The Art of Medicine in Practice: A Look at How Exceptional Physician-Patient Relationships are Formed in Healthcare Today

by
Jason Castaneda

A THESIS

submitted to

Oregon State University

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degree of

Honors Baccalaureate of Science in Chemical Engineering
(Honors Scholar)

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AN ABSTRACT OF THE THESIS OF

Jason Castaneda for the degree of Honors Baccalaureate of Science in Chemical Engineering presented on December 10, 2015. Title: The Art of Medicine in Practice: A Look at How Exceptional Physician-Patient Relationships are Formed in Healthcare Today

Abstract approved:

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The art of medicine refers to physicians' abilities to skillfully navigate interpersonal interactions with patients. These interactions are vital to the formation of exceptional physician-patient relationships. Certain elements of healthcare today such as the advancement of diagnostic tests, the emergence of the electronic medical record, and the presence of market forces in healthcare have introduced challenges to practicing these skills. The objectives of this project were to identify the elements of the ideal physician-patient relationship and explore specific actions and behaviors that physicians use in patient visits to establish an exceptional physician-patient relationship, meaning a relationship that is as close to the ideal physician-patient relationship as reasonably possible. Additional objectives were to analyze the ways in which physicians learn the skills required to form exceptional relationships and assess how new medical technologies and today's healthcare policies influence the physician-patient relationship. A review of current literature on the physician-patient relationship and one-on-one interviews with five physicians were used to address each objective. Findings from the literature and interviews concluded that practicing superb communication, utilizing the physical examination, promoting trust, and focusing on equal, collaborative relationships are essential to the physician-patient relationship. Specific tactics used by physicians to carry out these ideals are discussed and the challenges to improving doctor-patient interactions in the future are assessed.

Key Words: the physician-patient relationship, technology, medical education, healthcare

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I understand that my project will become part of the permanent collection of Oregon State University, University Honors College. My signature below authorizes release of my project to any reader upon request.

Jason Castaneda, Author

AUTHOR'S NOTE

My eyes shot to the patient's chest. I noted the thin, vertical keloid scar poking from underneath her cotton shirt. Eighteen years previously, at 2 months old, she underwent open-heart surgery to repair her heart valves that were not properly formed at birth. This happy, animated 18-year-old girl sat breathing and smiling in front of me on the examination table in room one, alive because of what medicine did for her.

After my junior year of college, I spent the summer of 2014 working for Dr. Jim Baker, an allergy and asthma specialist. He brought me onto his team to shoulder some of the nurse's duties taking health histories, typing up treatment plans, and conducting spirometry testing for his asthma patients. Toward the end of my first day, we went into room one together. I stood against one of the walls, hands clasped behind my back, observing him effortlessly engage with the 18-year-old patient. She had been his patient since she was born, and she was there to establish a treatment plan for her pollen allergies before beginning college at the end of the summer.

Dr. Baker interacted with the patient masterfully. He initially glanced at the patient's paper chart, then set it aside and sat down across from her. Even though he hadn't seen her in more than a year, he knowledgably inquired about the girl's interests. He quizzed her on her successes in school over her senior year, asked how her dance team had performed, and joked about his own difficulties and excitement going through the college admission process. Only then did he proceed to analyze her medical case.

After outlining her treatment plan for the upcoming school year away from home, Dr. Baker swung his stethoscope from around his neck and began conducting a physical examination. He placed the chestpiece on her back and listened. He moved with purpose and care, making sure to be gentle when he touched the patient, yet he projected confidence as he efficiently peered into her nose and mouth and palpated her lymph nodes with no wasted movements. While listening to her lungs he turned his head toward me and explained that she had heart surgery as an infant. I was absorbed in thoughts about her heart condition when he suddenly whipped off his stethoscope and handed it over to me. “Here, have a listen. I want you to hear this,” he said. I could feel the back of my neck prickle, surprised, yet excited at the thought of performing a medical procedure myself. I positioned the stethoscope earpieces and placed the other end on her chest. I could hear her heart beating and the even in and out of her breaths, the inner workings of a real person with hobbies, loved ones, and life goals.

“Do you hear the two sounds per beat?” Dr. Baker asked me, “the lub and the dub?” I strained to hone in on her heartbeats.

“Actually, no. I don’t,” I replied, “the sounds seem muffled, in a way, with a jumble of sounds surrounded by a strange, almost, whooshing noise.”

“Yes! That’s right. She actually has three sounds per beat because her valves don’t close synchronously, and that whooshing is the sound of blood rushing through her partially open valves.” He was excited to show me this medical anomaly. I was elated to learn and have the opportunity to interact with the patient on this close level.

This was a crystallizing experience for me. In placing my hand on a patient for the first time, I entered into a sacred zone. It is a space of permitted intimacy held together by the unique bond between patient and provider.

My confidence in pursuing medicine surged as my hand rested on the patient's shoulder and my ears took in the sounds of the complex processes happening within. The effects physicians had on this patient's life were intimate and real. I am excited for the challenges ahead on the path to becoming a physician who is committed to compassionate, trusting relationships as much as to a deep knowledge of disease and the human body.

Through this experience I witnessed the uniquely powerful bond between physician and patient. Dr. Baker's exceptional interaction with this young woman and my own interaction with her illuminated to me the importance of caring for the whole patient. The physician-patient relationship was an integral part of Dr. Baker's care for his patients, and I began to wonder about how I could become adept at building such a thriving relationship. What goes through a physician's mind in the examination room? How do physicians learn the art of medicine? These questions and others prompted me to investigate the literature on the nature of the physician-patient relationship and eventually sparked my own research on this vital aspect of medical care.

CHAPTER 1: Introduction

The relationship between physician and patient is complex, yet vital to healthcare quality and the status of the medical profession in society. The role of the physician in peoples' lives is unique. In no other profession is one expected to engage in conversation about the most intimate aspects of another's life, permitted to lay hands on another, and, simultaneously, be an expert source of technical information. Skillfully utilizing both the hard and soft skills is essential to being an adaptable, successful physician. Learning how to effectively use the soft skills that contribute to the delicate art of medicine are essential to building effective and lasting physician-patient relationships.

In the past few decades, there has been much debate about the ideal physician-patient relationship, particularly over the issues of patient autonomy and patient health. Emanuel and Emanuel evaluated four physician-patient models in their prominent 1992 study, with total patient autonomy and physician paternalism occupying the respective extremes. They concluded that the intermediate deliberative model, characterized by a caring physician able to integrate patient values and health-related values, is generally the best approach to the physician-patient relationship (Emanuel and Emanuel, 1992). The ideal physician communicates well and genuinely cares for patients as individuals. This physician provides sound recommendations, while keeping the patient's goals in mind, and then convinces the patient that these recommendations best realize his or her values as they relate to medical treatment. It is important to keep in mind that the ideal physician-patient relationship can vary by medical specialty, clinical environment, and the uniqueness of the patient. In any

case, a balance, lying somewhere between complete patient autonomy and physician infallibility, together with the presence of trust, mutual respect, and compassion constitutes the ideal physician-patient relationship.

In a later article, Emanuel and Dubler (1995) expanded on the common characteristics that foster a positive medical relationship. They described the ideal physician-patient relationship as characterized by the six C's: choice, competence, communication, compassion, continuity, and (no) conflict of interest. Similarly, Hillen et al. (2014) surveyed 345 oncology patients and demonstrated that physicians who display competency, honesty, and caring can be statistically shown to increase trust in relationships with their patients. These studies, and others, will be examined in later sections to attempt to bring together the characteristics of the ideal physician-patient relationships.

However, ideal characteristics such as trust, compassion, and communication are qualitative entities and can become vague as physicians attempt to incorporate them into practice. Therefore, an opportunity exists to connect the ideal physician characteristics to physicians' daily work by teasing out what exactly they do in examination rooms that leads to trust, compassion, communication, health, and patient satisfaction. This sets forth the first study objective, which is to identify what specific actions and strategies physicians use, from visit to visit, to achieve physician-patient relationships as close to ideal as practically possible. I define this as an exceptional physician-patient relationship.

Given the enormous variety of patient personalities, ages, and medical cases that doctors encounter, successful patient interaction can be complex and nuanced.

Though it is essential to creating an exceptional physician-patient relationship, mastering interactions with patients can be difficult to teach and is not often a priority during medical training. This leads to the second objective of the study, which is to examine how successful physicians have learned the soft skills needed in medical practice, whether they are acquired by medical training, learning through years of medical practice, or other life experiences.

In addition to the difficulty of mastering the soft skills of human interactions in medical training, a burst of new technologies and the influence of market forces in healthcare today have created new challenges to forming exceptional physician-patient relationships. The advent of electronic medical records and emergence of many new laboratory and imaging tests have undoubtedly changed the diagnostic process. Testing procedures and differential diagnoses are often completed before a patient is seen by a physician, which means that doctors see the patient's numbers and statistics before coming in contact with the real person (Verghese, Brady, Kapur, & Horwitz, 2011). This wealth of information that is within reach in minutes can be extremely useful for physicians, but it can also lead physicians in a certain direction in the diagnosis process and poses the risk that physicians will think of patients as a collection of numbers rather than a whole person with a unique story.

Similarly, some aspects of the current healthcare system in the United States do not always coincide well with quality, patient-centered care. A primary example is the fee-for-service method of physician reimbursement. Doctors receive payment for the medical procedures they perform, not for the amount of time they spend with patients or for how appropriate the treatment is. Therefore, a financial incentive does

exist for ordering tests and performing procedures, which has the potential to distract the physician from her duty to serve the patient's best interests (Medical Professionalism Project, 2002; Verghese et al., 2011). This leads to the third main study objective: understanding how new medical technologies and the organization of healthcare today coincide with quality medical care and how they affect the formation of exceptional relationships between doctors and patients.

CHAPTER 2: Study Methods

The three key objectives of this study were to identify the specific strategies and behaviors physicians use to form exceptional physician-patient relationships, explore how physicians learn this art of medical practice, and how characteristic elements of healthcare today, such as the prevalence of technology in medical care, influence the physician-patient relationship. This study used a two-pronged approach to address the key objectives. First, a thorough survey of existing literature on the physician-patient relationship was carried out. The literature review serves as an initial method of investigation to establish background information and begins the discussion on important considerations relevant to addressing the main study objectives. Second, five face-to-face interviews were conducted with currently practicing or retired physicians. The physician interviews probe deeper into the subject by engaging in extensive discussions with experienced medical professionals on their philosophies related to the physician-patient relationship and their triumphs and challenges in forming exceptional relationships.

Eighteen interview questions were generated and then approved by the institutional review board at Oregon State University. Each interview question was designed to prompt physicians to recall personal anecdotes and speak in detail about an element of the study objectives. The interviews lasted between 45 minutes and an hour, and an average of ten preselected interview questions were asked in each interview. The complete list of approved questions can be found in Appendix A.

Study participants were local physicians who have worked with the project's PI in educational settings in the past, and have expressed interest in engaging with

pre-medical students to help facilitate their educations. Interested physicians were contacted individually via email to schedule interviews. Five interviews were conducted over a period of four weeks. Each interview was audio recorded after obtaining permission from the study participant. See Appendix B for the IRB approved research protocol.

Working with a diverse group of five excellent physicians was a tremendous opportunity. Engaging with professionals experienced in navigating the successes and challenges of medical care lends credibility and an authentic voice to this thesis. Dr. A is a retired MD who specialized in internal medicine, hematology, and oncology. He worked in private practice for more than thirty years and currently volunteers at a local hospice care facility. Dr. B is a retired family medicine doctor, who worked in private practice seeing patients for 35 years. Throughout his career and even after retiring, Dr. B has served as a leader in several national patient advocacy groups, including a nonprofit group for the betterment of end-of-life care. Dr. A and Dr. B offer two excellent perspectives as highly experienced physicians. Having both completed medical training in the 1970s and worked in the medical field for more than 30 years, Dr. A and Dr. B provide insight into how the medical profession has changed in the past forty years.

Another study participant was Dr. C, is a Doctor of Osteopathy who specializes in family medicine. He began practicing family medicine in 2012. Dr. D is also a family medicine doctor. He graduated from medical school in 2003 and has practiced family medicine in a hospital setting for about ten years. Dr. C and Dr. D, as physicians educated and experienced in medicine after the start of the 21st century,

provide great complementary perspectives to Dr. A and Dr. B. The fifth study participant was Dr. E, an MD-PhD board certified in child, adolescent, and adult psychiatry. She has been practicing psychiatry, with a focus on pediatric patients, since 1996. Dr. E contributes a unique point of view coming from the field of psychiatry, where the dynamics of the physician-patient relationship are especially critical to patient care and where techniques for successful patient interaction are explicitly taught in medical training.

