. Using effective instructional approaches that include teaching excellence frameworks, guided by adult learning principles, in the first two years of medical school can build important preclinical knowledge and skills competencies for transition into the third and fourth year clerkships, strengthening student learning and also revealing potential impact on patient care.

In Graffam's (2007) description of methods for adapting medical education lectures in the undergraduate, basic science curriculum, he provides targeted strategies for moving from passive to active learning. The same strategies transcend lecture and clinical experiences. For example, decision-making skills used in real patient case scenarios in the clinical setting "can be utilized as hypothetical cases in lecture material" (p. 41). Graffam's perspective suggests the need for teaching faculty across the medical education paradigm to "make changes in their teaching methodology" (p. 38) for enhanced teaching effectiveness, improvement of student learning, and quality of patient care.

Wilkinson (2004) discusses the value of four adult learning theories (a) self-directed learning, (b) experiential learning, (c) constructivist theory, and (d) critical thinking in helping nursing students develop critical thinking skills in becoming competent nurses. She states, "Deep approaches result in a high level of engagement with the meaning or significance of the information, and an ability to apply the information in new situations" (p. 36). Similar approaches in the clinical teaching of medical students were evident in the study's presentation of data, indicating the value of adult learning theory in medical education and early clinical experiences. As discussed in Chapter 3

nursing education provided a wealth of data and research on clinical teaching excellence in both the academic and community-based settings with many best practices models from nursing education, such as Wilkinson's (2004) study, that could be adapted to medical education. Other health professions scholarly work on clinical teaching excellence, such as dental and veterinary medicine, are limited and often look to the nursing literature for sound instructional frameworks.

Faculty development "is essential to train medical faculty in essential educational theory and specific teaching skills as well as to encourage a flexible and learner-centered approach to teaching" (Ramani, 2006, p. 19) and illustrated an important professional development implication of the study on clinical teaching excellence with LCE preceptors. Ramani included recommendations for utilizing Knowles adult learning principles, such as self-directed learning, in designing training programs and the value of faculty development as an important instrument in creating a positive clinical environment.

The overriding influence of adult learning theory and process which helped to explain the clinical teaching excellence phenomenon in the study has well-established roots in teaching excellence and higher education. The study produced four thematic categories that illustrated a solid utilization of learning theory in the early clinical experience in undergraduate medical education (LCE). The literature is limited in the transformation and implementation of adult learning theory and practice in this domain. As a result, the study suggests an important framework that can have a positive influence on medical education, strengthen student learning, and enhance the quality of patient care.

## **Impact of the Study on the Researcher**

This study allowed the researcher to achieve an in-depth awareness of clinical teaching descriptions in the first two years of medical school; supported by creative interpretation of human behavior, meaning, and identifying hidden dimensions including the power of self-awareness, reflection, and reframing in a traditionally teacher-centered educational environment. In the process of discovering the reflecting and reframing abilities of each preceptor, the researcher discovered her own higher-level self-reflection and reframing abilities. For example, the grounded theory process of clinical teaching excellence discovery provided a different way for the researcher to understand the role of patient care in the clinical teaching environment and to have a greater appreciation for academic medicine. The impact was far-reaching professionally, personally, and academically. Professionally, the research aligned with career ambitions and responsibilities in continuing medical education and clinical teaching curriculum. Personally, in the role of patient advocate, the researcher was able to fulfill a level of understanding of clinical practice from the practitioner's perspective. Academically, scholarly growth and initiative were phenomenal. As a doctoral student, the discipline, organization, and fortitude of the research process provided valuable lessons in resilience. The journey from classroom to research was grueling, yet, the process of scientific discovery and its contribution opportunities to the literature were redeeming. The 'real science' and systematic development of an emerging theory driven by the data was not appreciated until the final product was revealed. It was then that the value of the research reached its' peak and began its journey into the academic world.

## **Summary**

This study demonstrated that rich descriptions of clinical teaching excellence in the first two years of undergraduate medical education could be discovered through a thematic analysis of, and emergent theory from, the views and perspectives of academic and community-based preceptors. The iterative, fluid, and constant comparative analysis process of grounded theory provided opportunity for discovery of rich data. From the initial student driven nomination process through the comparative analysis of the data and identified concepts, themes, and categories, a clinical teaching theory emerged. It is the vision of the researcher to optimize the clinical teaching environment through the application of the emergent theory in teaching and learning practices.

## **Final Thoughts from the Researcher's Reflective Journal**

The researcher's journal captured moments of successes and challenges. There were personal, academic, and professional achievements as well as setbacks, most notably a personal setback during the writing of Chapter 4. The journal charted a chronology of events that ultimately resulted in the culmination of eight years of diligence, multi-tasking, compromising, and academic accomplishments. The power of believing was a repeating catalyst for perseverance. Finally, the researcher captured many reflective moments along the dissertation journey and embraced the discovery of new insight for reframing clinical teaching, learning, and personal and career goals.

## **Recommendations**

**Implications for practice.** As discussed in Chapter 2, there is evidence of best practices in teaching excellence in the higher education setting as well as the third- and fourth-year clinical clerkships of undergraduate medical education. Kreber's (2002) observations of teaching excellence described the construction of knowledge and skills through activities such as experimentation, performance, and reflection. As a result, "excellent teachers are seen as those who know how to motivate their students, how to convey concepts, and how to help students overcome difficulty in their learning" (p. 9). Taylor et al. (2007) explored teaching beliefs of third year pediatric clerkship faculty, suggesting better preparation of future physicians through a more conscious, reflective teaching approach. Irby's work identified rich findings on teaching excellence in academic and community-based settings over several decades of medical education reform. His 1994 study identified six domains of knowledge which could be applied to teaching rounds illustrating the importance of content knowledge as well as instructional skills in effective teaching and how to "target teaching to the needs of the learner" (p. 333).

This study was illustrative of rich descriptions of clinical teaching excellence in the first two years of the undergraduate medical education curriculum; initiating consideration for academic and clinical teaching practice application. The study's findings suggests opportunities to foster knowledge and skill transfer between the preclinical curriculum and the third- and fourth-year clerkship experiences (vertical integration) and the transition to postgraduate (residency) training (Wijnen-Meijer, ten Cate, van der Schaaf, & Harendza, 2013).



A finding relevant to future practice implications and the structure of undergraduate medical education was the preceptor's recognition of the value of the early clinical experience for medical students. Preceptors discovered significant benefits of the LCE program's contributions to teaching, medicine and patient care, by virtue of their own limited early clinical experiences in medical school and the skills and knowledge gained by LCE students. When academic and community-based preceptors in this study were asked to describe clinical teaching excellence in regards to the LCE program there was considerable examination of their own medical school experiences. This helped them re-evaluate their own teaching style and philosophies to maximize teaching and learning in creating an environment of clinical teaching excellence. Preceptors met and exceeded the LCE program's goal to introduce students to clinical medicine during the basic science years, providing experiences that helped students gain insight into real world medicine, doctor-patient relationships, practice dynamics, and problem solving in patient care.

As a result of the interviews and data analysis from the eight LCE preceptors, a rich framework of self-awareness, reflective practice, and reframing in addition to illustrations of adult learning theory was discovered that can be utilized across the undergraduate medical school curriculum to enhance clinical experiences. The following are recommendations based on the study's findings that can serve as a catalyst for practice:

1. Use the study's emergent theory of implementing adult learning principles into medical education and early clinical experiences to develop a conceptual framework for curriculum committee discussion.

2. Increase awareness of “non-traditional” clinical education approaches, such as reflective practice and reframing among faculty and staff in the medical school setting.
3. Promote a culture of sound pedagogical practices, such as active learning, in medical education and clinical settings.
4. Promote the value of the early clinical experience in medical school.
5. Incorporate reflective practice into medical school assessment strategies, such as student journaling of clinical rotation experiences and patient cases.
6. Utilize nominated exemplary clinical teachers as ambassadors in the recruitment of new preceptors.

**Implications for future research in clinical teaching excellence.** The study’s findings raise important issues about the limited research in teaching excellence in early clinical experiences. Expanded research to include a focus on teaching and learning best practices in clinical teaching excellence would best serve the medical education community and foster student success and patient care outcomes. In an editorial on medical education, Cox and Irby (2006) maintain a visionary requirement for twenty first century health care stating, “Providing the ‘right’ physician for the health care of the future will require substantial changes in the way doctors are educated. Substantive reform will be possible only if there is a strong willingness to support the educational mission” (p. 1375).

Clinical teaching excellence descriptions should also be further explored among the specialty disciplines to expand findings to a more ‘real world medicine’ setting. There is value in identifying rich clinical teaching descriptions, and determining their meaning,

from primary care practitioners (e.g., internal medicine) as well as practitioners in a specialty setting (e.g., surgical subspecialties).

The research findings and theoretical explanation should also prompt further investigation into the value of reflection and reframing, and the transformation and implementation of adult learning theory, in undergraduate medical education. Clinical teaching excellence descriptions which emerged from the data could yield benefits in studying the impact on patient care especially in regards to continuing medical education activities which promote life-long learning and enhanced patient health care outcomes. Because LCE students had clinical experiences in primary care, as well as specialty settings, it would be worthwhile to expand this study to compare the two disciplines especially in light of the limited literature. Irby (1995) also emphasized the need for research in the non-primary care (specialty) settings and states:

Further research to learn about medical specialties other than internal medicine and family medicine, to describe the knowledge and reasoning of both teachers and learners, and to assess the influence of various educational programs on learning and satisfaction is recommended. (p. 898)

The current study had limitations due to the qualitative design. Surveys and other quantitative methods to gather data among preceptors as well as feedback from medical students would provide additional beneficial information for further application of clinical teaching excellence strategies. Hopefully, others will subsequently be able to devise further research to add to the existing knowledge base of clinical teaching in undergraduate medical education and meet the identified needs (research gap) of clinical teaching excellence in the preclinical curriculum. Embracing a strong educational

doctrine of teaching excellence in medical education will help shape the future of health care, and ultimately enhance patient care.