The interviews conducted with these five physicians delve into the nature of the physician-patient relationship as it manifests in real medical practice. Common findings from the physician interviews, which represent a range of medical specialties and a significant span of time in recent medical history, offer invaluable insights on the study objectives. The next section will explore the literature related to what the ideal physician-patient relationship is, how exceptional relationships are formed, and how technological advances and healthcare policies affect it.

CHAPTER 3: A Survey of the Literature

I. The Key Elements of the Physician-Patient Relationship

The good physician knows his patient through and through, and his knowledge is bought dearly. Time, sympathy and understanding must be lavishly dispensed but the reward is to be found in that personal bond which forms the greatest satisfaction of the practice of medicine.

-FW Peabody, *The Care of the Patient*, 1927

As Francis Weld Peabody suggested, the bond that forms between a doctor and patient can seed a rewarding and cherished relationship. However, the formation of such an intimate partnership can be complex, vary substantially by individual relationship, and be difficult to commit to in medical practice today, where doctors feel pressure to see as many patients as possible and spend less one-on-one time with each patient. Even under these circumstances, the physician-patient relationship remains as critical as ever to medical care. Bendapudi et al. (2006) states that the quality of a physician's relationships with patients not only affects the emotional response of the patient but concrete medical outcomes, like patient compliance and recovery time (Bendapudi, Berry, Frey, Parish, & Rayburn, 2006). Therefore, studying physician behaviors and characteristics that lead to excellent physician-patient relationships is a necessary endeavor for advancing medical care as well as for maximizing the emotional satisfaction of patients and doctors.

Until the last quarter of the twentieth century, the most commonplace physician-patient relationship consisted of patients seeking help from doctors who utilized medical knowledge to inform them of the necessary treatments. In this paternalistic approach, the ideal medical relationship was considered to be between a

knowledgeable doctor and a compliant patient, with the primary focus on the illness or injury at hand (Kaba & Sooriakumaran, 2007). Paternalism is based on the notion that the patient does not understand enough about disease to successfully navigate medical decisions. In a way that is analogous to the relationship between parent and infant, the physician has control of medical decisions to ensure the best health outcomes for the patient (Hellin, 2002).

However, research in the last thirty years has challenged the one-sided nature of the paternalistic relationship in favor of a more mutual partnership between patient and doctor. Not all patients experience illness in the same manner. Mead and Bower (2000) argue that many factors contribute to a patient's experience of illness such as financial circumstances, previous experiences with disease, and the amount of support received from loved ones. Therefore, a patient-centered approach is needed, where the individual's complete story of illness is considered rather than just the manifestation of a disease (Mead & Bower, 2000). At present, a collaborative relationship is accepted by society, in which power is shared more equally between doctor and patient and both parties are encouraged to listen and voice ideas.

The value of a collaborative physician-patient relationship is generally acknowledged, but how exactly does this type of relationship manifest itself in medical practice? As discussed above, Emanuel and Emanuel (1992) addressed the conflict between autonomy and health outcomes in an attempt to describe the ideal physician-patient relationship. The study examines four models of the physician-patient relationship: the paternalistic model, the informative model, the interpretive model, and the deliberative model. These models were compared and contrasted and

an ideal model for general healthcare situations was recommended. Emanuel et al. (1992) explains that, in the paternalistic model, the physician decides to implement the treatment he or she feels best promotes the patient's health and then presents the patient with selected information that will encourage consent to the chosen treatment. This model assumes that the physician can discern what is in the patient's best interest with minimal patient participation.

The informative model is on the opposite extreme of the paternalistic model. The idea is that a physician provides the patient all relevant information, the patient selects the medical intervention he or she wants, and the physician executes the selection. With the patient holding all decision-making power, there is no room for the physician to weigh in with his or her own judgment or to evaluate or sway the patient's choice or the values on which it is based. Therefore, the physician is reduced to a purveyor of technical knowledge, allowing patients to have full control over medical decision-making (Emanuel EJ & Emanuel LL, 1992).

Both the interpretive and deliberative models lie between complete physician authority and total patient autonomy. The aim of the interpretive model is for patients to elucidate their values, and then the physician helps the patient select the available treatments that fit the patient's values. Lastly, in the deliberative model the physician helps the patient determine the best health-related values that can be realized in the clinical situation. Here, physicians play a more active role than in the informative and interpretive models by explaining to the patient the details of their clinical situation and then elucidating the types of values embodied in the available treatment options. The physician acts as a teacher or friend to the patient in which both parties engage in

a mutual conversation on the best course of action. Although each model has potential flaws and there are undoubtedly more models, Emanuel and Emanuel conclude that the ideal physician-patient relationship is best supported by the deliberative model. The core of deliberative medical interaction is the physician's extensive knowledge, understanding, teaching, and action. Caring physicians are able to integrate the patient's medical condition and health-related values, provide the patient with comprehensive information, make recommendations on the best path of treatment, and persuade the patient of the merit of this course and the values it realizes.

A later article by Emanuel and Dubler (1995) elaborated on another definition of the ideal physician-patient relationship. Emanuel and Dubler (1995) suggested that the elements of the ideal physician-patient relationship are summarized by the six C's: choice, competence, communication, compassion, community, and (no) conflict of interest. Maintaining adequate choice in healthcare includes choice of practice type and setting, choice of primary care physician, choice of specialist or specialist facility, and choice among treatment alternatives. Emanual and Dubler explain that patients desire a say in how they are treated if options arise. This is consistent with the collaborative partnership described by Mead and Bower (2000) and the deliberative model of the physician-patient relationship outlined by Emanuel and Emanuel (1992). The element of competence is self-explanatory. Physicians must not practice medicine without proving their technical knowledge and diagnostic ability in medical training.

The element of communication is defined here as the ability of the physician to, "listen to and understand the patient and communicate their understanding."

(Emanuel EJ & Dubler N, 1995). This encompasses the understanding of the patient's disease, as well as the patient's values and how symptoms affect the patient's life, career, and family. Another important aspect of communication is the ability of the physician to explain to patients in clear, comprehensible terms the nature of their diseases, the diagnostic and treatment alternatives available, and how these are likely to fulfill or undermine their values (Emanuel EJ & Dubler N, 1995). Like Bendapudi et al., Emanuel and Dubler relate effective communication to quality of care. Patients are less likely to misinterpret information, more willing to ask for clarification, and quicker to call if symptoms fail to resolve when quality communication is present in medical relationships. Patients often enter into a medical relationship with some degree of vulnerability due to the stress of illness, the need to disclose sensitive information, or both. Therefore, compassion in the physician-patient relationship is essential for patients to feel understood and supported in a time of vulnerability and stress (Emanuel EJ & Dubler N, 1995).

The fifth element of the ideal physician-patient relationship described by Emanuel and Dubler (1995) is continuity. Continuity in care likely leads to a more efficient and trusting relationship between patient and doctor. Physicians engaged in long relationships with their patients are better able to carry out the diagnostic process, and patients are more likely to trust the opinion of a long-time provider.

No conflict of interest, the sixth element, is fulfilled by physicians who hold the well-being of their patients as their highest priority, despite any competing obligations (Emanuel EJ & Dubler N, 1995). The current healthcare system in the United States is fee-for-service based, meaning that physicians are reimbursed for the

various procedures and deliverables they provide. Therefore, a financial incentive to "do more" does exist. Physicians are ideally expected to prevent this financial force from becoming a conflict of interest and must never perform procedures for monetary gain. They have an ethical duty to hold paramount the betterment of the patient (Emanuel EJ & Dubler N, 1995; MPP, 2002). This sense of beneficence must be present to form an ideal physician-patient relationship.

When teasing out the components of the ideal physician-patient relationship, considering the perspectives of real patients is critical. Bendapudi et al. (2006) sought to incorporate the views of patients into the ideal behaviors of physicians in a study in which telephone interviews were conducted with a random sample of 192 patients who were seen in 14 different medical specialties of several Mayo Clinic locations throughout the United States. Patients were asked to describe their best and worst experiences with a physician in the Mayo Clinic system and to give specifics of the encounter. The interviewers generated and statistically validated seven ideal behavioral themes that emerged from the interview transcripts. The ideal physician is confident, empathetic, humane, personal, forthright, respectful, and thorough (Bendapudi et al., 2006). The worst patient experiences gathered from the interviews tended to be the opposite of these seven ideal physician behaviors. In these situations, patients often spoke of insensitivity and disrespect as the worst physician characteristics. The authors point out that patients frequently indicated the value of a physician's interpersonal behavior in addition to their technical competency. Though the seven ideal behaviors generated by Bendapudi et al. are different from the six C's

developed by Emanuel and Dubler, one can logically surmise that their two models are complementary rather than mutually exclusive.

Bendapudi et al. also discuss a particular challenge in achieving the seven ideal physician behaviors in medical care today. Patients often want their doctors to take their time and go out of their way to ensure patient comfort, which fits the seven ideal behaviors, namely being thorough and personal. However, it is often the goal of hospitals and clinics to provide care for the greatest number of patients, which can sometimes pressure physicians to hurry through a visit and sacrifice this aspect of healthcare quality in order to keep on schedule. This can be called the time conflict of interest. Similar to the financial conflict of interest in the fee-for-service healthcare environment described by Emanuel and Dubler (1995), the time conflict of interest can put the goals of patients and the goals of physicians at cross-purposes.

The last source I will mention on the key elements of the physician-patient relationship, from the many I considered, is “Beyond Empathy – A Glimpse into the Physician-Patient Relationship” by Morgan Prince. In her undergraduate thesis, Prince explored the inherent fascination many physicians have with the human body and in helping patients. She connects these ideas to the importance of empathy in the physician-patient relationship (Prince, 2011). Prince studied the physician-patient relationship in Sherwin Nuland's book *The Wisdom of the Body* and in personal interviews with physicians. Nuland describes the physician's interaction with patients and medicine in general as an art form. He explains, "I am not a scientist. I am a clinician and my natural interest lies in people" (Nuland, 1997). Good physicians strive to treat the whole person. They must be well versed in connecting to patients

emotionally as much as they are versed in technical knowledge. This emotional involvement can be a difficult aspect of the medical profession because physicians must understand something of what each patient is going through to truly empathize. However, Nuland concluded that a physician's full commitment to empathy has the effect of increasing the awe and wonder at the human body and the ultimate mission of curing disease, while also leading to a more successful and rewarding physician-patient relationship (Prince, 2011).

In the last few decades, the medical profession has placed less emphasis on the paternalistic model of the physician-patient relationship in favor of a more collaborative, equal partnership between patient and doctor. Emanuel and Emanuel (1992) grappled with the conflict between paternalism and patient autonomy and concluded that the most generally effective medical relationship consists of a partnership where both the patient and physician play active roles in medical decision-making and the physician functions as a teacher or trusted confidant. Emanuel and Dubler (1995) studied the specific elements of the ideal physician-patient relationship and recommended the six C's. Bendapudi et al. (2006), with a similar objective, used patient interviews to arrive at their seven ideal physician characteristics. The financial and time conflicts of interest pose challenges to achieving the ideal physician-patient relationship because the lure of financial success or the pressure of conducting short, efficient visits to maximize the number of patients seen can interfere with building a relationship. Lastly, Prince (2011) adds that a physician's genuine interest in the patient, as a person, is able to deliver empathetic care that stimulates a successful and treasured medical relationship. The next section

will examine the ways in which physicians pursue the ideal physician-patient relationship, including the role of the physical examination, one-on-one time, communication, trust, and professionalism.

II. How the Key Elements of the Physician-Patient Relationship are Achieved

Every patient upon whom you wait will examine you critically and form an estimate of you by the way in which you conduct yourself at the bedside. Skill and nicety in manipulation, whether in the act of feeling a pulse or in the performance of any minor operation will do more towards establishing confidence in you, than a string of diplomas, or the reputation of extensive hospital experience.

> - William Osler, Valedictory address to the graduates in medicine and surgery McGill University, 1875.

The Importance of the Physical Examination

Prior to the late 18th century, medical care was centered on alleviating the patient's symptoms. Physicians rarely spent time diagnosing illness in favor of merely helping patients cope with their ailments (Kaba & Sooriakumaran, 2007). As the prominence of hospitals as the place of care grew and major advances in microbiology took place, physicians began to focus on disease pathology and accurate diagnosis rather than only symptoms. This shift in emphasis led doctors to physically examine patients and use their knowledge of anatomy to form a diagnosis and elicit disease-specific treatment (Kaba & Sooriakumaran, 2007). The introduction of percussion methods in 1761 by Leopold Aunbrugger and the invention of the stethoscope by Rene Laennec in 1819 allowed physicians to observe essential pathological signs by physically examining patients. Until the second half of the twentieth century, patient history and physical examination remained the most important tools in diagnosis (Verghese et al., 2011). Today, patient history and physical examination are still used and are considered important, but they often occur in abbreviated forms and sometimes without the physical examination at all.