The following are recommendations based on the study's findings that can serve as a catalyst for future research:

1. Develop avenues to further explore the theoretical framework (grounded theory) through scholarly work.
2. Investigate reflection and reframing from a broader perspective of interdisciplinary clinical teaching (e.g., Dental Education, Veterinary Medicine).
3. Investigate the impact that adult learning theory transformation and implementation in medical education has on student success.
4. Research the impact of clinical teaching excellence in the undergraduate medical education curriculum on patient care practices.
5. Expand the study to compare primary care and specialty disciplines in undergraduate medical education.
6. Expand the study to compare clinical teaching excellence between allopathic (M.D.) and osteopathic (D.O.) preceptors.
7. Conduct a comparative study of descriptions of clinical teaching excellence between students and preceptors in early clinical experiences.
8. Explore the impact of early clinical experiences and vertical integration.

**Implications for future research in grounded theory.** Because the study was limited by the number of participants interviewed, it would be important to conduct additional grounded theory studies in undergraduate medical education and clinical teaching excellence. Respective areas for further research should include views and

perspectives from first- and second-year medical students on clinical teaching excellence, expanding the research to other medical schools, and reviews of grounded theory literature. In addition, an inter-disciplinary research approach within the health sciences could offer valuable frameworks for implementing clinical teaching excellence building blocks and integration of common elements. For example, team-based health care in the practice environment was acknowledged by medical students who nominated preceptors as a learning strategy which promotes clinical teaching excellence. Grounded theory research which examines views and perspectives among the health care team (e.g., physicians, critical care nurses, and respiratory therapists) can promote innovative strategies in clinical learning and change academic culture to enhance student success.

This study's grounded theory methodology offered an opportunity to closely examine views and descriptions of clinical teaching excellence in the first two years of medical school. This research methodology is highly valued in the education community and is becoming increasingly influential as medical education embraces strong educational principles and intellectual work.

#### **Discussion of recommendations for professional development for preceptors.**

One of the study's goals was to identify opportunities for professional development based on the findings of clinical teaching excellence descriptions. The only formal, professional development at the study site was offered on-campus for academic-based preceptors and was limited in sessions and attendance. Community-based preceptors were not offered formal training by the program's educational department, primarily due to limited resources, including geographical logistics. Educationally sound programs, developed

from evidence-based research such as this study, offer opportunity for enhanced program and professional development.

This study brings the identified concepts of clinical teaching excellence to a higher level through an emerging theoretical process, potentially impacting student outcomes, clinical teaching practice, and patient care. There are several strategies for professional development application of the findings. However, the initial challenge is to promote the interest of “non-traditional” elements of instruction for culture reform in medical education. For example, studies such as this one can promote the value of reflection and reframing, and adult learning practices in teaching and learning and, thus, increase its utilization in professional development programs for clinical teachers. Including the role of medical student outcomes measurement in the training framework can increase the interest of curriculum planners, potentially expediting implementation of the “non-traditional” instructional process.

Program design and implementation strategies for professional development of preceptors should consider the time and resource constraints of the busy academic and community-based practitioner and include active learning and interactive components. The primary goal should be to design activities based on preceptors’ educational needs and targeted to maximize clinical teaching (student) outcomes, as well as patient care outcomes. For example, in Dean’s interview comments, he talked about the importance of dedicated teaching time and responsibility in precepting students. He termed this “resetting” the thought process. Professional development programs should include how clinical teachers can utilize this concept to maximize teaching and patient care time.

Design and implementation of professional development programs should include the following recommendations in consideration of the study's interview findings and education as a continuous, life-long journey:

1. Utilize nominated, exemplary clinical teachers in preceptor development program design and implementation.
2. Design preceptor development programs based on the identified instructional needs of academic and community-based settings.
3. Incorporate the findings into preceptor development material, such as clinical rotation manuals, student syllabi, and online training modules.
4. Design preceptor development programs which comply with continuing medical education accreditation requirements and promote the improvement of teaching as well as patient care outcomes (e.g., AAMC initiative 'Learning from Teaching').
5. Carefully select training information to reflect program structure, such as clear expectations and requirements and content, such as finding work-life balance, adult learning theory, time management, and communication skills that set the stage for clinical teaching success.

## REFERENCES

- Agency for Healthcare Research and Quality (AHRQ). (2011, January 5). *Ambulatory safety and quality: Improving management of individuals with complex healthcare needs through health IT*. Retrieved from <http://www.ahrq.gov/fund/tac011008txt.htm>
- Aronson, J. (1994). A pragmatic view of thematic analysis. *The Qualitative Report*, 2(1). Retrieved from <http://www.nova.edu/ssss/QR/BackIssues/QR2-1/aronson.html>
- Bartz, C., & Srsic-Stoehr, K. M. (1994). Nurses' views on preceptorship programs and preceptor and preceptee experiences. *Journal of Nursing Staff Development*, 10(3), 153-158. Retrieved from [http://www.researchgate.net/journal/0882-0627\\_Journal\\_of\\_nursing\\_staff\\_development\\_JNSD](http://www.researchgate.net/journal/0882-0627_Journal_of_nursing_staff_development_JNSD)
- Beckman, T. J., & Lee, M. C. (2009). Proposal for a collaborative approach to clinical teaching. *Mayo Clinic Proceedings*, 84(4), 339-344. doi:10.1016/S0025-6196(11)60543-0
- Bell, S. K., Krupat, E., Fazio, S. B., Roberts, D. H., & Schwartzstein, R. M. (2008). Longitudinal pedagogy: A successful response to the fragmentation of the third-year medical student clerkship experience. *Academic Medicine*, 83(5), 467-475. doi:10.1097/ACM.0b013e31816bdad5



- Benner, P., Hughes, R. G., Sutphen, M. (2008). Clinical reasoning, decisionmaking, and action: Thinking critically and clinically. In: R. G. Hughes (Ed.), *Patient safety and quality: An evidence-based handbook for nurses* (Chapter 6). Available from <http://www.ncbi.nlm.nih.gov/books/NBK2643/>
- Bolman, L., & Deal, T. (1991). *Reframing organizations*. [Powerpoint slides]. Retrieved from [http://www.google.com/#gs\\_rn=15&gs\\_ri=psy-ab&gs\\_mss=Reframing%20organizations%20po&suggest=p&pq=10.1097%2Facm.0b013e31816bdad5&cp=27&gs\\_id=16&xhr=t&q=Reframing%20organizations%20powerpoint&es\\_nrs=true&pf=p&scient=psy-ab&oq=Reframing+organizations+pow&gs\\_l=&pbx=1&bav=on.2,or.r\\_qf.&fp=2a502fbd91234162&biw=628&bih=667](http://www.google.com/#gs_rn=15&gs_ri=psy-ab&gs_mss=Reframing%20organizations%20po&suggest=p&pq=10.1097%2Facm.0b013e31816bdad5&cp=27&gs_id=16&xhr=t&q=Reframing%20organizations%20powerpoint&es_nrs=true&pf=p&scient=psy-ab&oq=Reframing+organizations+pow&gs_l=&pbx=1&bav=on.2,or.r_qf.&fp=2a502fbd91234162&biw=628&bih=667)
- Bonwell, C., & Eison, J. (1991). *Active learning: Creating excitement in the classroom*. Retrieved from <http://www.oid.ucla.edu/about/units/tatp/old/lounge/pedagogy/downloads/active-learning-eric.pdf>
- Borrell-Carrio, F., & Epstein, R. M. (2004). Preventing errors in clinical practice: A call for self-awareness. *Annals of Family Medicine*, 2(4), 310-316. Retrieved from <http://www.annfammed.org/>
- Bryant, A., & Charmaz, K. (2007). *The Sage handbook of grounded theory*. London, UK: Sage.
- Buchel, T. L., & Edwards, F. D. (2005). Characteristics of effective clinical teachers. *Family Medicine*, 37(1), 30-35. Retrieved from <http://www.stfm.org/fmhub/>
- Buckley, S., Coleman, J., & Khan, K. (2010). Best evidence on the educational effects of undergraduate portfolios. *The Clinical Teacher*, 7(3), 187-191. doi:10.1111/j.1743-498X.2010.00364.x

- Burns, C., Beauchesne, M., Ryan-Krause, P., & Sawin, K. (2006). Mastering the preceptor role: Challenges of clinical teaching. [Review]. *Journal of Pediatric Health Care: Official Publication of National Association of Pediatric Nurse Associates & Practitioners*, 20(3), 172-183. doi:10.1016/j.pedhc.2005.10.012
- Carlin, R. D. (1989). Survey results and a recommendation for a change in U.S. medical physiology curricula. *Academic Medicine*, 64(4), 202-207. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Carney, P. A., Ogrinc, G., Harwood, B. G., Schiffman, J. S., & Cochran, N. (2005). The influence of teaching setting on medical students' clinical skills development: Is the academic medical center the "gold standard"? *Academic Medicine*, 80(12), 1153-1158. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Charmaz, K. (2008). Grounded theory as an emergent method. In S. N. Hesse-Biber & P. Leavy (Eds.), *Handbook of emergent methods* (pp. 155-170). New York, NY: Guilford.
- Charmaz, K. (2009). *Constructing grounded theory: A practical guide through qualitative analysis*. Los Angeles, CA: Sage.
- Chickerella, B. G., & Lutz, W. J. (1981). Professional nurturance: Preceptorships for undergraduate nursing students. *American Journal of Nursing*, 81(1), 107-109. Retrieved from <http://journals.lww.com/ajnonline/pages/default.aspx>