The significant increase in the last several decades of laboratory tests and sophisticated imaging techniques has contributed to the prevalence of abbreviating or skipping the physical examination because many doctors view the physical exam as unnecessary with the availability of accurate diagnostic tests. Verghese et al. in the article "The Bedside Evaluation: Ritual and Reason" advocates for the preservation of the physical examination as a valuable diagnostic tool and a key ritual of the physician-patient relationship (2011). Patients expect some form of a physical examination to occur when they see a physician, especially during the first visit with a physician. Physicians that masterfully carryout the physical examination fulfill an important ritual of the healing relationship. The act of physically laying hands gives patients a sense that healing is taking place. Conversely, a poorly conducted physical exam or the absence of one can communicate to a patient that he or she is not the central focus of the visit, thus undermining the physician-patient relationship (Verghese et al., 2011).

Apart from the physical examination being an important ritual, it also has diagnostic merit and therapeutic effects. Consistent performance of a thorough physical examination allows physicians to gather diagnostic information efficiently, inexpensively, and early on in patient care (Verghese et al., 2011). The physical examination of course cannot confirm every diagnosis and further diagnostic tests are often needed, but spending an additional five to ten minutes skillfully conducting an exam is worthwhile if it can occasionally save patients from unnecessary radiation, the bother of blood draws, or unnecessary delays in diagnosis (Mookherjee, Pheatt, Ranji, & Chou, 2013; Verghese et al., 2011). There is also compelling evidence that

the bedside evaluation induces significant biological changes. Recent research suggests that the feeling, sense of ritual, setting, and tone of voice of the physician creates a placebo effect that sparks notable change in the patient's neurotransmitter levels, which promote healing and reduced anxiety (Finniss, Kaptchuk, Miller, & Benedetti, 2010). Therefore, fulfilling the ritual of the physical examination may have a positive therapeutic effect.

The Doctor and Patient Face-to-face

The core of an exceptional physician-patient relationship is built in the time physicians spend face-to-face with their patients. The physician's presence in the exam room, free from distraction, conveys that the patient is the focus of the visit and promotes a trusting and caring relationship (Verghese et al., 2011). As mentioned previously, physicians often feel pressure to see patients in shorter visits, due to the scheduling constraints of hospitals and clinics (Bendapudi et al., 2006). In the *New York Times* article "Doctor, Shut Up and Listen," Dr. Nirmal Joshi, MD referenced a study that found that physicians interrupted patients telling their accounts of symptoms after only 18 seconds, on average (Joshi, 2015). Joshi also stated that a doctor's inability to listen and empathize is a detriment to care and is often correlated with decreased patient satisfaction. The amount of time spent with patients is often beyond physicians' control, yet seeking to maximize the quality of patient one-on-one time is a worthwhile endeavor that ought to be on the minds of physicians and considered by healthcare organizations.

Quantitative evidence of the importance of face-to-face interaction between doctors and patients is provided by Levinson et al. (1997), who conducted a study on how physician behaviors varied between those who received malpractice claims versus those who did not. The length of time primary care physicians spent with patients was a statistically significant predictor of claims status, as "no-claims" primary care physicians were found to spend 22% more one-on-one time with patients than "claims" primary care physicians (Levinson W, Roter DL, Mullooly JP, Dull VT, & Frankel RM, 1997). Additionally, Levinson et al. (1997) found that primary care physicians without claims used humor more, encouraged patients to talk more, and spent time educating patients and checking their understanding of diagnoses and treatment plans. This suggests that physicians who spend more time and higher quality time interacting with patients are able to provide better care. The claims status of physicians incorporates components of both patient satisfaction and competency into a single metric of care quality and should be researched further as a potential tool for measuring care across the healthcare field.

Communication

Sir William Osler, one of the founding fathers of modern medicine and medical education, famously stated, "Listen to your patient, he is telling you the diagnosis…" (Silverman, 2008). Osler recognized the power of physicians who are truly present and actively listening when they are with their patients. Part of that power, as suggested by Osler's quotation, lies in the fact that the correct diagnosis can often be determined from the patient's story alone. The other part of it is that

physicians who consciously strive to maintain excellent listening skills tend to practice better communication and garner a relationship closer to the ideal physician-patient relationship.

Ha and Longnecker (2010) describe communication and interpersonal skills in medicine as an art form. Mastering this art form confers the ability, "to gather information in order to facilitate accurate diagnosis, counsel appropriately, give therapeutic instructions, and establish caring relationships with patients" (Ha & Longnecker, 2010, p. 38). Therefore, doctor-patient communication is a major constituent of healthcare and of how the ideal physician-patient relationship is formed.

Ha and Longnecker (2010) also delve into how effective communication in the medical environment is achieved and discuss several challenges to practicing good communication. Basic communication skills, such as a polite demeanor and keeping patients informed on the status of their illnesses, are insufficient in building a thriving physician-patient relationship. However, Ha and Longnecker (2010) advocate multi-leveled communication, where physicians and patients share perceptions and feelings regarding the medical problem, both discuss their goals of treatment, and exchange psychosocial support. If physicians consider this more complete approach to interpersonal communication, a more caring and efficient therapeutic relationship can be achieved.

One challenge to good communication is that doctors sometimes avoid engaging in discussions that involve difficult emotional or social implications for the patient. An analogous problem is that patients may be uncomfortable disclosing

certain problems (Ha & Longnecker, 2010). Both of these obstacles to communication have the potential to delay or impede necessary treatment and typically have a negative emotional impact on both physicians and patients.

Another hindrance to practicing effective doctor-patient communication is that there is often a discrepancy between what physicians perceive as good communication and what patients perceive as good communication. For example, a 1998 study by The American Academy of Orthopedic Surgeons, where 700 orthopedic surgeons and 807 patients answered a survey on physician-patient communication, found that 75% of the physicians surveyed believed their communication was satisfactory, but only 21% of the patients agreed. In an analysis of these findings, Tongue et al. (2005) noted that the gap in perceived communication was most prevalent in the categories of listening, caring, time spent with the patient, and the ability of the physician to elicit an empathetic response. Though a definitive reason behind the communication discrepancies is not established, one can speculate that physicians' inability to grasp the perspectives of patients may play a role. Patients seeking medical care do so because they have some sort of medical problem. Patients in need of orthopedic surgeons, for example, often have injuries that severely affect their quality of life. Therefore, a great deal hinges on the success or failure of their medical treatment. On the other hand, orthopedic surgeons see many patients each day and spend an entire career interacting with patients with serious medical problems. If physicians are not diligent about putting themselves in patients' shoes and considering the range of emotions they are experiencing in every visit, then one can logically see how physicians become desensitized to patients' experiences and

appear to lack empathy or show too little caring. Ha and Longnecker (2010) support this theory of physician desensitization over time. There is a trend that physicians' communication skills deteriorate as they advance through their education and careers. Some studies have found that the burden and stress of internship and residency can suppress empathy, encourage the replacement of conversation with technical procedures, and make doctors stray from pursuing holistic care (DiMatteo, 1998; Ha & Longnecker, 2010).

Comprehensive and effective communication remains a pillar of the ideal physician-patient relationship. Throughout their entire careers, physicians must commit to strategies for maintaining good communication such as attentive listening, outwardly showing empathy, asking open-ended questions, and inhabiting the perspective of each patient (Ha & Longnecker, 2010). Overall, doctors with better communication skills are able to deliver higher quality care, achieve much better patient satisfaction, and feel more fulfilled by their careers.

Trust

The patient is not just a group of symptoms, damaged organs and altered emotions. The patient is a human being, at the same time worried and hopeful, who is searching for relief, help and trust.

> - T. Hellin, "The Physician-Patient Relationship: Recent Developments and Changes," 2002.

Trust is fundamental to medical relationships. Often, the level of trust a patient has in a healthcare provider is an accurate predictor of important components of medical care related to quality of care, such as the patient's use of preventative

techniques and services, adherence to the provider's recommendations, and commitment to long-term medical relationship (Thom, Hall, & Pawlson, 2004). Thom et al. (2004) surveyed the literature on patient trust and teased out how to employ methods for measuring patient trust. Trust is defined by Thom et al. (2004) as, "The acceptance of a vulnerable situation in which the truster believes that the trustee will act in the trustee's best interests." In this study, trust is separated into three domains of physician attributes: technical competency, interpersonal competency, and agency. Technical competence is clearly important to a patient's trust in a provider. Interpersonal competency refers to a provider's ability to form relationships through good communication skills, listening, understanding, empathizing, and being honest. The third domain, agency, is more unique to trust. It is the provider's commitment to the patient's welfare and willingness to put patient interest ahead of other factors, such as financial interests or career advancement (Bendapudi et al., 2006; MPP, 2002; Thom et al., 2004). Physicians who value trust and embody these attributes stand to gain not only more developed and fulfilling relationships with their patients but the ability to practice medicine more efficiently. The trusting patient is more likely to disclose sensitive information that can be important to diagnosis, and thus, immediate, appropriate treatment. Trust can also reduce cost by eliminating the need for additional verification of physicians' opinions because the number of unnecessary referrals and diagnostic tests would decrease (Thom et al., 2004).

Professionalism

It is the patient who carries the burden of illness, but the compassionate physician shares that burden, lifting it when possible and lightening it when that is all that can be done. This sharing of the burden has always been the hallmark of the medical profession.

-Richard S. Hollis, MD, 1994.

Professionalism forms the basis of medicine's relationship with patients and with society. The public must trust physicians to uphold the best interests of patients above themselves and to commit to maintaining the highest standard of medical competency (MPP, 2002). Commitment to these principles promotes a culture of integrity and service within the medical profession and results in effective care. A 2002 article in the *Annals of Internal Medicine* by the Medical Professionalism Project argues the need for a renewed commitment to medical professionalism in healthcare today. Currently, the medical profession faces challenges from the rapid implementation of new technologies, convoluted healthcare policies, and market forces (MPP, 2002; Verghese et al., 2011). Physicians are encountering greater difficulty in satisfying the needs of patients and society due to these competing external forces. Therefore, a commitment by physicians to the fundamental principles of medical professionalism has become even more important. The Medical Professionalism Project outlines in its physician's charter that the fundamental principles of medical professionalism are the primacy of patient welfare, patient autonomy, and social justice (2002). Physicians have a professional and ethical duty to actively promote justice in the healthcare system. The physician who has respect for all patients and an attitude of beneficence fulfills these fundamental principles and

garners fair, compassionate care that is less compromised by external pressures (MPP, 2002).

III. Medical Education and the Physician-Patient Relationship

How Physicians Learn the Skills to Build an Exceptional Relationship

Learning how to consistently forge exceptional physician-patient relationships, given the immense variety of patient personalities and the many nuances of patient interaction, is not easy. Unlike learning molecular biology or human anatomy, the soft skills of medicine cannot be mastered by memorizing key facts. Moreover, such skills are not always taught explicitly in medical training, but rather they are often picked up by observation of clinical mentors or life experiences outside of medicine. This section will review several methods by which physicians learn how to create exceptional physician-patient relationships, including apprenticeship and simulation methods.

A major component of physician learning is fulfilled by apprenticeship, where students or new doctors work closely with an experienced clinician. Apprenticeship learning occurs through observation of a "master's" words, actions, and attitudes (Verghese et al., 2011). Verghese et al. (2011) argue that what medical students learn from their textbooks on history-taking and physical diagnosis does not resonate as much as what they observe from their teachers while training. Clinician-teachers, "By their actions or omissions - a form of the "hidden curriculum" - …might suggest that hands-on care is or is not important." (p. 551). Teachers who do not appear to place value on the physical exam will tend to pass this point of view to their students. Therefore, clinician-teachers hold tremendous power in teaching via apprenticeship, and serious thought must be put into how they interact with medical students and young physicians in order to preserve worthy medical skills. According

to Verghese et al. (2011), clinicians and teachers have a duty to stress the value of bedside manner both verbally and through their own clinical styles. Education through observation of masterful clinicians and hands-on practice is among the most effective ways for students to master the bedside evaluation and the soft skills needed to establish an exceptional physician-patient relationship. Approaches based on theory or simulation can be useful tools, but ultimate mastery comes from being in the room with another human being (Mookherjee et al., 2013).

In a 2013 review article published by *The Journal of the American Medical Association*, Chi and Verghese evaluated the use of simulations as a pedagogic tool. They specifically considered a study by Curtis, Back, and Ford (2013) that explored using simulation to teach students how to communicate well with patients at the end of life. Curtis et al. (2013) led a 4-day simulation-based workshop using standardized patient actors to improve the end-of-life communication skills with 178 internal medicine trainees and 33 nurse practitioners or registered nurse trainees. Participants in the simulation workshop were compared with a control group of 198 internal medicine trainees and 36 nurse practitioner or registered nurse trainees. The authors evaluated the success of the simulation workshop with a skills assessment immediately after the workshop and in a 10-month follow-up period during which participants were evaluated by actual patients and families as well as by supervising faculty. Though study participants showed improved skills directly after the simulation workshop, no significant difference in communication or end-of-life skills was observed by real patient reviews in the 10-month follow-up (Curtis et al, 2013). Several explanations for these findings are that physicians were not able to retain the

information taught in the simulation workshop, four days of learning communication skills were not enough to produce a measurable difference in patient outcomes, or patients' lack of training in assessing physician communication skills. All are possibilities, yet each explanation still leads to the conclusion that a burst of simulation-based learning is an insufficient method for improving communication skills and bedside manner.

Chi and Verghese (2013) also indicate that simulation is limited because it does not perfectly reproduce a real situation. The results of the study by Curtis et al. may reflect this limitation, and call into question whether patient actors can convincingly convey the feelings of a real patient or whether physicians can show true empathy in a situation they know to be fabricated (Chi J & Verghese A, 2013). However, simulation cannot be totally dismissed. It can offer valuable practice in a low-risk setting where physicians can try new techniques, fail or succeed, receive feedback, and improve.

Lastly, another major pathway of physician learning is through failed and successful experiences over an entire career. Chi and Verghese (2013) commented that years of experience, time spent "doing", helps prepare physicians to successfully handle tough emotional situations with patients. In their 2013 study, more senior physicians were shown to better relate to and support patients in end-of-life care. Therefore, significant learning likely takes place gradually as physicians see patients throughout their practice.

In conclusion, repeated practice interacting with real patients, through both apprenticeship and continued experience, is the most effective way for physicians to

learn how to build exceptional relationships with their patients. Simulation and theoretical learning have their places in medical education, but they must not exist as the only methods of teaching.

How Learning Has Changed Over Time

Certain changes over time have undoubtedly enhanced how physicians learn to create relationships with their patients. In 1999, the American Board of Medical Specialties adopted, "The need to train and test physicians in interpersonal and communication skills" as one of the key competencies of medical education institutions, which serves as evidence that the medical profession is moving in the right direction (Joshi, 2015). This formal recognition of the importance of relationship-building skills has motivated medical schools to pursue explicit methods for teaching future doctors essential skills in patient interaction.

Other recent changes in the medical field, though, have introduced challenges in the learning of traditional bedside techniques and have potentially altered what physicians perceive to be satisfactory patient interaction. For example, B.M. Reilly describes eight practices performed by excellent clinical teachers he has interacted with in an effort to parse out how to avoid certain "bad habits" taught by the current medical education system. Reilly (2007) laments the upheaval of the diagnostic process by digital information systems as a particularly "bad habit." Reilly explains that, "Clinical trainees inevitably review patients' laboratory data and diagnostic images before they do a history or physical examination. This change portends more than the devaluation of bedside skills; it is nothing less than complete inversion of the

conventional diagnostic process.” (Reilly, 2007, p. 705). Reilly argues here that medical teaching practices have been adapted to new medical technology. Instead, medical technologies ought to accommodate and enhance important and proven teaching practices.

Regarding tactics for retaining quality clinical teaching, Reilly promotes a more skilled and humble "thinking out loud" approach and reinforces the benefits of hands-on teaching. In the “thinking out loud” approach, clinicians must explain to students in real time while seeing patients every variable that runs through their minds. This should not be spouting random facts, but rather explicating important diagnostic elements in each case and integrating those elements into the diagnostic process as a whole. Humility is a key aspect of this technique. Teachers ought to voice out loud their own concerns and limitations as they sort out the convoluted details of each medical case (Reilly, 2007). Practicing such humility and being transparent with students promotes the best learning. Though instructors thinking out loud may be a valuable teaching method, it has the potential to make patients feel that the central concern of the medical interaction is for the benefit of the student rather than their own care. This approach ought to be utilized carefully to ensure that the physician-patient relationship and quality of care are not sacrificed to teach medical students.

Another point Reilly makes is that effective clinical teachers "wear gloves," meaning they serve as hands-on role models. There is no better way for doctors to connect with patients than by performing good physical examinations, and teachers must demonstrate this importance to students. Touch, in itself, has a therapeutic effect

and the physical exam still has profound clinical utility, which must be communicated in a hands-on fashion to incoming generations of physicians by their clinical mentors.

This section addressed how physicians learn to build relationships with their patients and how learning has changed over time. Several key avenues of learning that contribute to the physician-patient relationship are outlined in the literature, including learning by apprenticeship or mentorship, learning in simulated clinical environments, and learning from experiences throughout a career in medicine. Regarding how learning has changed over time, Reilly (2007) argued that new medical technologies have altered the way medical students interact with patients. Medical institutions must adapt to technological changes and teach students to maintain important patient interaction skills. The next section explores more comprehensively the impact that technological advances in medicine have had on forming exceptional physician-patient relationships.

IV. The Impact of Technological Changes on the Physician-Patient Relationship

The good news is that innovation in medical education eventually catches up with advances in science and technology. The bad news is that the pace of change is glacial.

> –B.M. Reilly from the 2007 *Lancet* article "Inconvenient Truths About Effective Clinical Teaching"

Advances in medical technology have clearly made waves in the healthcare field in the twenty-first century. As is the nature of any major paradigm shift, a host of new obstacles and benefits exist. The previous quotation by B. M. Reilly (2007) elucidates that grappling with the challenges brought on by new medical technology is expected to be a lengthy and complicated process. This section focuses specifically on how increased use of diagnostic tests and imaging studies and the emergence of electronic medical records affects the formation and maintenance of physician-patient relationships.

Medical technology is advancing faster now than at any other time in history. The number of diagnostic tests and methods of imaging have exploded in the last three decades (Chi J & Verghese A, 2013). Additionally, the millennial generation's ease with technology is affecting medical care with younger physicians as well as patients readily embracing electronic tools, namely, electronic medical records (EMR). The adoption of EMR is a quite recent innovation in the medical field, yet it is extremely widespread. Since the start of the 21st century, EMR has become the centerpiece of care organization in governmental providers such as the Veterans Administration and other large hospital systems such as Kaiser Permanente and the Mayo Clinic (Gillum, 2013). Even more recently, financial motivation to adopt EMR

systems from the 2009 American Recovery and Reinvestment Act and the 2010 Affordable Care Act have led to further expansion of EMR to small medical groups and private practices (Gillum, 2013). By 2011, over 50 percent of physicians reported using an electronic health record system (Blumenthal & Dixon, 2012).

The tendency to use technology drives a new pattern of patient interaction on hospital wards − the so-called "flipped patient" model (Chi J & Verghese A, 2014). Medical students and recent graduates are finding that their first interaction with their patients occurs electronically. This is an unintentional and marked divergence from traditional bedside care because it means that doctors often see vitals, the chief complaint, a summary of radiology, and a preliminary diagnosis before even meeting the patient.

The burst of technological advances in medicine in the past several decades, including new imaging techniques, laboratory tests, and electronic medical records have flipped the traditional diagnostic paradigm by leading physicians to often forego the traditional bedside evaluation in favor of immediate imaging or testing (Chi J & Verghese A, 2014; Reilly, 2007; Verghese et al., 2011). Therefore, physicians often see the numbers, statistics, and differential diagnoses of the patient's case before coming in contact with the real patient (Chi J & Verghese A, 2014; Reilly, 2007). This can lead to physician bias and to occasional missed diagnoses. Regarding the physician-patient relationship, physicians are at risk of assuming they possess all of the necessary information for care in a patient’s numbers and thus devalue the time spent in the room with the real person. The important rituals of touch and truly listening to the story, which are vital to the medical relationship, can be degraded or

lost. Too often, the "numbers" of the patient become the primary focus of providers. Similarly, the format of electronic medical records with its drop-down menus and burdensome requirements to qualify "satisfactory" care and receive reimbursement does not correlate well with what actually happens in examination rooms and can be a distraction to physicians (Chi J & Verghese A, 2014).

Electronic medical record systems generate a neat construction of a patient. Though this construct can accurately report test results and conveniently track medical trends, physicians that rely too much on evaluating the “virtual” patient form an impression that is often at odds with the story and actual manifestation of illness in the living, breathing patient (Chi J & Verghese A, 2014). Chi & Verghese (2014) extend this notion by stating that, in the extreme case of the flipped patient, physicians that are too engaged with the EMR are at risk of assuming that "the EMR *is* the dialogue with the patient, not a representation of one" (p. 2331). With abnormalities highlighted and recommended treatments outlined, physicians could potentially carry out rapid, abbreviated medical care using the information compiled in the electronic record. Physicians in this situation may find that their role is relegated to that of an observer or technician in the healthcare process rather than the mutual partnership between two human beings, physician and patient, that tends to characterize the exceptional medical relationships.

Apart from the actual organization of electronic medical records, the mere presence of the computer in the examination room appears to alter the dynamics of one-on-one interactions between doctors and patients. In an article by Courtney Cummings, a pediatrician at the Boston Children’s Hospital, Cummings details her

experiences with patients while using computers on wheels (COWs) (2013). She came to the realization that COWs obstructed her view of her patients and her medical team. Despite physically being present in the room, the patients' view of the medical team rapidly typing notes on their history while hidden from view is not the epitome of good communication skills (Cummings, 2013). COWs offer great benefits such as quickly checking test results or writing an authorizing note while still watching over a critical patient and quickly writing clinic notes in between back-to-back patient visits. However, good communication is a pillar of forming an exceptional physician-patient relationship, and active listening is one critical aspect of good communication (Emanuel EJ & Dubler N, 1995; Silverman, 2008). Active listening in medical care requires physicians to provide their full attention to the patient, give verbal cues of understanding, and maintain eye contact. This is exceedingly difficult to accomplish when physicians must divide their time between hearing the patient's story and engaging in electronic charting, and it becomes especially important to sustaining patient relationships when the amount of time doctors have in the room with patients is limited (Cummings, 2013). An environment free of distractions with a fully engaged physician is ideal for fostering excellent communication, yet the benefits of electronic resources cannot be ignored. Our challenge ahead is to refine electronic medical record systems so that they accommodate excellent communication in examination rooms, while we retain their immense utility.

The fact that there are numerous issues with electronic medical records is not a surprise. EMR is an innovation that has really only emerged in the last 15 years, and

we should not expect it to operate flawlessly (Gillum, 2013). The long, yet vital, task at hand for the medical field is allocating time and resources for making EMR systems more user-friendly, less onerous, less distracting in the exam room, and overall a better match with good bedside care and cultivation of the physician-patient relationship.

Pitting technology against traditional bedside manner is not the appropriate conceptualization. Rather, incorporating superb bedside care with intelligent, judicious use of medical technologies will result in the most effective and efficient medical care. Learning how to use the electronic medical record in current medical training must be accompanied by guidance and close observation to allow students to foster skills in balancing the use of the EMR while still treating patients, who are often vulnerable and distressed, with empathy. (Chi J & Verghese A, 2014).

The surge of diagnostic tests observed by the healthcare system in the last thirty years and the rapid incorporation of the electronic medical record in the last ten to fifteen years has undoubtedly affected medical care and physician-patient relationships. Chi and Verghese (2014) and Reilly (2007) stressed the emergence of "the flipped patient," where frequent diagnostic tests invert the typical diagnostic process and threaten to mislead physicians armed with too much information to false diagnoses. Similarly, the ability of the electronic medical record to automatically compile medical information and highlight key findings may shift the physician's attention from the real patient to the medical record. In addition, Cummings (2013) noted that the use of the computer in examination rooms is a distraction to the physician and can be a detriment to quality communication. Lastly, we should expect

various new challenges induced by medical technologies considering that they are quite recent innovations. The challenge for healthcare today is to focus on improving electronic medical record systems and the use of diagnostic tests to enhance the essential elements of physician-patient interactions. The next chapter seeks to expand on the information gathered in the literature review by analyzing one-on-one interviews with physicians.