- Chipchase, L., Buttrum, P., Dunwoodie, R., Hill, A., Mandrusiak, A., & Moran, M. (2012). Characteristics of student preparedness for clinical learning: Clinical educator perspectives using the Delphi approach. *BMC Medical Education*, 12(1), 112. doi:10.1186/1472-6920-12-112
- Chickering, A. W., & Gamson, Z. F. (1991). *Applying the seven principles for good practice in undergraduate education*. San Francisco, CA: Jossey-Bass.
- Conn, J. J., Lake, F. R., McColl, G. J., Bilszta, J. L., & Woodward-Kron, R. (2012). Clinical teaching and learning: From theory and research to application. *The Medical Journal of Australia*, 196(8), 527. doi:10.5694/mja10.11473
- Cook, L. (2010). *Toward a grounded theory of nursing student attrition*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses. (375381946).
- Cooke, M., Irby, D. M., O'Brien, B. C., & Shulman, L. S. (2010). *Educating physicians: A call for reform of medical school and residency*. San Francisco, NY: Jossey-Bass.
- Cote, L., & Turgeon, J. (2005). Appraising qualitative research articles in medicine and medical education. *Medical Teacher*, 27(1), 71-75. doi:10.1080/01421590400016308
- Cox, M., & Irby, D. M. (2006). A new series on medical education. *New England Journal of Medicine*, 355(13), 1375-1376. Retrieved from <http://www.njem.org>
- Creswell, J. (1998). *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage.
- D' Onofrio, A. (2001). *Qualitative research methods in education: Grounded theory*. Retrieved from Widener University Web site: <http://http://www.widener.edu/>

- Dahle, L. O., Brynhildsen, J., Fallsberg, M. B., Rundquist, I., & Hammar, M. (2002). Pros and cons of vertical integration between clinical medicine and basic science within a problem-based undergraduate medical curriculum: Examples and experiences from Linkoping, Sweden. *Medical Teacher*, 24(3), 280-285. doi:10.1080/01421590220134097
- Dornan, T., Littlewood, S., Margolis, S. A., Scherpbier, A., Spencer, J., & Ypinazar, V. (2006). How can experience in clinical and community settings contribute to early medical education? A BEME systematic review. *Medical Teacher*, 28(1), 3-18. Retrieved from <http://www.medicalteacher.org/>
- Eison, J. (2008, August). *Teaching excellence: What is it and how might instructors develop it?* Handout.
- Elliott, N., & Lazenbatt, A. (2005). How to recognise a 'quality' grounded theory research study. *Australian Journal of Advanced Nursing*, 22(3), 48-52. Retrieved from <http://www.ajan.com.au/>
- Elnicki, D. M., Kolarik, R., & Bardella, I. (2003). Third-year medical students' perceptions of effective teaching behaviors in a multidisciplinary ambulatory clerkship. *Academic Medicine*, 78(8), 815-819. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Emilia, O., Bloomfield, L., & Rotem, A. (2012). Measuring students' approaches to learning in different clinical rotations. *BMC Medical Education*, 12(1), 114. doi:10.1186/1472-6920-12-114

- Flexner, A. (1910). *Medical education in the United States and Canada: A report to the Carnegie foundation for the advancement of teaching*. New York, NY: Carnegie. Retrieved from <http://www.carnegiefoundation.org/publications/medical-education-united-states-and-canada-bulletin-number-four-flexner-report-0>
- Fox, R., Henderson, A., & Malko-Nyhan, K. (2006). A comparison of preceptor and preceptee's perceptions of how the preceptor's role is operationalized. *Journal of Clinical Nursing*, 15(3), 361-364. doi:10.1111/j.1365-2702.2006.01329.x
- Freese, A. R. (2006). Reframing one's teaching: Discovering our teacher selves through reflection and inquiry. *Teaching and Teacher Education*, 22(1), 100-119. doi:10.1016/j.tate.2005.07.003
- Gerzina, T. M., McLean, T., & Fairley, J. (2005). Dental clinical teaching: Perceptions of students and teachers. *Journal of Dental Education*, 69(12), 1377-1384. Retrieved from <http://www.jdentaled.org/>
- Graffam, B. (2007). Active learning in medical education: Strategies for beginning implementation. *Medical Teacher*, 29(1), 38-42. doi:10.1080/01421590601176398
- Graffam, B., Bowers, L., & Keene, K. N. (2008). Using observations of clinicians' teaching practices to build a model of clinical instruction. *Academic Medicine*, 83(8), 768-774. doi:10.1097/ACM.0b013e31817ebfa2
- Grusec, J. E. (1992). Social learning theory and developmental psychology: The legacies of Robert Sears and Albert Bandura. *Developmental Psychology*, 28(5), 776-786. doi:10.1037/0012-1649.28.5.776

- Hardigan, P., & Cohen, S. (2003). A comparison of learning styles among seven health professions: Implications for optometric education. *The Internet Journal of Allied Health Sciences and Practices*, 1(1). Retrieved from <http://ijahsp.nova.edu>
- Harper, L., & Ross, J. (2011). An application of Knowles' theories of adult education to an undergraduate interdisciplinary studies degree program. *Journal of Continuing Higher Education*, 59(3), 161-166. doi:10.1080/07377363.2011.614887
- Harris, I. (2003). What does "The discovery of grounded theory" have to say to medical education? *Advances in Health Sciences Education*, 8(1), 49-61. Retrieved from <http://link.springer.com/journal/10459>
- Harris, I., & Simpson, D. (2005). Christine McGuire: At the heart of the maverick measurement maven. *Advances in Health Sciences Education*, 10(1), 65-80. <http://dx.doi.org/10.1007/s10459-005-2339-8>
- Harris, S. (2013). Reframing the narrative: New AAMC chief diversity officer Marc Nivet. Retrieved from <https://www.aamc.org/44826/search.html?q=reframing&x=-957&y=-18>
- Heidenreich, C., Lye, P., Simpson, D., & Lourich, M. (2000). The search for effective and efficient ambulatory teaching methods through the literature. *Pediatrics*, 105(1 Pt 3), 231-237. Retrieved from <http://pediatrics.aappublications.org/>
- Henning, M., A., Pinnock, R., Shulruf, B., & Hawken, S., J. (2013). The emerging professional: Early clinical students' views about their learning environment. *Education in Medicine Journal*, 5(1), e54-e60. doi:10.5959/eimj.issn21801932
- Herr, K., & Anderson, G. L. (2005). *The action research dissertation: A guide for students and faculty*. Thousand Oaks, CA: Sage.

- Hewson, M. G. (1991). Reflection in clinical teaching: An analysis of reflection-on-action and its implications for staffing residents. *Medical Teacher*, 13(3), 227-231. Retrieved from <http://www.medicalteacher.org/>
- Irby, D. M. (1994a). Three exemplary models of case-based teaching. *Academic Medicine*, 69(12), 947-953. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Irby, D. M. (1994b). What clinical teachers in medicine need to know. *Academic Medicine*, 69(5), 333-342. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Irby, D. M. (1995). Teaching and learning in ambulatory care settings: A thematic review of the literature. *Academic Medicine*, 70(10), 898-931. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Irby, D. M., & Papadakis, M. (2001). Does good clinical teaching really make a difference? *The American Journal of Medicine*, 110(3), 231-232. doi:10.1016/S0002-9343(00)00737-3
- Irby, D. M., & Wilkerson, L. (2008). Teaching rounds: Teaching when time is limited. *British Medical Journal*, 336, 384-387. doi:10.1136/bmj.39456.727199.AD
- Irby, D. M., Ramsey, P. G., Gillmore, G. M., & Schaad, D. (1991). Characteristics of effective clinical teachers of ambulatory care medicine. *Academic Medicine*, 66(1), 54-55. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>

- Kassirer, J. P. (2010). Teaching clinical reasoning: Case-based and coached. *Academic Medicine*, 85(7), 1118-1124. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Kennedy, T. J. T., & Lingard, L. A. (2006). Making sense of grounded theory in medical education. *Medical Education*, 40(2), 101-108. doi:10.1111/j.1365-2929.2005.02378.x
- Kogan, J. R., & Shea, J. A. (2007). Course evaluation in medical education. *Teaching and Teacher Education*, 23(3), 251-264. doi.org/10.1016/j.tate.2006.12.020
- Kreber, C. (2002). Teaching excellence, teaching expertise, and the scholarship of teaching. *Innovative Higher Education*, 27(1), 5-23. doi:10.1023/A:1020464222360
- Kumar, A., Kallen, D. J., & Mathew, T. (2002). Volunteer faculty: What rewards or incentives do they prefer? *Teaching and Learning in Medicine*, 14(2), 119-123. doi:10.1207/S15328015TLM1402\_09
- Kuther, T. (2011). What's the difference between allopathic and osteopathic medicine? Retrieved from About.com Graduate School Web site: <http://gradschool.about.com/od/medicalschoo/f/osteallo.htm>
- Labuschagne, A. (2003). Qualitative research - Airy fairy or fundamental? *The Qualitative Report*, 8(1). Retrieved from <http://www.nova.edu/ssss/QR/>
- Lambert, V., & Glacken, M. (2005). Clinical education facilitators: A literature review. *Journal of Clinical Nursing*, 14(6), 664-673. doi:10.1111/j.1365-2702.2005.01136.x



- Lawson, P. J., & Flocke, S. A. (2009). Teachable moments for health behavior change: A concept analysis. *Patient Education and Counseling*, 76(1), 25-30. doi:10.1016/j.pec.2008.11.002
- Liaison Committee on Medical Education (LCME) (2006). *Accreditation Guidelines for New and Developing Medical Schools*. Retrieved from <http://www.lcme.org/newschoolguide.pdf>
- Lie, D., Boker, J., Dow, E., Murata, P., Encinas, J., Gutierrez, D., & Morrison, E. H. (2009). Attributes of effective community preceptors for pre-clerkship medical students. *Medical Teacher*, 31(3), 251-259. doi:10.1080/01421590802139765
- Lingappa, V., Farey, K. (2000). Physiological medicine: A clinical approach to basic medical physiology. Retrieved from <http://catdir.loc.gov/catdir/description/mh021/00029194.html>
- Locke, L. F., Spirduso W. W., & Silverman, S. J. (2007). *Proposals that work: A guide for planning dissertations and grant proposals*. Thousand Oaks, CA: Sage.
- Lowman, J. (1996). Characteristics of exemplary teachers. *New Directions for Teaching and Learning*, 1996(65), 33-40. doi:10.1002/tl.37219966508
- Ludmerer, K. M. (2010). Commentary: Understanding the Flexner report. *Academic Medicine*, 85(2), 193-196. doi:10.1097/ACM.0b013e3181c8f1e7
- MacDougall, J., & Drummond, M. J. (2005). The development of medical teachers: An enquiry into the learning histories of 10 experienced medical teachers. *Medical Education*, 39(12), 1213-1220. doi:10.1111/j.1365-2929.2005.02335.x