Chapter 4: Findings from Physician Interviews

This chapter draws on the experiences and opinions of five current or former physicians. The goal is to integrate these first-hand perspectives of real medical practice with the previous literature review to comprehensively address the key study objectives. First, I identify strategies used to form exceptional physician-patient relationships and philosophies that physicians deem important in patient interaction. Second, I explore the means by which physicians learn the skills and strategies needed in physician-patient relationships, including how these skills are learned both in and outside of medical training. Third, I assess the benefits and challenges induced by new medical technologies and how technology coincides with exceptional physician-patient relationships. Lastly, I put in context the physician-patient relationship and the state of healthcare today and discuss the future of the physician-patient relationship.

I. How Physicians Form Exceptional Physician-Patient Relationships

The literature review honed in on the ideal physician-patient relationship as one characterized by physician competency, superb communication, trust, compassion and caring, and a mutual partnership between doctor and patient. This section will reinforce and expand on the elements of the ideal physician-patient relationship established from the literature with insight from physician interviews and delve into the specific behaviors and strategies physicians use to generate exceptional relationships that are as close to the ideal physician-patient relationship as possible.

Competency Beyond Disease

Ultimately, the objective of medical care is the diagnosis and treatment of illness and injury. Therefore, patients logically desire to be cared for by physicians with exceptional technical ability. It is essential for every physician to prove mastery of knowledge and capability in treatment within their respected fields because the life and livelihood of another human being is often in their hands. This requirement explains the rigor and length of medical training.

Since competency is such a vital aspect of practicing medicine, it naturally plays a role in the physician-patient relationship. Not only is the competent physician better able to diagnose and treat patients, but she or he can use medical knowledge as a basis for establishing trust for patients. Dr. B explains that, “Teaching is a huge part of your bag of tricks, and…probably ten times a day you need to help someone understand because they don’t understand, and that’s what your medical authority brings to the table.” Physicians that embrace teaching empower patients to confidently understand their medical conditions. This promotes a patient’s more equal role in the relationship because, rather than passively following a physician’s treatment plan, patients can understand why medical decisions are made and can then become more equipped to voice their opinions and desires.

One method that physicians can use to convey competency to patients is the skilled use of the physical examination. Dr. C illustrates this notion when he rhetorically asks, “How can I say that you're fine if I don't look?” Taking the time to conduct an examination gives patients the perception of thorough care. The physical exam can certainly uncover important diagnostic information, but even when it does

not, time is not wasted because patients feel reassured that there is nothing drastically wrong, and often, just the act of physically touching the area that hurts gives the impression that healing is taking place. Therefore, the physical exam lends credibility to any subsequent diagnosis, and promotes trust in the physician.

A masterfully conducted physical examination also demonstrates a physician's ability to occupy an intimate space in a professional way. In her book *Every Patient Tells a Story*, Dr. Lisa Sanders writes that, "How to occupy that permitted space between physical intimacy and intellectual distance is fundamental to being a doctor" (Sanders, Lisa, 2009). Administering an exceptional physical examination communicates to the patient the mastery of this vital skill that Sanders mentions. It signals to the patient that the physician is confident and qualified, which in turn makes the patient confident in the medical care received. Further analysis of the value of the physical examination as a ritual of medicine is conducted in a later section on trust.

Though every doctor must be knowledgeable in his or her respected specialty, competency is only one component of the ideal physician-patient relationship. Dr. B notes that a problem that physicians sometimes fall into is that "We [physicians as a collective] focus on disease, we don't focus on the patient. You know, everybody has this ICD-10 code. You're not Jason, you're diabetes." The emotional connection between the physician and patient is reduced or eliminated if the patient's story, life-goals, and relationships are ignored and the physician sees just another case of diabetes. Successful patient care certainly requires physicians to pay attention to the patient's medical problems, but it also requires them to focus on providing emotional

and psychosocial support. Physicians must be competent beyond the study of disease. They must engage with the whole patient and be competent in communicating, building trust, and showing compassion.

Communication is Key

Communication skills are paramount to creating an exceptional physician-patient relationship, yet achieving outstanding communication is not simple. There are many types of communication, including verbal and non-verbal methods. The several aspects discussed here are listening skills, assessing non-verbal signs of patients, focusing on understanding the patient's perspective, and explicitly being transparent.

Effective listening skills are some of the most important tools physicians can possess. Each physician I interviewed, when asked about the most essential elements of making a diagnosis, stated that the patient history was vital. For example, Dr. D answered, "By far the most important thing is the patient story and how they tell their story." Dr. D alludes to the value of subtle details beyond the content of the patient's story, meaning the body language they use, the emotion shown, or attitude they have. Careful listening and keen observation of these details often allows physicians to judge the credibility of the story and gain a better sense of how the patient is affected by an illness. Dr. A explained further:

> When a patient comes to you, they generally don't come to you and say, 'I've got pneumococcal pneumonia.' They'll come in and say, 'You know, I had to stop work yesterday because I was coughing and I had a fever.' Part of the

> impact is getting the right antibiotic, but it's also important to know the impact of the illness on their lives because sometimes that can be just as important.

Listening to how a disease or injury affects a patient's life does more than get them the medicine they need to alleviate symptoms. It promotes a higher level of healing by validating their suffering and tailoring treatment to their specific needs.

Since listening effectively is an integral piece of communication, it is worthwhile to study specific strategies that can help physicians better listen to their patients. Physician interviews honed in on several key strategies for maximizing the physician's ability to listen when in the room with a patient. The first strategy is to talk less. After reflecting on positive patient interactions he has had, Dr. C stated that he "spends probably a good 5 to 10 minutes of the 15-minute appointment listening." Dedicating a significant portion of each visit to listening and understanding the patient allows physicians to better understand the needs of their patients. This is consistent with the article by Joshi (2015), which found that a lack in physicians' ability to listen to patients and the tendency to interrupt patients' stories early correlated with worse health outcomes and a decrease in patient satisfaction.

A second strategy is to make eye contact with the patient. Every physician interviewed either directly stated that maintaining eye contact is important or implied it by emphasizing that physicians must sit face-to-face with patients. This seems to be a self-evident tactic, yet common distractions in examination rooms can make consistent eye contact difficult. While describing his typical patient visit, Dr. C stated, "When I first talk to them [patients], I'm sitting face-to-face. I can't tell you how

many patients have said to me, thank you, for not using the computer the entire time." Patients clearly appreciate having the physician's full attention, which makes logical sense because patients desire to be heard when they decide to visit a doctor. Sharing one's suffering with another seems to be therapeutic in itself. If the doctor is focused on the computer, the perception of being heard is inhibited. The thankfulness that Dr. C's patients express also implies that physicians frequently exhibit poor listening skills and spend a disproportionate amount of time tending to the computer in the exam room.

Another critical aspect of good communication is the ability to truly understand the perspective of another person. Dr. A stressed that good communication should include "allowing patients to let you know what's important to them." Though doctors typically know the chief complaint of each patient they see, the full story behind why a patient came in and what they want to achieve from the visit must be gathered. The story and the chief complaint do not always match, yet a doctor may never know unless she or he consciously seeks to inhabit the patient's perspective. Dr. E, a pediatric psychiatrist, explains, "You have to mentally be in their space, or you have to mentally be a school age kid and think about what school-aged kids want, like, and care about." The physician-patient relationship is greatly enhanced by mutual understanding and the ability of physicians to truly understand what their patients are going through. When physicians recognize the patient's perspective they are able to understand how a disease, injury, or treatment might affect many aspects of the patient's life.

Transparency between doctor and patient is the final method I discuss here for engendering good doctor-patient communication. Transparency in this context refers to being open and explicit with patients about medical information and about the treatment process. Dr. A stated, “One of the things that I always try to do at the end of a visit is to find out if they have any questions, and give them an opportunity to react or respond.” Directly asking questions about visit outcomes promotes greater patient satisfaction and allows physicians to correct any misunderstandings or address other lingering issues that patients may have.

Transparency is also used by Dr. E to promote greater patient satisfaction. In a typical visit, Dr. E sits face-to-face with the patient and focuses on listening for most of the appointment, but at the end of the visit she must set aside several minutes to put information into the computer. Though forfeiting the patient’s attention for a period of time is not ideal, Dr. E retains good patient rapport through direct, open communication. She explains, “I make it clear that I am no longer talking to them, thinking about them, or concentrating on them, and…it's pretty clear that now I have to focus on the computer now.” By specifically explaining the purpose behind her actions, Dr. E prevents patients from feeling as if they are not heard.

The success of Dr. E’s tactic suggests that patients are dissatisfied when the events of the visit do not coincide with their expectations. For example, when a patient is telling the story of his or her illness, they expect the physician to listen attentively and understand the suffering they are going through. Providing only partial attention in this time gives patients a sense that the physician does not value the patient’s time or that they consider minute details of the story unimportant. This often

remains true even when physicians try their best to fully listen while taking notes on the computer. The dynamic completely shifts, however, when there is no expectation that the physician is listening. Rather than wonder why Dr. E is not providing her attention, patients understand that their time is still valued and it is necessary that she spend a few minutes with the computer to record notes and print prescriptions. I discuss an in-depth assessment of technology in medicine in later sections on medical technologies in the 21st century.

Utilizing more transparent or direct communication in certain situations can also help to mend problems that arise throughout the course of the medical relationship. Dr. A recalled an instance where a patient was unhappy with the way a visit was carried out. Rather than letting the issue be forgotten, Dr. A told the patient, "I know this has been a problem. Let's talk about it." Over years of practice, physicians inevitably make mistakes in their interactions with patients. Directly acknowledging mistakes and being willing to talk through a solution with patients is essential. Practicing the virtue of humility is important because it communicates to patients that the physician is a flawed, yet caring, human being whom they can trust. Being transparent about flaws communicates equality to the patient, making them much more apt to mutually seek a solution.

The Development of Trust: Asking Patients About Their Roses

Everything mentioned in the previous section on communication also establishes trust. Trust and communication are intimately linked. Therefore, in this

section I will explore beyond good communication and discuss physician behaviors that are more specific to developing trust.

Apart from being a useful diagnostic tool and marker of a physician's competency, the physical examination is an important ritual of the medical relationship (Verghese et al., 2011). Dr. C stated, "Most people believe that it [the physical examination] is a part of the ritual of being a physician or being a patient." This coincides with the article by Verghese et al. (2011) and confirms that patients often do expect a physical exam to take place. Performing the physical exam thus fulfills patients' expectations. It signals to patients that they are receiving quality care and they are indeed the focus of the physician's attention.

Trust is established when physicians conduct the physical examination in some form. All five of the physicians interviewed agreed that the physical exam still has an important role in medicine, yet several explained that this does not mean it must be carried out at every visit. Dr. C offers his view:

> As a primary care doc I get to carry out the ritual with each of my patients over time. I don't need to re-do that ritual necessarily every time I see them. If I was a specialist physician doing consultations, I think the ritual component would become imminently important on each and every patient visit because you need to package that ritual in a smaller package…In primary care you can package that ritual longitudinally.

Dr. C makes a compelling point about how the ritual of the physical examination should be carried out in real medical practice. The reality appears to be that, although the ritual must be present in each physician-patient relationship, the way the ritual is

achieved varies by medical specialty and how well physicians know their patients. Performing a comprehensive physical exam is imperative to the formation of trust and credibility whenever a physician meets the patient for the first time. This is the standard case for specialists who typically see a patient once or only a few times. Primary care physicians, however, generally treat patients over long periods of time, often over many years. Therefore, the ritual should be completed during the first visit and as new illnesses or injuries arise, but a comprehensive exam is not needed every visit because physicians typically know their patients well and a trusting relationship has already been formed.

The ritual aspect of the physical exam and how the exam ought to be used in practice has been discussed, but why is the ritual so important? What is it about the physical exam that makes it such a necessary part of medicine? Dr. B simply answers, "Touching has magical, magical properties." Dr. B, in describing touch as magical, refers to the placebo effect induced by the physical examination. The act of touching communicates that the physician is giving his or her full attention to the patient and that the patient's problems are being treated. This reassurance and positive thinking can initiate a type of emotional healing that accompanies the invaluable scientific side of medicine. Laying hands on another person is a unique part of being a physician, and it can be a powerful tool in the physician-patient relationship. Dr. A spoke of the power of touch, stating, "I always felt that this created some sort of connection between us." Touch clearly creates a unique bond between doctor and patient.

Dr. C also commented on the bond that physicians create, both through touch and sharing deep, personal information. He explained, "It is about intimacy. When

somebody makes the decision to go see a physician about a problem, they are opening up and expressing to someone that they know a lot, or a little, 'Hey, I have this problem I need help with.'" Certainly a kind of intimacy is present between a caring doctor and a patient. Patients are inherently vulnerable in the medical relationship because they must acknowledge they need help and are often experiencing anxiety. Sometimes courage is required to confide in another person, and the information they choose to share with a physician may not be told to even their closest loved ones. When this vulnerability is met with a physician's genuine desire to help and judgment is left behind, physicians and patients are able to successfully engage in an intimate and trusting relationship.