- Mann, K., Gordon, J., & MacLeod, A. (2009). Reflection and reflective practice in health professions education: A systematic review. *Advances in Health Sciences Education, 14*(4), 595-621. doi:10.1007/s10459-007-9090-2
- Manyon, A., Shipengrover, J., McGuigan, D., Haggerty, M., James, P., & Danzo, A. (2003). Defining differences in the instructional styles of community preceptors. *Family Medicine, 35*(3), 181-186. Retrieved from <http://www.stfm.org/fmhub/>
- Masunaga, H., & Hitchcock, M. A. (2010). Residents' and faculty's beliefs about the ideal clinical teacher. *Family Medicine, 42*(2), 116-120. Retrieved from <http://www.stfm.org/fmhub/>
- McGeehan, J., English, R., Shenberger, K., Tracy, G., & Smego, R. (2013). A community continuity programme: Volunteer faculty mentors and continuity learning. *The Clinical Teacher, 10*(1), 15-20. doi:10.1111/j.1743-498X.2012.00602.x
- McLeod, P. J., Steinert, Y., Meagher, T., & McLeod, A. (2003). The ABCs of pedagogy for clinical teachers. *Medical Education, 37*(7), 638-644. doi:10.1046/j.1365-2923.2003.01559.x
- Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.
- Miller, G. E. (1969). The study of medical education. *Medical Education, 3*(1), 5-10. doi:10.1111/j.1365-2923.1969.tb01586.x
- Morse, J. M. (2009). *Developing grounded theory: The second generation*. Walnut Creek, CA: Left Coast Press.

- Morzinski, J., & Henley, C. (2006). Aligning the interests of osteopathic and allopathic teachers of family medicine. *Annals of Family Medicine*, 4(2), 182-184. doi:10.1370/afm.533
- Novack, D. H., Suchman, A. L., Clark, W., Epstein, R. M., Najberg, E., & Kaplan, C. (1997). Calibrating the physician. Personal awareness and effective patient care. Working group on promoting physician personal awareness, American Academy on Physician and Patient. *JAMA: The Journal of the American Medical Association*, 278(6), 502-509. Retrieved from <http://jama.jamanetwork.com/journal.aspx>
- O'Brien, B. C., & Poncelet, A. N. (2010). Transition to clerkship courses: Preparing students to enter the workplace. *Academic Medicine*, 85(12), 1862-1869. doi:10.1097/ACM.0b013e3181fa2353
- O'Sullivan, P. S., & Irby, D. M. (2011). Reframing research on faculty development. *Academic Medicine*, 86(4), 421-428. doi:10.1097/ACM.0b013e31820dc058
- O'Sullivan, P. S., Niehaus, B., Lockspeiser, T. M., & Irby, D. M. (2009). Becoming an academic doctor: Perceptions of scholarly careers. *Medical Education*, 43(4), 335-341. doi:10.1111/j.1365-2923.2008.03270.x
- Oesch, G. R. (2005). *Teaching excellence: Perceptions of community college students*. (Doctoral dissertation). Retrieved from Proquest Dissertations & Theses. (3197940).
- Osterman, K. (1993). Reflective practice for educators: Improving schooling through professional development Retrieved from <http://www.fgse.nova.edu/edl/secure/mats/rdgelach2.pdf>

- Parker, C. (2007). *Exploring the qualities, skills, attitudes, and techniques among highly rated community college teachers that may foster community, connectedness, and discourse in the virtual classroom: A qualitative study*. (Doctoral dissertation). Retrieved from Proquest Dissertations & Theses. (3285346).
- Patton, M. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.
- Pinsky, L., Monson, D., & Irby, D. (1998). How excellent teachers are made: Reflecting on success to improve teaching. *Advances in Health Sciences Education*, 3(3), 207-215. doi:10.1023/a:1009749323352
- Plack, M. M., & Greenberg, L. (2005). The reflective practitioner: Reaching for excellence in practice. *Pediatrics*, 116(6), 1546-1552. doi:10.1542/peds.2005-0209
- Poses, P., & Isen, A. (1998). Qualitative research in medicine and health care. *Journal of General Internal Medicine*, 13(1), 32-38. doi.org/10.1046/j.1525-1497.1998.00005.x
- Powell, S., & Easton, G. (2012). Student perceptions of GP teachers' role in community-based undergraduate surgical education: a qualitative study. *JRSM Short Reports*, 3(8). doi:10.1258/shorts.2012.012015
- Ramani, S. (2006). Twelve tips to promote excellence in medical teaching. *Medical Teacher*, 28(1). 19-23. doi:10.1080/01421590500441786
- Ramani, S., & Leinster, S. (2008). AMEE guide no. 34: Teaching in the clinical environment. *Medical Teacher*, 30(4), 347-364. doi:10.1080/01421590802061613

- Raszka, W. V., Jr., Maloney, C. G., & Hanson, J. L. (2010). Getting off to a good start: discussing goals and expectations with medical students. *Pediatrics*, *126*(2), 193-195. doi:10.1542/peds.2010-1439
- Reilly, B. M. (2007). Inconvenient truths about effective clinical teaching. *Lancet*, *370*(9588), 705-711. doi:org/10.1016/S0140-6736(07)61347-6
- Rich, V. J. (2009). Clinical instructors' and athletic training students' perceptions of teachable moments in an athletic training clinical education setting. *Journal of Athletic Training*, *44*(3), 294-303. doi:10.4085/1062-6050-44.3.294
- Riggs, G. (2010). Commentary: Are we ready to embrace the rest of the Flexner report? *Academic Medicine*, *85*(11), 1669-1671. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Rosenbaum, M. E., Ferguson, K. J., & Lobas, J. G. (2004). Teaching medical students and residents skills for delivering bad news: A review of strategies. *Academic Medicine*, *79*(2), 107-117. Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Rosenthal, D. R., Worley, P. S., Mugford, B., & Stagg, P. (2004). Vertical integration of medical education: Riverland experience, South Australia. *Rural Remote Health*, *4*(1), 228. Retrieved from <http://www.rrh.org.au>
- Saldaña, J. (2009). *The coding manual for qualitative researchers*. Thousand Oaks, CA: Sage.
- Scott, E. (2011). Reframing and stress management: Reframing: It's all how you look at it! Retrieved from <http://stress.about.com/od/positiveattitude/a/reframing.htm>

- Secor, D. (2009). APDIM presents DME award to Kelley Skeff, MD, PhD. *Academic Internal Medicine Insight*, 7(4), 16. Retrieved from <http://journals.lww.com/pages/currenttoc.aspx>
- Sherman, T. M., Armistead, L. P., Fowler, F., Barksdale, M. A., & Reif, G. (1987). The quest for excellence in university teaching. *The Journal of Higher Education*, 58(1), 66-84. Retrieved from <https://ohiostatepress.org/Journals/JHE/jhemain.htm>
- Shin, K. R. (1993). The effective approaches of clinical nursing education. *The Korean Nurse*, 32(5), 93-105. Retrieved from <http://www.koreanurse.or.kr/>
- Skeff, K. (2005). *Faculty development program for professionalism in contemporary practice*. Retrieved from The Josiah Macy Jr. Foundation Web site: <http://macyfoundation.org/grantees/profile/faculty-development-program-for-professionalism-in-contemporary-practice>
- Skeff, K. M., Stratos, G. A., Bergen, M. R., Sampson, K., & Deutsch, S. L. (1999). Regional teaching improvement programs for community-based teachers. *American Journal of Medicine*, 106(1), 76-80. doi:10.1016/S0002-9343(98)00360-X
- Smith, D. W. (2011 Fall) "Phenomenology". *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta (ed.). Retrieved from <http://plato.stanford.edu/archives/fall2011/entries/phenomenology/>
- Speicher, T. E., Bell, A., Kehrhahn, M., & Casa, D. J. (2012). Case-based analogical reasoning: A pedagogical tool for promotion of clinical reasoning. *Athletic Training Education Journal*, 7(3), 129-136. doi:10.5608/0703129

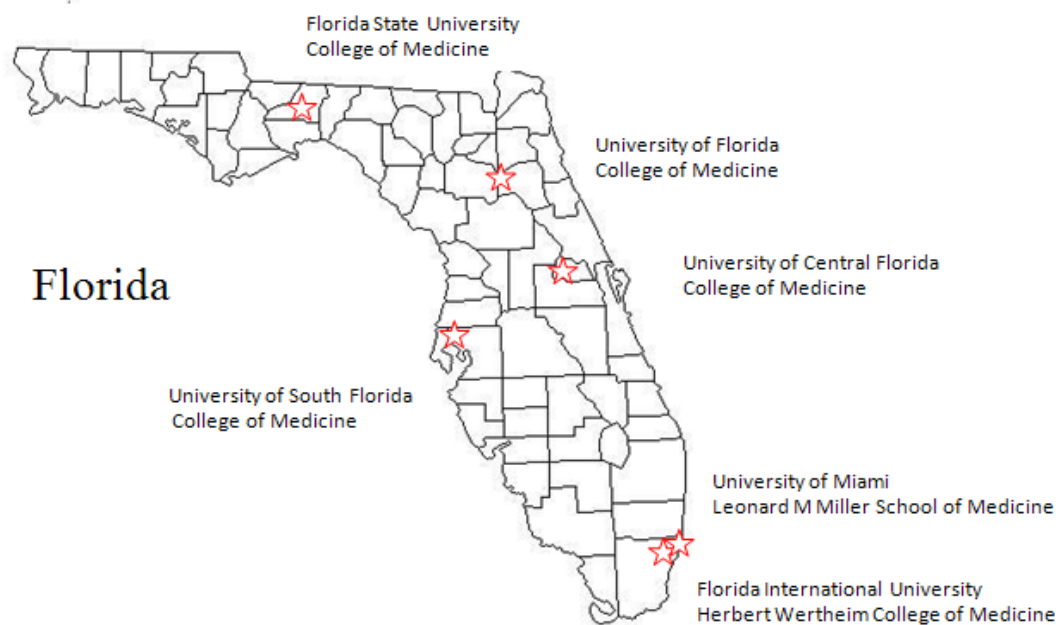
- Srinivasan, M., Pratt, D. D., Collins, J., Bowe, C. M., Stevenson, F. T., Pinney, S. J., & Wilkes, M. S. (2007). Developing the master educator: Cross disciplinary teaching scholars program for human and veterinary medical faculty. *Academic Psychiatry, 31*(6), 452-464. doi:10.1176/appi.ap.31.6.452
- Starr, S., Ferguson, W. J., Haley, H. L., & Quirk, M. (2003). Community preceptors' views of their identities as teachers. *Academic Medicine, 78*(8), 820-825.  
Retrieved from <http://journals.lww.com/academicmedicine/pages/currenttoc.aspx>
- Stenfors-Hayes, T., Hult, H., & Dahlgren, L. (2011). What does it mean to be a good teacher and clinical supervisor in medical education? *Advances in Health Sciences Education, 16*(2), 197-210. doi:10.1007/s10459-010-9255-2
- Strauss, A., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage.
- Sutkin, G., Wagner, E., Harris, I., & Schiffer, R. (2008). What makes a good clinical teacher in medicine? A review of the literature. *Academic Medicine, 83*(5), 452-466. doi:10.1097/ACM.0b013e31816bee61
- Taylor, E. W., Tisdell, E. J., & Gusic, M. E. (2007). Teaching beliefs of medical educators: Perspectives on clinical teaching in pediatrics. *Medical Teacher, 29*(4), 371-376. doi:10.1080/01421590701510553
- Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research, 79*(2), 702-739. doi:10.3102/0034654308330970