Dr. A expanded on the detrimental effect judgmental behavior has on the physician-patient relationship. He said, "It was important for me to never convey that sense." He went on to recall that, "There were physicians that refused to see patients with AIDS when it first came out, and so, somehow it was conveyed to people that they were somehow responsible for their illness." Worrying about judgment can be a tremendous burden for patients. Physicians make patients feel comfortable and engender a sense of equality when they communicate non-judgment. Patients already experience a host of stresses associated with illness and deserve a safe space to confide in another and receive care.

Similar to withholding judgment, approaching the physician-patient relationship as a mutual partnership promotes a great deal of trust. Dr. E gave an example of the importance of teamwork when parents of a psychiatric patient she sees expressed anxiety over their child acting up in school. Her approach was to sit down

with the parents and say, “We're going to work on this problem together, we're not going to hold people accountable for things they can't control.” Dr. E successfully navigates this difficult, emotional situation by communicating non-judgment and explicitly emphasizing that she intends to work side-by-side with the parents to reach a solution. This is hugely comforting for the parents, and Dr. E’s commitment to teamwork implies that she has the goals of the parents and patient at heart.

One strategy for building trust that every interviewee mentioned was building a relationship with patients outside of medical treatment. Dr. E stated that “Knowing what’s going on in their lives, and being able to reference little details, maybe about what their hobbies are, really builds their sense of trust because they want a relationship with their provider.” Showing real interest in the patient as a person is vital for developing a functional medical relationship that goes beyond listening to the patient’s symptoms and prescribing medication. Trust is achieved through treating the whole person.

Similarly, Dr. A recounts:

> One of the interesting things that I came up with over the years with patients, was what they were reading. They would want to know what I was reading, and, really, you can spend just two or three minutes on that, and it really creates this common ground, some shared experience.

Dr. A’s recollection is notable because he illustrates perfectly that the relationship is bidirectional. Trust is formed through common experience, meaning physicians listen to all the details of their patients’ lives and also share something about themselves. Similar to a friendship, the doctor-patient relationship extends both ways. Dr. C

shared another story of how creating a relationship outside of medicine can be essential to the provider's interactions with a patient:

> There was a specific patient of mine. Every time I saw her, I would ask, "How are your roses?" Even in the dead of winter. Because even in the dead of winter, she's like, "Well I'm wintering them doing this, this, and this. Every time, I'd ask about her roses and she loved me. Asking patients about their roses makes a big difference.

In the end, physicians have to care about people. Dr. C takes joy in conversing with his patient about her passion. Maintaining this special connection over a long period of time was able to shift the focus of physician-patient relationship from addressing medical problems to the patient's personality and interests, and in the process, both patient and physician satisfaction was achieved.

Diminishing the Power Dynamic

The strategies discussed here for diminishing the power dynamic in the examination room also contribute to eliciting trust and practicing good communication. All of these categories are largely interdependent and all function to bring the physician and patient closer together in a successful, rewarding relationship.

Mead and Bower (2000) argue that medical relationships require a patient-centered approach. Similarly, Emanuel and Emanuel (1992) refute the paternalistic model of the physician-patient relationship in favor of the deliberative model, where the physician operates as a teacher or friend to the patient. In the last several decades,

a more collaborative relationship between doctor and patient has come to be generally accepted. However, a power dynamic is still frequently present in examination rooms. The cultural remnants of the paternalistic doctor and the fact that physicians must function as experts in their respective medical fields cause patients, and physicians alike, to perceive that the doctor holds more power in the medical relationship. Focusing on diminishing the power dynamic between doctor and patient can be a valuable tool for physicians as a way to create exceptional physician-patient relationships and to better address medical problems.

Physician interviews confirmed the importance of the collaborative relationship recommended in the literature. Dr. B explained that, "When you share in medical decision-making you give [patients] knowledge from your medical authority, but you don't close the book when they begin to talk about what they think their choice might be." Dr. B acknowledges that an unequal power dynamic can result from the physician's superior medical authority, yet valuing the patient's opinion can offset this dynamic. Physicians realize that patients are capable of understanding their illness and they must seek to be equal partners in medical decision-making.

The interviews with physicians also yielded several specific behaviors for reducing the power dynamic in the examination room. Dr. B proclaimed, "You never should ever complete an appointment with someone without sitting down." He later explained that this is to, "make sure you're always at equal playing field. It's even better if you can sit below them. That seems silly, but that's really important for power." This tactic is rooted in the fundamentals of human interaction. Conducting a visit sitting face-to-face with the patient non-verbally communicates that the doctor

and the patient are equals. Sitting down also conveys caring because, rather than standing in the doorway and asking questions, the physician takes the time to come into the exam room and fully engage in a conversation.

The next specific behavior that can help to minimize the power dynamic is dressing appropriately. Two of the five interviewees mentioned that appropriate attire is important to the physician-patient relationship. Dr. B wore a white shirt and a tie every day throughout his thirty-five years of practice. Choosing to wear a shirt and tie expresses professionalism, but, more importantly, neutrality. Dr. B stated, "I think that if the patient is noticing what you are wearing then that means that the focus is on you and not on them." Dr. B illuminates that the value of appropriate dress ultimately comes from ensuring the patient is the most important part of the visit. Dr. C chooses to dress more casually, wearing a shirt and scrub bottoms, but his philosophy on dress code is consistent with Dr. B's. Dr. C states, "The white coat is just a barrier. To me it says, I'm the doctor, you're the patient, do what I say." There are certainly situations where a white coat is appropriate or more common, such as in the hospital. However, in smaller practices, where the white coat is not as frequently worn, it can be an unnecessary status symbol. Dressing professionally yet neutrally is a respectful statement of equality.

Another essential physician strategy for comforting the patient and promoting an equal relationship is the utilization of humor. Dr. B explains, "We're dealing with problems, aging problems or a series of losses, so it's easy to forget that irony matters and whimsy matters. It's really, hugely beneficial to be able to laugh at yourself [the doctor] and to laugh with [patients], and to find goofy things that happen. That way,

you aren't taking yourself so seriously." At times, physicians can overwhelm themselves with the seriousness of treating disease and the suffering that they observe. This is detrimental if it penetrates the physician-patient relationship. Physicians create a more comfortable environment for patients by retaining the ability to be lighthearted and recognizing humorous situations when they arise. Sharing in laughter also puts physician and patient on the same plane, as Dr. B suggests when he comments, "That way, you aren't taking yourself so seriously." Laughter has a way of forming bonds between people, and this is certainly true in medicine.

The ability to laugh at one's self leads into another key skill: willingness to abandon one's ego. Leaving ego out of the examination room and practicing humility is advantageous because it prevents patients from perceiving the physician as superior. This causes patients to be more cooperative and ultimately leads to a more functional physician-patient relationship and higher quality of care. However, learning to prevent the ego from intruding on the medical relationship is not necessarily easy or natural for physicians. Dr. C further elucidates:

> You've got to swallow your ego sometimes, which is hard, especially because you learn to have an ego as a doctor. You learn that you're the one in charge, so learning to swallow that ego is not the lesson that you learned in medical school or residency. It's only afterwards that you either figure it out or you don't.

Physicians devote years to building an extensive base of medical knowledge and are expected to be confident experts by the time they are in practice. As a physician, finding balance between one's educated medical opinion and patient choice can be

difficult, yet developing the ability to find this balance in an un-biased way, without the ego, is a critical skill. Ultimately physicians must operate on the principle of beneficence, meaning they must always hold the best interests of the patient at the forefront of their minds. This means that physicians at times have a duty to convince the patient to pursue a course of treatment that might not have been their original preference in the interest of preserving their health. Other times, the beneficent physician must concede her or his medical opinion in favor of preserving a better physician-patient relationship or serving the emotional needs of the patient.

Dr. E cites a compelling example from her experience with a particular patient and the patient's parents. During the first visit, the patient's parents demanded that they would not accept any treatment plan that involved medication. Though not in agreement, Dr. E decided to respect the parents' choice. Several weeks later, the patient returned with no improvement, and the parents had decided to consider medication as a necessary component of treatment. Dr. E explained, "So then that return visit I have to pretend that none of that stuff happened, where they told me I didn't know what I was doing." In this scenario, Dr. E's initial decision to respect the parents' choice allowed the parents to come to agreement with Dr. E on their own accord and resulted in the best possible care. Rather than pointing out to the parents in the return visit that she was correct, Dr. E continued to leave out her ego, which was essential for supporting a therapeutic relationship.

All of the previously mentioned strategies serve to establish an exceptional physician-patient relationship based on mutual respect. The common link between each strategy is making patients feel they are the central focus. It is this patient-

centeredness that operates to diminish the power dynamic. Dr. C illustrates this using the example of staying on schedule. He explained that, "by running on time I'm telling the patient that their time is as valuable as my time. My time isn't as valuable as our time is together." Just by committing to staying on schedule, Dr. C conveys respect and makes his patients feel that they matter to him. Dr. B emphasized compartmentalization as a means of showing respect. He stated, "Compartmentalizing means that I should walk in with a fresh face and an open mind, not thinking about the last patient I just saw or the next one that I'm about to see." With this mentality, Dr. B reserves his whole attention for the patient at hand. In agreement with Dr. C and Dr. B, Dr. A commented that, "The most important thing is creating the sense that what [patients] are there for is the most important thing to you at the time." Patients must feel that they are being heard and that physicians value their needs.

Adaptability

No medical encounter is exactly like another. Therefore, no flawless step-by-step list of strategies exists that, if followed, ensures an exceptional physician-patient relationship. Instead, physicians must consider the strategies for good patient interactions (many of them previously discussed in this section) and be able to adapt them to fit each patient and each clinical environment. Dr. B offered his own model for the ideal physician-patient relationship that places significant emphasis on the physician's ability to adapt. In his model, Dr. B compared the ideal physician to the medieval court jester. He explained that the true duty of the court jester was not to

make jokes or be a fool, but rather to take any action necessary to make the king or queen better. He stated, “If it was going to make the king better, by that I mean healthier, happier, the court jester could use any technique. That’s who a doctor ought to be.” The court jester had a license to say anything to the king as long as it was meant to improve the king. Analogously, the physician is privy to much sensitive information, and the ideal physician is able to perceive the needs of the individual patient and adapt his or her behavior to fulfill those needs effectively. The more provocative aspect of the court jester model is that it likens the patient to a king, implying that the physician holds a subservient position. This emphasis on totally reversing the typical power dynamic, where the physician is below and serves the patient, is not so sharply suggested in the previously discussed models of the physician-patient relationship. Dr. B’s court jester model, though rather unconventional, does support the essential physician characteristics of adaptability and beneficence.

Dr. D confirmed the vitality of physician adaptability when he stated, “I think it’s a horrible mistake if the provider has their approach and expects that the patients adapt to their approach because that just fails inevitably.” Physicians have a responsibility to understand the needs of their patients and adapt care appropriately. When physicians are stubborn about their preferred methods of care, the physician-patient relationship suffers and can even fail.

Successfully perceiving the patient’s needs comes with challenges and requires experience. Dr. E confides, “I sometimes screw it up… I'll be trying to come across to Mom and Dad as competent, professional, on their team, and at the same time be

pleasant and silly with their child. I sometimes, you know, fall off that tight rope." As a pediatric psychiatrist, Dr. E often must simultaneously adapt to the personalities of both the patient and parents. Even after years of experience, perceptions can be incorrect and successfully adapting to patient personalities can be difficult. However, an enduring commitment to improving how physicians listen to patients and adapt to each clinical situation remains essential to successful medical care.

II. How Physicians Learn Relationship-Building Skills

The myriad of soft skills and specific strategies for forming physician-patient relationships discussed in the previous section all contribute to what is often called the art of medicine. Describing patient interaction as an art suggests that a certain level of creativity is required and that learning the trade involves something beyond a formulaic curriculum. Verghese et al. (2011) posit that medical students and physicians learn primarily by apprenticeship, where the student observes an excellent clinician-teacher. In addition to observation, the literature concluded that practice is vital to the development of physician soft skills. For example, Mookherjee et al. (2013) advocated that mastery of bedside skills comes from experience in the room with real patients. Simulation is also frequently used in medical education. However, the study by Curtis et al. (2013) could not prove that a simulated clinical environment improves physicians' ability to interact with patients. This section seeks to assess the accuracy of the literature and obtain a more complete view of how physicians learn the art of medicine. Using the information gathered from the five physician interviews, three categories emerged for how physicians learn to form exceptional relationships with patients: learning in medical school, learning over years of medical practice, and learning from life experiences outside of medicine.

Learning in Medical Training

Physicians must proceed through some of the most rigorous training of any profession. Medical training involves learning a tremendous amount of technical information on disease, treatment, and procedures, but also how to conduct interviews

with patients, deliver bad news, and other skills that comprise the art of medicine. This sub-section addresses how the skills necessary to form exceptional physician-patient relationships are taught in medical training and comments on the differences in medical training among various medical specialties.

Every physician interviewed cited mentorship as a critical pathway for learning how to interact with patients. For example, when asked how he learned the skills needed to foster exceptional physician-patient relationships, Dr. A stated, "In medical school I had some wonderful people mentor me who really valued the patient-physician relationship and were really impactful in my life about the clinical demeanor and the way you treat people." For Dr. A, medical school provided close interaction with physicians who felt the physician-patient relationship was important. Therefore, Dr. A was able to develop his own skills through close observation of these mentors. When asked the same question, Dr. D answered, "I think I just learned mostly by observation, many, many hours in medical school and residency of seeing docs who I respected." Again, looking up to doctors who students notice to be exceptional clinicians and by extensive observation appear to be essential to learning relationship-building skills. These mentors play a major role in forming new physicians' perceptions of quality medical care. This is consistent with Reilly (2007), who advocated for the persistence of hands-on clinical mentors, and Verghese et al. (2011), who promoted the apprenticeship style of learning and urged that the preservation of good bedside manner in future physicians largely depends on the teaching of clinical mentors.

Besides mentorship, medical schools often use simulated clinical environments to teach students how to interact with patients. This allows instructors to observe how students perform in the examination room and provide constructive feedback. Dr. D, one of the younger physicians interviewed, explained, "We were just starting to experiment with these structured interview sessions, where they would observe us interview a fake patient, an actor." Dr. D completed his medical training in the mid 2000's. Therefore, the use of simulations as a tool for teaching interview skills is relatively new. He later remarked, "I was never an enormous fan of the fake patient interviews. Those never really felt natural." Simulations are advantageous because they allow students to get a good deal of practice in a low-risk environment, and they allow for instructors to easily observe and evaluate student performance. However, as also described by Chi and Verghese (2013), simulations have the inherent limitation of not perfectly reproducing a real doctor-patient encounter. The literature as well as Dr. D suggest that simulation should not be the main avenue of learning.

Interestingly, physicians of various medical specialties seem to learn to interact with patients in markedly different ways. Toward the end of his interview, Dr. D was asked what he would recommend if he could improve the way soft-skills were taught in medical training. He explained that the ideal situation would be the instructor could explain the elements of a successful patient interaction, allow students to practice with real patients, and the instructor would have a way to unobtrusively observe the student and provide feedback. This combination of theoretical learning, practice, and feedback from a proven clinician is Dr. D's

recommendation for the education of primary care physicians. However, when Dr. E was asked how she learned to interact well with patients, she mentioned each component of Dr. D's ideal method of teaching:

> When you become a psychiatrist, you spend hours each week with the supervisor who goes through everything, like what is your body language, what are you saying at that moment, etcetera…We actually video tape our residents' therapy sessions and we watch them with them.

Unlike students in primary care, psychiatrists are explicitly taught to a great extent how to form ideal relationships with patients. This makes logical sense because analyzing how patients interact and how physicians successfully relate to many types of patients is the core of psychiatry. The interesting conclusion physicians drew here was that proven tactics for teaching relationship-building skills do exist. Perhaps other specialties do not have the time available to teach patient interaction tactics to the extent that psychiatry does, in addition to the existing curricula. However, perhaps certain elements of psychiatric training may be useful for improving medical education in other specialties.

Learning Throughout a Career

A tremendous amount of time and resources are allocated to ensure that every graduate of medical school is prepared to be a superb practicing physician. However, a considerably less amount of time is spent explicitly training student to excel in interpersonal relationships. When asked how and where he learned the skills necessary to form exceptional physician-patient relationships, Dr. C replied, "I'd like

to say it was medical school, but it wasn't." Similarly, Dr. D replied, "That's not really taught very well." With additional emphasis on the word "taught," Dr. D implied that learning the soft skills of medicine does not take place in a structured course, but rather through extensive practice and experience. Perhaps it should remain this way. Dr. D went on to affirm that he believes learning to interact with patients is best done through years of practice with patients.

Dr. A suggested that mentorship does not end when physicians complete their medical training. He explained, "You have role models even after you get into practice that you work with. You see how they interact and how they do things. You try to see how successful they are and try and find ways to improve." Mentorship remains a vital part of learning to interact with patients. As Dr. A illustrated, other successful physicians can provide new ideas for how to develop new skills and promote physicians' commitment to lifelong learning and improvement.

In addition to mentorship after medical school, another major method of learning is exposure to many patients, diseases, and clinical situations throughout a physician's career. Dr. E elucidated her understanding of learning through practice:

> You practice…It's the practice of medicine right? So what happens is you try something and it goes right or it goes wrong, and then you think about what went right and what went wrong, and the next time you try something else and, you know, as time passes you get more rights and fewer wrongs.

Physicians continue to refine their skills throughout their careers through trial and error. Each patient is different and requires a slightly different approach to form the best possible physician-patient relationship. The occasional breakdown or failure of a

relationship serves as a useful opportunity to discover techniques that do and do not work and further the mastery of patient interaction.

Learning from Life Experiences

Several physicians that I interviewed felt that the ability to successfully interact with patients stemmed, in part, from life experiences outside of medical school and outside of medical practice. Dr. B posited that the skills for forming physician-patient relationships likely "Started in kindergarten, where you learn to share and to take it easy, and you learn to be kind to one another." Dr. B suggests that interacting with patients requires some of the same basic interpersonal skills that are required to navigate relationships with friends, family, and peers.

Some parallels may exist in the interactions between peers and the interactions between doctor and patient, yet garnering a successful physician-patient relationship requires skills beyond those required in a peer relationship. Dr. E elucidated:

> I hope I learned to share in kindergarten, if not before. I hope all the rest of the doctors did, but it's not like medical school applications preclude people who didn't. I think a lot of this is taught and taught deliberately or not deliberately.

Dr. E acknowledges that basic interaction skills are important to learn while growing up, but that proficiency in the art of medicine mostly comes from what is directly or indirectly taught in medical training. As Dr. E points out, students entering medical school have a huge range of life experiences and mastery of human interaction cannot be guaranteed, nor expected, in medical applicants. Thus, patient interaction skills

must be taught in medical education or gathered through medical experiences in order to ensure that physicians are adequately prepared for medical practice.

Dr. A also spoke of how experiences growing up added to his bedside skill. He stated, “One of the things is it was part of me growing up. People would tell stories, you know. It’s an enjoyable thing to do, to hear people talk about their lives.” Like Dr. B, Dr. A also attributed some of his ability to carry out a good patient visit to the way he grew up. Instead of mentioning specific interpersonal skills, he spoke more of the appreciation he developed for hearing life stories. Dr. A was fortunate in gaining this perspective early in life, which may have made learning to interact with patients during medical training easier. Not all physicians may have had the same opportunity. Therefore, lessons learned from being around others becoming an adult may complement a physician’s ability to interact with patients, but life experiences alone cannot produce proficiency in the art of medicine.

III. How Technology Impacts the Physician-Patient Relationship

The number of new medical technologies, including diagnostic tests, advanced imaging techniques, and software systems has exploded in the past twenty years. Such a significant change naturally comes with an assortment of new benefits and issues to forming the ideal physician-patient relationship. Current literature notes several ways in which new medical technologies disrupt the diagnostic and treatment process. One such challenge is that physicians can become focused on the test results and statistics of each patient rather than the individual (Chi J & Verghese A, 2014; Verghese et al., 2011). Dr. Courtney Cummings warns that using the computer in the examination room interferes with proper listening skills (2013). It is important to also note that, since much of this technology is new, challenges should be expected (Gillum, 2013). Reilly (2007) concluded that, though it will take time, the healthcare field will eventually adapt to the presence of technology and move forward.

The Benefits of Medical Technology

An analysis of medical technology would not be complete without discussing some of the remarkable benefits offered by the wide variety of diagnostic and imaging tests and the potential of the electronic medical record. Dr. B gave one benefit of technology when he stated, "Technology makes you a better doctor because of all of the possibilities and choices you have to offer your patient." With a greater variety of diagnostic tests, innovative procedures, and medicines, physicians are able to provide higher quality care that better suits the needs of each individual patient.

According to Emanuel and Dubler (1995) the availability of choices furthers the physician-patient relationship as choice is outlined as one of the six C's.

A major advantage of medical technology, particularly of medical software, is the ease of access to enormous amounts of medical information. All of the physicians interviewed agreed that the amount of available information has dramatically improved. Dr. D perhaps captured it best in the following statement:

> Access to information is utterly phenomenal and unbelievable. I could not imagine going to look in textbooks for answers, whereas in the computer that sits in front of me in every single patient room I am about 5 to 10 seconds away from extremely high quality information."

The widespread use of software systems that compile in-depth, standardized medical information on diseases, treatment, dosing, and much more have significantly increased the ability of physicians to stay updated on new medical research and allow them to confirm factual information quickly.

Similar to the rapid access of technical information, the electronic medical record allows for rapid access to consolidated patient information. For example, Dr. E stated, "The electronic medical record does a good job of pulling pertinent information in one place. It's easier to find the meds, see the vitals, and compare trends over time." In this respect, the EMR has improved efficiency. Rather than thumbing through sheets of paper to gather patient data from previous visits, the EMR compiles for the physicians the whole patient history instantly and typically plots measured values over time. This allows physicians to quickly gather information and more accurately assess the patient's medical status.

The Challenges to the Physician-Patient Relationship Brought on by Technology

I think it depersonalizes medicine, and if it's depersonalized outcomes are lower. So if a patient leaves the exam room unhappy or unsatisfied, they're not going to be as well as if they left satisfied that their doctor listened and tended to their concerns.
- Dr. B

The previous quotation by Dr. B expresses the central issue that new medical technologies create regarding the physician-patient relationship. Technology, whether it is diagnostic tests or the EMR, can shift the physician's focus from engaging with the patient as an individual to interpreting the collection of test results and statistics. This relegates the physician-patient relationship to something more analogous to the interaction between a customer and a technician. The various other challenges created by technology all relate to this notion that technology impedes on the pure interaction between physician and patient.

One issue with current medical technology is that patients can be overwhelmed by the amount of medical information they receive. For example, diagnostic test results are often sent in full directly to patients. Dr. A pointed out that this "Creates [a] volume of information that they have to kind of deal with. It's a burden for people." When diagnostic test reports containing much raw data are sent directly to patients they must wrestle with the information alone, which can be difficult and stressful for some patients. This can be an advantage with patients that prefer a greater level of autonomy and are able to navigate the data, but this is not always the case. Dr. A later states, "That's where having a relationship with a patient means a lot. They trust you. Then if something is abnormal, they know you're going to give it the weight or the importance that it needs to make that useful to them." A trusting physician-patient relationship can be a meaningful source of comfort for

patients when they have to interpret diagnostic tests. Patients who are confident that their doctor has their best interests in mind are put at ease, and the physician can function as a valuable mediator in the process. Therefore an exceptional physician-patient relationship is one method for offsetting issues introduced by medical technology.

Along with creating an overload of information, the rise in prevalence of diagnostic tests can cause patients to become fixated on test results. Dr. A stated, "The patient can get distracted or focused on that [test results] as sort of the end all or be all of what's going on with their illness." Patients get a sense of security in regular tests because they assume that information from diagnostic tests is always highly accurate. However, this is not always the case. Certain diagnostic tests can vary substantially, which means a patient's reverence of test results can be unwarranted. At times, patients may even place more trust in diagnostic tests than in the judgment of their physicians, which severely devalues the physician-patient relationship. The challenge for the physician then becomes to adequately educate patients on the practical use of diagnostic tools and then being able to communicate context of these diagnostic tools in their illness overall.

Some of the physician interviews confirmed the issue of the "flipped patient" studied by Chi and Verghese (2014). Dr. B described that the risk of obtaining the patient's statistics before entering the examination room is, "it makes us [physicians] more prone to error when we start going down a path without thinking. Having an open mind means that you have information and knowledge, but you aren't biased or prejudiced before you begin to think." Relying on technology can mislead the

diagnosis by preventing physicians from keeping an open mind in the diagnostic process. Each medical case demands physicians to think critically, so focusing too much on the technology can endanger the delivery of quality care.