- Wheeler, B. K., Powelson, S., & Kim, J. H. (2007). Interdisciplinary clinical education: Implementing a gerontological home visiting program. *Nurse Educator*, 32(3), 136-140. doi:10.1097/01.NNE.0000270231.14779.6a
- Wijnen-Meijer, M., ten Cate, O., van der Schaaf, M., & Harendza, S. (2013). Graduates from vertically integrated curricula. *The Clinical Teacher*, 10(3), 155-159. doi:10.1111/tct.12022
- Wikipedia. (2012). Intrinsic value. Retrieved from [http://en.wikipedia.org/wiki/Intrinsic\\_value\\_\(finance\)](http://en.wikipedia.org/wiki/Intrinsic_value_(finance))
- Wilkinson, J. (2004). Using adult learning theory to enhance clinical teaching. *Nursing Praxis in New Zealand*, 20(1), 36-44. Retrieved from <http://www.nursingpraxis.org/>
- Wilson, M. R. (2006). Scholarly activity redefined: Balancing the three-legged stool. *The Ochsner Journal*, 6(1), 12-14. Retrieved from <http://www.ochsnerjournal.org/>
- Winn, J. M., & Grantham, V. V. (2005). Using personality type to improve clinical education effectiveness. *Journal of Nuclear Medicine Technology*, 33(4), 210-213. Retrieved from <http://www.snmjournals.org/>
- Woolliscroft, J. O., Harrison, R. V., & Anderson, M. B. (2002). Faculty views of reimbursement changes and clinical training: a survey of award-winning clinical teachers. *Teaching and Learning in Medicine*, 14(2), 77-86. doi:10.1207/s15328015t1m1402\_03



## **APPENDICES**

## Appendix A: Map of Florida Allopathic Medical Schools



## Appendix B: Email to Florida Allopathic Medical School Contacts

This is a follow-up correspondence to departmental contacts regarding **MS 1 and MS 2** student placement in clinical sites at your institution (preclinical experiences). I would like to ask the following five brief questions:

1. Do you require clinical experiences prior to clerkships? If yes, which years and what is the name of the course?
2. Approximately what percent (%) of your clinical preceptors are primary care and what % are specialists (prior to clerkships)?
3. Approximately what percent (%) of your clinical preceptors are community-based/office-based/ambulatory and what % are academic preceptors (prior to the clerkship)?
4. What is the job title for your “teachers” in your clinical experience course (prior to clerkships)? e.g., “preceptors”
5. Does your medical school have a formal system to recognize outstanding/exemplary clinical experience preceptors?

### **Please consider the following in answering your questions:**

- The clinical education settings should only include settings where students are placed in actual patient care (not simulation centers, role modeling etc).
- Operational definitions:
  - **Community-based preceptors** – physicians who teach students and residents one-on-one in an office-based/ambulatory setting or inpatient (hospital-based) setting, who do not have full-time academic appointments at the medical school, and are not employed at an affiliated institution of the medical school. They include practitioners who are voluntary, partial or un-paid FTE.
  - **Academic preceptors** – physicians who are full-time, paid (.75 – 1.0 FTE) with academic appointments at the medical school or employed at an affiliated site. They include faculty who teach in the in-patient (hospital-based), office-based/ambulatory setting, critical care, or academic medical center clinic setting.
- Primary Care clinical teachers include: Family Medicine, General Internal Medicine, General Pediatrics, Geriatrics, and OB/GYN (those who mainly do women’s primary care). Specialty clinical teachers include all others: cardiology, pain management, hospitalists, radiology, psychiatry, etc.

Your feedback by **Friday, March 11, 2011** is greatly appreciated. If you are interested in receiving a summary of the collected information, please let me know. If there is someone else better able to answer the five questions, please forward or provide me with the appropriate contact. Thank you

## Appendix C: Class Email Nomination Instructions

Dear Class of 2011, 2012, & 2013,

As you may recall, the goal of the LCE program is to introduce students to clinical medicine during the basic science years with the following objectives. At the end of the LCE program, the student will:

1. Be introduced to clinical medicine by a positive role model.
2. Develop an understanding of the doctor-patient relationship and the relationship of the physician with other health care professionals.
3. Establish an understanding of what is the essence of being a physician, including the fostering of professionalism.
4. Develop medical interviewing and communication skills.
5. Develop physical examination skills.
6. Apply and integrate basic science into clinical medicine.
7. Develop a clinical knowledge base.

With these programmatic goals in mind, your help is requested in our effort to recognize outstanding/exemplary clinical experience teachers. You can help us by nominating one, two, or three preceptors from your year one and two LCE program. The preceptor(s) you nominate should represent someone who has significantly and positively influenced your pre-clerkship clinical education over the three rotations in the LCE program and who has gone above your expectations providing you with one of the best learning experiences you have had in medicine at USF. You do not have to nominate a preceptor, and they will not find out if you have nominated them unless they are the recipient of the award. This process will in no way impact your individual evaluation from your preceptor.

Your feedback will remain anonymous. The deadline for your response is Wednesday, February 9, 2011.

Thank you for your participation. \*If you would like to nominate more than 1 LCE instructor, please submit an individual nomination form for each instructor.\*

Sincerely,

MS 2 Co-President, Class of 2013

MS 2 LCE Liaisons, Class of 2013

I've invited you to fill out the form **LCE Instructor of the Year Award Nomination Form**.

**Appendix D: Preceptor Award Nomination Form from Online Survey**

# **LCE Preceptor Award for Teaching Excellence Nomination Form**

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\* Required

## **Nomination Form**

Your Name \*

Year in School \* Note: Current MS-1s cannot nominate an instructor. You will have this opportunity at the end of your second year.

Name of LCE Instructor being nominated \*

Specialty of LCE Instructor? \* (e.g., general surgery, family medicine, oncology, etc.)

Please describe why your LCE preceptor should be chosen as instructor of the year. Remember, a nominee should be someone that exceeded your expectation as an instructor. Additionally, they should be someone that exemplifies the qualities of a good physician with patients as well as co-workers. A nominee should be someone that has given you one of the best experiences you have had as a medical student. Your LCE preceptor will not find out you have nominated them unless they are chosen for the award, and this will in no way impact your grade or the comments for your dean letter as the process will be entirely separate. \*

## Appendix E: E-mail Invitation to Participate/Interview

March 2012

Dear Preceptor,

As you may recall, in February 2011, you were nominated for a teaching excellence award by University of South Florida, Morsani College of Medicine medical students in the Longitudinal Clinical Experience (LCE) program. Nominations were completed through an online survey after students were asked to select a nominee who exemplified the qualities of a good physician with patients as well as co-workers, exceeded expectations as an instructor, and who provided one of the best clinical experiences for the medical student in the preclinical undergraduate medical education program.

Thus, I would like to ask your assistance in an educational study related to my doctoral dissertation. The purpose of the study is to describe and explain descriptions of clinical teaching excellence of academic and community-based preceptors in the preclinical undergraduate medical education program. The study is called, *Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors*. Your clinical teaching excellence views would provide valuable insights for the study. Results from the study will hope to encourage further research on clinical teaching excellence and design of faculty development practices.

The interview will take approximately one hour to complete at your practice setting or a setting convenient for you during the month of March/April 2012 and will be digitally recorded and transcribed, with your permission. To maintain anonymity, your comments will not be identified by name, only an assigned pseudonym.

The process has gone through USF Institutional Review Board approval for research which means you will be asked to sign a consent form for participation. Participation is voluntary; you are free to participate in this interview or withdraw at any time. You will also have an opportunity to review the collected data from this interview. This process, called a member check, will provide credibility and transparency in the study and re-affirmation of interview data analysis. Data will remain confidential.

If you are interested in participating, please contact me at [pparisia@mail.usf.edu](mailto:pparisia@mail.usf.edu) or by phone 941-720-0511. I have included my approved informed consent form for your review and signature should you decide to participate.

Thank you for your consideration of my request. I look forward to hearing from you.

Sincerely,  
Patti Parisian, MPH, CHES

## Appendix F: Sample Confirmation E-mail to Participants

March 2012

Dear Preceptor,

This is to confirm our interview session for my doctoral study, *Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors* on [date ] at [time] at [location].

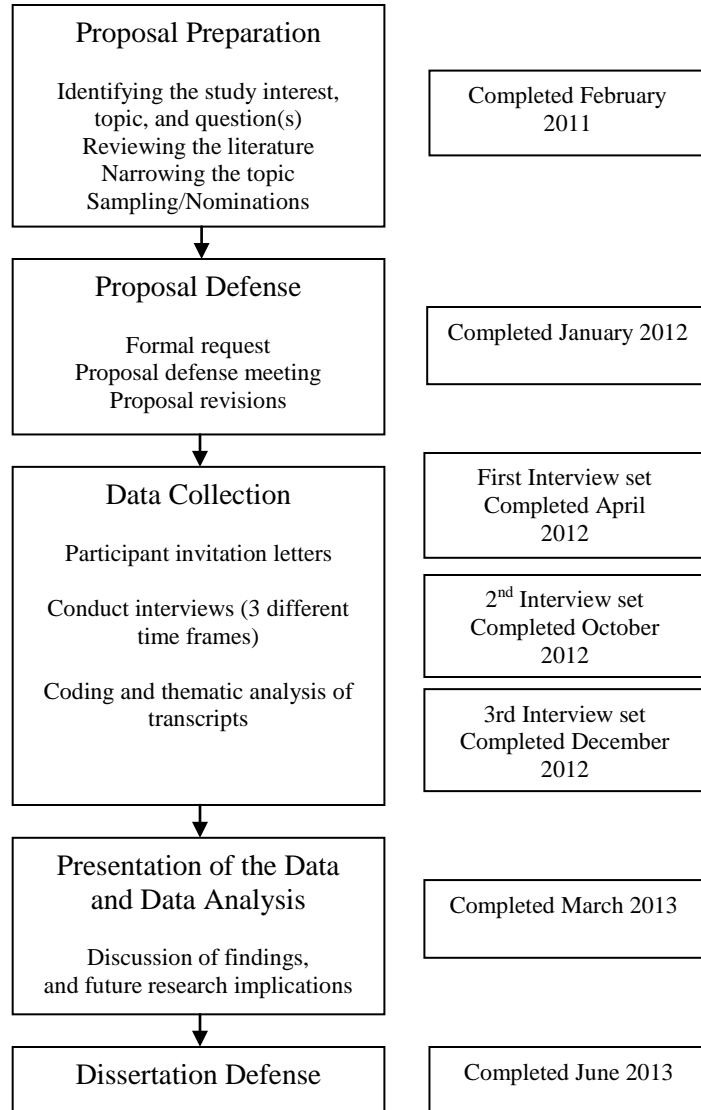
To expedite the process, I am forwarding the interview questions in advance so that you will have a chance to review and consider your responses.

Thank you for your interest and participation in my research study. I look forward to our meeting. If you have any question, please contact me at [pparisia@mail.usf.edu](mailto:pparisia@mail.usf.edu) or by phone 941-720-0511.

Sincerely,

Patti Parisian, MPH, CHES

## Appendix G: Flowchart of the Study Design





## **Appendix H: Interview Protocol and Questions**

### *Study Title*

Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School:  
The Views of Academic and Community-Based Preceptors

### *Script*

Date: April - December 2012

Time Start:

Time end:

Location/setting:

Participants: USF Morsani College of Medicine 1<sup>st</sup> and 2<sup>nd</sup> Year Clinical Preceptors

Interviewer: Patti Parisian

### **Welcome and Introduction**

As you may recall, in February 2011 you were nominated for a teaching excellence award by University of South Florida, Morsani College of Medicine second, third, and fourth- year medical students in the Longitudinal Clinical Experience (LCE) program. Nominations were completed through an online survey after students were asked to indicate why their assigned LCE preceptor should be chosen as instructor of the year. Additionally, students selected a nominee who exemplified the qualities of a good physician with patients as well as co-workers, exceeded expectations as an instructor, and who provided one of the best clinical experiences for the medical student in the preclinical undergraduate medical education program.

Thus, I would like to ask your assistance in an educational study, related to my doctoral dissertation. The purpose of the study is to describe and explain descriptions of clinical teaching excellence of academic and community-based preceptors in primary care (PC) and specialty settings in a preclinical undergraduate medical education program. Results from the study will hope to encourage further research on clinical teaching excellence and design of faculty development practices.

The interview will take approximately one hour to complete at your practice setting or a setting convenient for you during the month of March/April 2012. The interview will be digitally recorded and transcribed, with your permission. To maintain confidentiality, your comments will not be identified by name on recording, only an assigned pseudonym. Recordings will be transcribed by me and a professional transcribing service.

The process has gone through USF Institutional Review Board approval for research which means you will be asked to sign a consent form for participation. Participation is voluntary; you are free to participate in this interview or withdraw at any time. At any time during the interview you may turn off the digital recorder.

## **Appendix H: Interview Protocol and Questions (continued)**

You will also have an opportunity to review the collected data from this interview, for correctness. This process, called a member check, will provide credibility and transparency in the study and re-affirmation of interview data analysis. Data will remain confidential.

### **Begin Demographic and Interview Questions**

#### *Introduction*

In this study, I am interested in your views of clinical teaching excellence in the first two years of medical school. Specifically, your one-on-one clinical teaching experiences with students in your practice setting.

#### *Demographic Questions*

1. How many years have you been a preceptor for USF Morsani College of Medicine?
2. How many USF Morsani College of Medicine students have you precepted?

#### *Interview Questions*

1. How would you describe “clinical teaching excellence” in working one-on-one with first and/or second year undergraduate medical education students?
2. Participants will be asked one of the four following questions:
  - What clinical teaching attributes do you consider most essential as a primary care preceptor working in an academic setting?
  - What clinical teaching attributes do you consider most essential as a primary care preceptor working in a community-based setting?
  - What clinical teaching attributes do you consider most essential as a specialty preceptor working in an academic setting?

## Appendix H: Interview Protocol and Questions (continued)

- What clinical teaching attributes do you consider most essential as a specialty preceptor working in community-based setting?
3. In your view, what are two preceptor attitudes and/or behaviors which you feel best or uniquely distinguish excellence in clinical teaching from satisfactory/average performance in clinical teaching?
  4. Think back to your first and second year of undergraduate medical education. Now think about your clinical teaching with current LCE first and second year medical students. How were your experiences different or similar?
    - Describe one especially positive experience.
    - Describe one especially negative experience.
  5. Now, tell me about your most wonderful experience as a LCE preceptor?
  6. In what ways do you think clinical teaching with first year medical students is *similar* to clinical teaching with second year medical students? In what ways do think clinical teaching with first year medical students is *different* than clinical teaching with second year students?
  7. What are the challenges (barriers) you have experienced as a clinical teacher?
  8. What helpful advice, regarding teaching excellence, would you offer to other physicians who might be contemplating becoming new preceptors?
  9. If you were asked to help design professional development training opportunities for new preceptors, what suggestions would you have to help prepare preceptors for their role?

## **Appendix H: Interview Protocol and Questions (continued)**

10. Is there anything else you would like to tell me about regarding clinical teaching excellence? Is there anything else you consider most important to you as an LCE preceptor?

**Thank you for your participation.**

# Appendix I: IRB Approved Participant Consent Form

Study ID: Pro00006982 Date Approved: 3/19/2012 Expiration Date: 3/19/2013



## **Informed Consent to Participate in Research Information to Consider Before Taking Part in this Research Study**

**IRB Study # Pro00006982**

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This study involves interviewing academic and community-based clinical teachers (preceptors) from USF Morsani College of Medicine regarding their views on clinical teaching excellence. The study is called, *Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors*. The person who is in charge of this research study is *Patricia Parisian*. This person is called the Principal Investigator.

The purpose of the study is to describe and explain descriptions of clinical teaching excellence of academic and community-based preceptors in primary care (PC) and specialty settings in a preclinical undergraduate medical education program. Results from the study will hope to encourage further research on clinical teaching excellence and design of faculty development practices.

Ten preceptors from USF Morsani College of Medicine will take part in this study. The interview will be digitally recorded and transcribed, with your permission. To maintain anonymity, your comments will not be identified by name, only with an assigned pseudonym. Recordings will be transcribed by the Principal Investigator and a professional transcribing service.

The process has gone through USF Institutional Review Board approval for research. Participation is voluntary; you are free to participate in this interview or withdraw at any time

You will also have an opportunity to review the collected data from this interview, for correctness. This process, called a member check, will provide credibility and transparency in the study and re-affirmation of interview data analysis. Data will remain confidential.

If you take part in this study, you will be asked to, provide your views and perspectives on clinical teaching excellence, participate in one interview session for approximately one hour in length at your practice site, and provide consent to be audio recorded with a digital recorder (you will have the option of withdrawing from participation at any time as well asking for the digital recorder to be turned off).

There are no risks to you for participating in this study. Since this is unfunded research payment or compensation will not be provided. There are, however, no costs to you. Potential benefits to preceptors who participate include the opportunity to contribute to

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IRB Number: Pro00006982  
IC Adult Minimal Risk - SB Rev:9-3-2010



IRB Consent Rev. Date: 3/9/2012

Page 1 of 2

## Appendix J: Sample Interview Field Note

Event	Description	Initial/open Coding
<p>Pilot Interview # 1  Date: April 5, 2012  Participant: Preceptor Carin  Location: USF Morsani COM  Start Time: 3:10 pm  End Time: 4:20 pm  Length of Interview: 1 hour 10 minutes</p>		
<p>Pre-meeting notes/correspondence</p>	<p>Two initial requests for participation were eliminated due to not meeting selection criteria and/or no response.</p> <p>E-mail reply from Preceptor Carin agreeing to interview was immediate. Preceptor Carin had me follow-up to schedule interview with assistant in office, via email cc. There were 4 optional dates and times, pleasantly workable with out of town travel arrangements. A copy of the IRB approved informed consent was provided. A follow-up phone call with assistant was also done to discuss optional meeting days. E-mail confirmation was completed a few days later with a copy of the interview questions attached. Was given an assigned parking space for the interview date.</p> <p>Selection criteria was completed; participant was agreeable to the 1 hour timeframe for interview and had an opportunity to review voluntary participating and use of pseudonym for confidentiality through the IRB informed consent provided via email.</p> <p>I arrived 30 minutes early and waited in lobby. The assistant came out promptly at 3:00 and took me to the preceptor's office for introductions.</p> <p>I was also provided an assigned parking spot which added to the accommodating setting. It is quite difficult to find parking and get parking passes so this was a nice gesture.</p>	<p>Immediate responses</p> <p>Accommodating</p> <p>Thrilled to be a part of the study</p> <p>Prompt</p>

**Appendix J: Sample Interview Field Note (continued)**

Communication	E-mail and phone	
Setting	<p>Preceptor Carin’s office located in the College of Medicine faculty building.</p> <p>The faculty office was bright, cheery and had a huge window. Since this was also a medical clinic building in addition to faculty offices, I could hear children playing outside. I was excited to formally meet this clinical teacher after having worked with her via email and phone communication for several years in the LCE program.</p>	<p>Multi-tasker</p> <p>Great setting for interview</p>
A little history	<p>The interview was with a female primary care physician who works in the academic setting. She received her MD and completed residency at USF College of Medicine and has been working for USF Health since. Her subspecialty is [ ] She is a well-respected expert in her field in addition to the nomination for clinical teaching excellence by students. She is a wife and mother of 2 daughters.</p>	<p>Expert</p> <p>Approachable</p>
Words or phrases attributed to a specific meaning (interviewee’s language use)	<p>“What makes me happy at the end of the day after teaching”</p> <p>“Be happy in the job you are doing”</p>	<p>Learning environment</p>
Quotations	<p>“Connect to the students as who they are”</p>	
Challenges	<p>Teaching to the level of understanding for each student</p>	

## **Appendix K: Reflective Journal Entry**

### A Journey through a Grounded Theory Study

#### **Preface**

I chose to name this journal part *A Journey through Grounded Theory* because of my immersion into the day-to-day exploration of researching, learning, living, and evaluating the theoretical concepts of my study. My writings are a chronological journal of activity and capture both challenges and successes.

#### **January 23, 2012**

Dissertation proposal defense; another milestone in this journey.

#### **February 2012**

##### Grounded Theory (GT)

I am now beginning to grasp the enormity of the immersion process for which I will be undertaking for the grounded theory, emergent research design of the study. Similar to my mental construction of readiness in embarking on pre-admission to the doctoral program, I am re-discovering the true definition of a systematic process and how important passion is for your research topic. It is intense. When asked, I often advise neophyte students who are beginning their journey into the doctoral world, that they will be married to the research process and topic for many years. That is how I overcame the challenges. Grounded theory design will again test my abilities and challenges over the next several months as I live emerging theory almost daily.

As I continue my awareness of GT, I reference a thought from the book, *Developing Grounded Theory: the Second Generation* where GT provides an avenue to express creative talents through the collection and analysis of data (Morse et al., 2009). I reference this because as I move into a deeper level of understanding of GT, I seem to have more “aha” moments with getting it. This is a good thing, right? I think so. I am becoming more comfortable with this approach to research and that I have in fact chosen the right road.

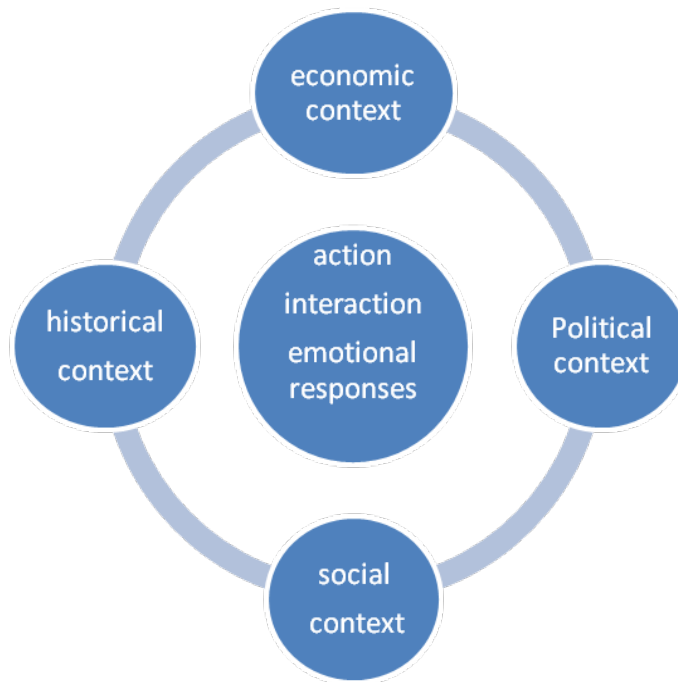
Another visual diagram (because I am a visual learner) of GT (from the book, *Developing Grounded Theory: The Second Generation*, p. 51). The diagram shows the importance of how the researcher captures the complexities in life and different ways people respond to events. Actions/interactions and emotional responses, for example, are the core with structured contexts such as economics, providing a broader framework for comparison/analysis. It is the meaning given to the events, not the events themselves



## Appendix K: Reflective Journal Entry (continued)

which are the focus of GT research (p. 38). So, I as the research instrument, play detective, practice investigation, and piece together these meanings for answers.

### *Putting Process together with Structure*



Still working in the awareness of GT mode, I continue to seek as many GT resources as I possibly can. I want to truly embrace this approach in preparation of my interviews, coding, and analysis. My main sources include material from the influential works of Strauss, Glaser, Morse, and Charmaz. So I have ordered, interlibrary loaned, googled, and literature searched many of their publications. A few are still too complex to grasp (i.e. Strauss' *Qualitative Analysis for Social Scientist*). However, many resources do provide me with information on GT which are becoming part of my doctoral study repertoire. A brief list is below. By far, Charmaz's *Constructing Grounded Theory* has provided me with the best wealth of information, for my level of GT understanding, for interview analysis preparation.

1. Charmaz, K. (2009). *Constructing grounded theory : a practical guide through qualitative analysis* (Reprinted 2009. ed.). Los Angeles London: Sage.
2. Strauss, A. L., & Corbin, J. M. (1998). *Basics of Qualitative Research : Techniques and Procedures for Developing Grounded Theory* (pp. 327p.): Sage Publications, Inc
3. Charmaz, K. (2008). *Grounded Theory as an Emergent Method*. In S. N. a. L. Hesse-Biber, P. (Ed.), *Handbook of emergent methods*. New York: Guilford Press

### **Appendix K: Reflective Journal Entry (continued)**

4. Charmaz, K. (1990). 'Discovering' chronic illness: Using grounded theory. *Social Science & Medicine*, 30(11), 1161-1172.
5. Morse, J. M. (2009). *Developing grounded theory : the second generation*. Walnut Creek, Calif.: Left Coast Press

#### My thoughts on Charmaz's Constructing Grounded Theory: a practical guide through qualitative analysis:

Charmaz says "Grounded theory methods foster creating an analytic edge to your work...and can inform compelling descriptions and tales" (2009, p. xii *Constructing GT a practical guide*). I am excited to put this to practice in my study and believe my analysis will generate rich information.

I am starting to make connections to my study and how and where GT fits. I like Charmaz's book right from its' beginning because she provides a direct application approach via examples. Coding, exploring, comparing data from my interview responses, then the same process with my next preceptor, the next preceptor...until the final interview. I am half way into the book and sensing excitement in the opportunity to apply GT to my study. I am confident I can use the tools of GT to take my research of clinical teaching excellence in the first two years of medical school to a significant level of awareness and analysis.

## **Appendix K: Reflective Journal Entry (continued)**

**October 30, 2012**

This was a day of 3 interviews, logistics, and much driving back and forth between locations.

Interview #4 was at 10 am, however started late as Dean was doing rounds at the hospital. The interview lasted about an hour and 15 minutes. Dean was one of two interviewees who were nominated and received an award. He received an award for LCE teaching excellence as a community-based specialist. I have known Dean for as long as LCE has been in existence and have witnessed his attention to detail and strong desire for teaching commitment. I am not surprised he won the award.

This was a high energy discussion and I could feel the teaching commitment throughout the interview. He was one of the kindest physicians I have met and when combined with his love for teaching it set him at the top in clinical teaching. The dialogue had a great flow. One of the most striking features of the interview was his preparedness for discussion. He had reviewed and answered every interview question prior to the meeting. AWESOME!

Another thing that was appreciable was his love for music. He was not only an accomplished medical practitioner he was also an accomplished musician, currently playing with the symphony. Immediately after finishing his medical degree he took several years off to study music. As I was hearing this, I could not help but think about the connection between medicine and music and what attributes were common between the two. The interview was dynamic, engaging and referenced a holistic approach to patient care observed in some of the other interviews... "treat the human being" "how can I make life better for the patient." Being a dedicated preceptor with fully accepting responsibility for teaching was evident in his teaching excellence descriptions.

Another reward I got from this interview was seeing pictures of his "mentor" in his patient waiting room. Dean showed me several paintings/pictures of Albert Schweitzer, humanitarian, visionary, physician, musician, and spoke of his admiration for this man.

Dean's commitment as a clinical teacher was distinctive and it was rewarding to know that he played a part in guiding medical students to their profession. He took the study's meaning to a whole new level.

Interview #5 with Judy was also high energy, clearly recognizable of a teaching commitment. Judy was the 2<sup>nd</sup> nominated LCE preceptor who won an award for clinical teaching excellence, representing an academic specialist.

### **Appendix K: Reflective Journal Entry (continued)**

The interview began a few minutes late and lasted about 45 minutes. She was in between patients, quickly eating her lunch just before our meeting. She was very accommodating, even flexible on the time. Judy is a DO and reflective of holistic patient care in her practice, in her medical school training, and as a clinical teacher. She was articulate in her descriptions of clinical teaching excellence, often relating the importance of attitude and enthusiasm. Her patient care qualities were evident in her work as a consultant with the local health department, cancer center and trauma hospital often called to provide her expertise in treatment. Judy was dynamic, energetic, caring, and competent in her field.

Interview #6 with Adelane was one of my most memorable interviews. I was most concerned with how the interview would go with her and was pleasantly surprised to realize otherwise. I thought this would be my most challenging interview and instead it proved to be rewarding and with incredible respect for this wonderful surgeon. I was eager to finally meet Adelane after working with her by email and phone in my role as LCE coordinator for many years in the LCE program.

The setting was a small academic office, very modest and unassuming for a surgeon of such accomplishment and contribution to medicine.

Adelane is a surgeon at a cancer center in a very specialized field. She has been affiliated with USF for many years and with the LCE program since its inception. A striking observation after spending more than the planned hour with her was the visible reflective practice taking place during the discussion and when answering questions. It was obvious the interview process brought significant opportunity for her reflections of medical practice, clinical teaching, and medical school training. The discussions were rich, descriptive, inviting, and thought provoking. I imagined a short, hurried interview. It was quite opposite. She encouraged continuance of the discussion and many questions she seemed to probe herself and move to connecting thoughts, questions, and answers. The interview was well over the planned hour even prompting family discussion about her children and evening responsibility sharing with her husband, also a physician. She was eager to contribute to the study and was honored to be included. This interview was very high energy. She was a no-nonsense tell it like it is professional who loves her career.

## Appendix L: IRB Approval Letter



DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE  
Institutional Review Boards, FWA No. 00001669  
11201 Bruce B. Downs Blvd. MDC036 • Tampa, FL 33613-4799  
(813) 974-6636 • FAX (813) 974-6618

March 19, 2012

Patricia Parisian  
College of Medicine - Educational Affairs  
146 Thompson Drive  
Speedwell, TN 37870

RE: **Expedited Approval for Initial Review**  
IRB#: Pro00006982  
Title: Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors

Dear Ms. Parisian:

On 3/19/2012 the Institutional Review Board (IRB) reviewed and **APPROVED** the above referenced protocol. Please note that your approval for this study will expire on 3/19/2013.

**Approved Items:**

Protocol Document:

Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors - CLEAN

Consent/Assent Document:


Interview Consent Form.pdf

It was the determination of the IRB that your study qualified for expedited review which includes activities that (1) present no more than minimal risk to human subjects, and (2) involve only procedures listed in one or more of the categories outlined below. The IRB may review research through the expedited review procedure authorized by 45CFR46.110 and 21 CFR 56.110. The research proposed in this study is categorized under the following expedited review categories:

(6) Collection of data from voice, video, digital, or image recordings made for research purposes.

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

## Appendix M: Letter of Support from OEA

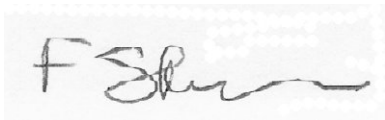
	<p>MORSANI COLLEGE OF MEDICINE</p> <p>UNIVERSITY OF SOUTH FLORIDA TAMPA BAY</p>	
<p>Frazier Stevenson, MD Associate Dean for Undergraduate Medical Education Professor of Medicine</p>		<p>Office of Educational Affairs, USF COM 12901 Bruce B. Downs Blvd., MDC 54 Tampa, FL 33612-4799 Office: (813) 974-7131 fstevens@health.usf.edu</p>

January 11, 2012

Dear Patricia Stubenberg Parisian,

I have read your proposed research project for your dissertation with USF College of Education. We understand that you are seeking the support of the Office for Educational Affairs for this proposal by providing access to potential interviewees selected from our preclinical faculty preceptors in the Longitudinal Clinical Experience (LCE) program, now a part of our year 1-2 Doctoring curriculum. We will be pleased to provide you the assistance requested and fully support the involvement of our office in this project. We look forward to working with you.

Sincerely,



Frazier Stevenson, M.D.  
Associate Dean, Undergraduate Medical Education

## Appendix N: Peer Review Process for Transcripts

In order to establish rigor, transparency, and confirmability and to address any concerns which could impact the credibility and trustworthiness of the study (trustworthiness is the qualitative complement of validity and reliability in qualitative design) the researcher included an external, peer review process during data collection and analysis. The peer reviewer is a colleague and friend of the researcher who recently completed a doctoral program using qualitative methods. The process for the current study includes the following steps:

1. Development of initial and focused coding of transcripts and emerging themes by researcher.
2. Peer reviewer analysis of the research questions and transcripts (raw, uncoded data).
3. Peer reviewer initial and focused coding of transcripts to determine emerging themes from the described codes.

Initial and focused coding, consistent with grounded theory development identifies themes from the interview question data. According to Charmaz, initial coding closely examines each component of the data by quickly identifying words which reflect action (gerunds). The second phase, focused coding, engages earlier, frequent codes which conceptually categorizes data for emerging theme development (Charmaz, 2009)

4. After review and coding of the raw transcripts by the peer reviewer, the peer reviewer will send a copy to the researcher for comparison.
5. Researcher and peer review will discuss, clarify, and verify theme development by phone.
6. The peer review will lend confirmability to the process to reduce potential for bias.
7. Peer reviewer will sign peer reviewer form O) for researcher to include in manuscript

**Appendix O: Peer Reviewer Form**

Peer Reviewer Form

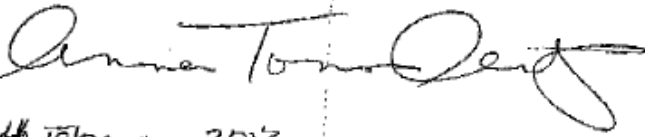
I, \_\_\_\_\_, have served as a peer reviewer for “Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors,” by Patricia Stubenberg Parisian. In this role, I have worked with the researcher in identifying emerging themes from participant interviews and validation of thematic analysis.

Signed:

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

Peer Reviewer Form

I, Anna Torrens-Armstrong, have served as a peer reviewer for “Descriptions of Clinical Teaching Excellence in the First Two Years of Medical School: The Views of Academic and Community-Based Preceptors,” by Patricia Stubenberg Parisian. In this role, I have worked with the researcher in identifying emerging themes from participant interviews and validation of thematic analysis.

Signed: 

Date: 16 February 2013



## Appendix P: Initial Concepts and Primary Themes from the Presentation of Data

Initial Concepts and Primary Themes from the Presentation of Data			
<p><b>Carin</b> Teaching to the appropriate level Preventing burn out Adjusting expectations Correlating information Coaching Understanding of personality types Rephrasing questions Teaching and learning style Teaching and learning inventories Preceptor learning about the student Student learning about preceptor Patient interaction/communication Understanding basic human needs Application of basic science to clinical medicine</p> <p><b>Truman</b> Engaging the learner Being Inquisitive “Group tango” - teaching and taking care of patients Application of basic science to clinical practice</p> <p><b>Dean</b> Having an internal commitment to teaching and intrinsic value in teaching Embracing the teaching role</p>	<p>Treating the human being, not the machine Feel, see, hear Resetting to the responsibility and thought process of teaching Immeasurable preparation and dedication to teaching Connecting basic science to clinical medicine Assessing and Adapting to the learner’s level Pursuing global achievement Students having resolve to be in medical school Student’s commitment to success Being a catalyst in change</p> <p><b>Judy</b> Creating a fun and relaxed learning environment Moving from genuine character to competence in teaching Having passion for dissertation topic Balancing clinical teaching and patient care The role of the “Three-legged stool” Having patience and attitude Promoting holistic patient care Integrating teaching frameworks How osteopathic medicine contributes to holistic patient care, humanism, and student competency building Having a competitive medical school environment with students in their second profession</p>	<p><b>Adelane</b> Demonstrating Intrinsic value Doing what you love Having dedication in learning Having personal achievements Utilizing emotional activation and active learning Embracing learning Impacting patient care Promoting professional growth through self-awareness Having perspective Having a conscious teaching approach</p> <p><b>Trevor</b> Adapting/adjusting to the student’s learning level Understanding stages of learning Clinical teachers should think hard about who the learner is Assessing knowledge and skills Promoting diagnostic reasoning Understanding educational theory Using critical thinking skills and case-based teaching models Using good decisions based on sound reasoning Instilling commitment and responsibility in the student learning environment Recognizing and appreciating opportunities for teaching Understanding interactions with people can foster teachable moments</p> <p><b>Arthur</b> Adjusting teaching to the student’s knowledge and skill level</p>	<p>Adapting to the learning level Assessing the learning environment Using a needs assessment Knowing advantage of tutoring Having exposure to other disciplines in the teaching environment and the medical care team Teaching collaboration Enhancing patient care Facilitating real world medical practice learning Overcoming logistical challenges Understanding challenges in the student and preceptor role Importance of the LCE curriculum Balancing teaching and patient care time</p> <p><b>Eaton</b> Providing hands-on activity Recognizing challenges in a specialty practice Having unique patient cases for students Using higher-order learning (reflection) Encouraging student-patient interaction and rapport Using cueing events that prompt specific cognitive and emotional responses Adapting the practice setting</p>

**Appendix P: Initial Concepts and Primary Themes from the Presentation of Data**

**(continued)**

<b>Carin</b>	<b>Truman</b>	<b>Dean</b>	<b>Judy</b>	<b>Adelane</b>	<b>Trevor</b>	<b>Arthur</b>	<b>Eaton</b>
Being adaptable in the teaching environment Having an awareness of learning styles Making learning connections	Utilizing emotional activation	Demonstrating intrinsic value in teaching Demonstrating resetting and preparation in the teaching role Supporting students' goals and aspirations	Demonstrating passion for teaching Promoting academic balance Promoting holistic medicine	Demonstrating intrinsic value in teaching Having an awareness of the student's interest in learning Utilizing reflective practice	Demonstrating an awareness of the student's learning level Implementing clinical reasoning practices Creating teachable moments	Demonstrating the ability to diagnose the learner Utilizing inter-disciplinary teaching Making a time commitment	Utilizing active learning Creating teachable moments

## Appendix Q: IRB Certificates

# Certificate of Completion

**Patricia Parisian**

Has Successfully Completed the Course in

Foundations in Human Research Protections at USF

On

Saturday, February 12, 2011



2/22/2011 4:31:01 PM

## **About the Author**

Patricia (Patti) Stubenberg was born in Honolulu, HI and raised on the Gulf coast of Florida. After completing her Bachelor of Arts in Health Education and Master of Public Health in 1990 at the University of South Florida, she spent considerable time preparing for her PhD journey in Curriculum and Instruction/Higher Education. A combination of front-line work in public health, twelve years in undergraduate medical education in both allopathic and osteopathic medical schools, and academic and professional experience in education set in motion a complimentary process of career and personal goals in medical education. She is currently the Director of Continuing Medical Education and Preceptor Development at an osteopathic medical school. Her research reflects her passion to blend education and medicine and new discovery in clinical teaching excellence, especially in the first two years of medical school.