A significant issue that each interviewee touched on was that having the computer in the exam room with patients can be a detrimental distraction from carrying out an exceptional physician-patient relationship. Dr. B explained, "This computer thing gets in the way all the time of me looking at you, me touching, me listening to you. I end up worshipping the device instead of the patient." Dr. B spoke of the computer as if it was an invader, and in many ways it is. The core elements of the physician-patient relationship, such as listening, the ritual of touch, and compassion can potentially be upended when the computer steals away the attention of the physician. Regarding the EMR, Dr. E commented, "You get stuck sort of treating the electronic medical record rather than treating the patient." Dr. E illustrates that the computer demands too much attention, and that physicians too often slip into sacrificing valuable patient-centered care in favor of satisfying the requirements of the EMR. Dr. B and E happened to explain the intrusiveness of the computer in remarkably similar ways, which hints at the pervasiveness of the issue. Dr. D offered another supporting opinion. Speaking of the computer in the examination room, Dr. D stated, "It is intrusive in the physician-patient relationship. We haven't figured out how to utilize EMR in an unobtrusive way." The design of EMR systems clearly does not adequately coincide with the formation of the physician-patient relationship. The next subsection will examine the specific inefficiencies of the electronic medical record that cause it to be a cumbersome distraction to the medical relationship.

Inefficiencies of the Electronic Medical Record

Issues with the electronic medical record were among the most frequently noted challenges of medical technology by the physicians I interviewed. A major advantage of the EMR is that it can efficiently compile and track patient information, yet Dr. C pointed out that, "If you have a bad system it gives you bad numbers." He explained using colonoscopy data as an example. For Dr. C, the healthcare quality tracking system of the EMR he uses consistently shows that he does not meet appropriate standards for the number of patients over the age of 50 who ought to have had colonoscopies. However, these numbers are merely an inaccuracy, "because there is no good way of tracking it in the system, so I don't know the true numbers." Dr. C cited additional points of frustration with the EMR, including that EMR systems designed by different companies cannot synchronize and that the systems occasionally go down. Therefore, the key benefit of efficiently tracking quality metrics is lessened by the persistence of inaccuracies.

Other interviewees focused on critiquing the user-friendliness of the EMR. Dr. D explained that, "the way EMRs are structured, to acquire data you often have to jump around to different parts of the chart, and nobody is very good at typing and talking at the same time." The EMR is often arranged in a way that requires time to use. When a physician is in the examination room with a patient, time is already typically short. The poor organization of the EMR requires the physician to either shorten the length of the visit or to attempt to record information in the computer while giving partial attention of the patient. Either outcome is not ideal because exceptional physician-patient relationships are created when physicians spend time

face-to-face with patients and are actively engaged with them. Dr. D succinctly illuminated this issue when he stated, “We as physicians, spend a lot of time clicking boxes in different parts of the EMR, which takes away from the purity of the physician-patient communication and relationship.”

In addition to the onerous layout of EMR systems, the new ability to efficiently perform quantitative analyses of medical data has created a push by insurance companies and healthcare organizations to standardize important aspects of medical care. In many ways, this is positive. For example, it can help to ensure that high-quality, standard care is delivered throughout the healthcare system. However, new emphasis on quantitative metrics has saturated the electronic chart with additional tasks that physicians are expected to complete. Dr. E described the effect this has on a typical patient visit:

> The problem is that when we had paper charts we did five things maybe. What's happened with the electronic medical record is they now want you to do thirty things in the same time, and so each thing, if we were still doing the same five things, would be more efficient, but unfortunately you have to do thirty things and so it actually takes longer than five things by hand.

Though a single task can be completed more quickly with the electronic medical record, the overall visit conducted with the EMR is less efficient than when paper charts were the norm because more objectives are expected to be completed each visit. The additional tasks may also require physicians to ask patients questions that are unrelated to their chief complaint, which can convey to patients that the physician is not listening or does not understand what the patient hopes to achieve from the

visit. In the end, these points of frustration and inefficiencies could perhaps be attributed to growing pains in a young technology. Much refinement is required in coming years, and the health of the physician-patient relationship ought to be a priority, to allow the EMR to better support efficient and high quality medical care.

IV. Challenges in Healthcare Today

According to the Medical Professionalism Project, the rapid development of technology, convoluted healthcare policies, and market forces pose challenges to the medical profession today and in years to come (MPP, 2002). The development of new medical technologies, most notably the electronic medical record, have their challenges, yet tremendous opportunity exists to improve the efficiency of healthcare, utilize medical information, and better assess the quality of care. In addition, the current fee-for-service reimbursement method in healthcare today presents a complicated set of issues regarding conflicts of interests and it requires physicians to keep a high ethical standard (Emanuel EJ & Dubler N, 1995).

Opportunity in Future Technology

Gillum (2013) noted that the incorporation of the electronic medical record into mainstream medical care has occurred only in the last fifteen years. Dr. D echoed Gillum's findings when he stated, "We went from a world in the very recent past, where we would literally scribble notes with a pen for key findings in the story and key findings in the tests." Dr. D alludes to how far the medical field has come in the short period of time since the introduction of EMR. The ability to compile information in a standardized manner can be a powerful tool in medical care. Dr. D later explained his view on EMR in the future of healthcare: "We need to figure it [the EMR] out because I think it's a fabulously powerful tool, and we don't even realize some of the power that it can have for us and for our patients." Issues with EMR systems should be expected of such a new innovation, and the medical

profession currently has the important task of improving EMR and capitalizing on the immense opportunities it presents.

One of the potential benefits of the electronic medical record is the utilization of quantified medical information. The advent of the EMR has allowed physicians to measure and track a multitude of factors that was never possible with paper records. Dr. D comments, "We have these huge databases of information on populations, and with the occasional exception, we don't know how to get good stuff from that data beyond the traditional one-on-one doctor-patient relationship." The massive stores of information that are collected in medical practice today have not yet been fully exploited. The current challenge for the field is learning how to process these data to extract useful information. This is an entire research area in itself. The study of data-mining techniques is a highly active field as nearly all industries in today's economy collect information electronically.

A positive application of these stores of information is efficiently tracking healthcare quality. Dr. C explained that, "Right now in medicine there is a huge amount of quality of care assessment that is going on in numbers." Healthcare quality ultimately results from an attentive physician interacting closely with patients to fulfill their needs, which makes healthcare quality difficult to quantify. However, electronic records can efficiently track some important metrics of care, and further study of how quantitative metrics match a truly exceptional medical relationship will only improve the quality of care.

Conflict of Interest in the Healthcare System

The current system for physician reimbursement in the United States is based on fees-for-services, meaning physicians are compensated for the specific services they deliver. This introduces motivation to take a procedure-based approach in medical treatment, which may or may not be the most effective approach for serving the patient. Dr. B explained, "The problem with it is, and this is always one of the hardest things to talk about, if you do more you get paid for it. If you do less, you don't." Dr. B shows discomfort when he acknowledges the financial conflict of interest that accompanies the fee-for-service system. The literature concluded that fee-for-service can be successful when physicians fulfill their ethical duty to promote the best interests of their patients, regardless of outside factors (Emanuel EJ & Dubler N, 1995; MPP, 2002). However, Dr. C explained that the risk of the fee-for-service system is that some, "people are motivated by money." Ideally, every physician would be an altruist with only the needs of the patient at heart, yet this is not a realistic idea. If motivation to abuse the physician-patient relationship is present then occasional instances of selfishness will occur. The difficulty, though, is creating a satisfactory alternative. As Dr. C points out, "the incentives have to be somewhere." Looking forward, the challenge for the medical profession is to comprehensively assess improvements to the current system and the feasibility of new reimbursement systems that complement the ideal physician-patient relationship and ultimately the service of patients.

Another notable conflict of interest presents itself in end-of-life care. Dr. B provided an example:

> We offer more kidney dialysis, another heart transplant, but we don't say that one of the things you can choose to do is nothing, and I'll be there with you. I'll be there to support you in that. We don't use all those things. It's still an uphill battle because doctors still want to offer everything. We want to help.

The financial conflict of interest is not the only challenge. The desire to help that is so often ingrained in physicians frequently instills the mentality that the patient's life ought to be saved at any expense. Using every possible tactic to save a life is often the right course of action, yet the dynamics in end-of-life care can be different. The essential duty of the physician is to understand the patient's wishes. If the patient's goals of treatment are to live as comfortably as possible in the time remaining, then the physician must be an advocate for the patient and deliver the comfort they desire. Preventing this potential conflict of interest obliges us to return to the importance of beneficence in the physician-patient relationship. The physician and patient must be mutual partners in the medical relationship, who respect one another and work collaboratively to achieve the best possible outcomes for the patient.

Chapter 5: Conclusions and Limitations

Through a review of current literature and the five one-on-one interviews with experienced physicians, the essential elements of exceptional physician-patient relationships were identified, specific strategies for forming such a relationship were investigated, the modes by which physicians learn the art of medicine were analyzed, and the effects of new medical technologies on healthcare today were examined.

The key elements of the physician-patient relationship are centered on the development of a close, collaborative partnership between doctor and patient. Therefore, exceptional relationships are achieved through transparent and attentive communication, trust, and mutual respect. Findings from the physician interviews tended to agree with the literature, which provides good credibility to the definition of the ideal physician-patient relationship and how it is achieved to the greatest extent possible in medical practice.

Both the literature and interviews promoted the value of mentorship, observation, and practice in learning the art of interacting with patients. The place of simulation in medical education was found to be a somewhat inferior method of learning, yet additional research is required to fully assess its value.

The literature on the use of diagnostic tests and the electronic medical record in medical practice tended to focus on the challenges they present, such as depersonalizing physician-patient interactions and upsetting the traditional treatment process. Physician interviews supported these findings, but physicians also spoke of the potentially wonderful benefits of new medical technology.

Medical technology, particularly the electronic medical record, also plays a significant role in the function of today's healthcare system. The applications of data collection in improving and monitoring the quality of medical care are just beginning to be realized. Some of the literature sources and physicians that were interviewed also mentioned the challenges faced by the current healthcare system, specifically the risk of the fee-for-service reimbursement system. Though superior systems are not agreed upon, physicians must be aware of the danger the financial conflict of interest can pose to the medical relationship and quality of care.

There were several key limitations to this study. One limitation was the small number of physicians interviewed. The low number of participants provides the opportunity for the individual personalities and biases of the five interviewees to influence study results. In addition, the five interviewees represented only a small subset of medical specialties. Another limitation was the lack of perspective from patients. Additional inquiries into what patients deem to be the most valuable components of the physician-patient relationship as well as consultation with more physicians from a greater variety of medical specialties are required to validate findings.

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Appendix A

Physician Interview Questions

1. How did you learn to build a good relationship with patients?
2. What is the value of the physical examination?
3. Walk me through a typical patient visit.
4. Has the role of the physical examination changed since you began practicing?
5. How much one-on-one time do you have with a patient during a visit?
6. How long is a typical patient visit?
7. Do you perform a physical examination on every patient, every time they visit?
8. What are the most essential elements in making a diagnosis?
9. What listening skills do you use when hearing a patient's story?
10. What specific actions do you take to make patients feel comfortable and diminish the power dynamic within the room?
11. How or where did you learn the skills necessary to form good physician-patient relationships?
12. Do different patient personalities, ranging from overly passive to volatile, change your technique for establishing a good relationship with the patient?
13. How do you assess quality of care? What is successful care?
14. How does technology make you a better doctor?
15. Are there down sides to relying on medical technology?
16. In what ways do you establish trust when you see a patient for the first time?
17. How do you determine patient satisfaction?

18. In what ways do you retain trust with your patients?

Appendix B

RESEARCH PROTOCOL

October 12, 2015

1. Protocol Title

   "The Art of Medicine in Practice: A Look at How Exceptional Physician-Patient Relationships are Formed in Healthcare Today"

PERSONNEL

2. Principal Investigator

   Dr. Courtney Campbell

3. Student Researcher(s)

   Jason Castaneda

4. Co-investigator(s)

   N.A.

5. Study Staff

   N.A.

6. Investigator Qualifications

   Dr. Courtney Campbell is the Hundere Professor in Religion and Culture in the College of Liberal Arts at Oregon State University. He received his Ph.D and M.A. in Religious Studies from the University of Virginia and his B.A. from Yale University. Dr. Campbell has spent much of his academic career tackling tough ethical issues in medicine.

   Jason Castaneda is a fourth year student studying chemical engineering with a focus in biochemical processes and a specific interest in the ethics of medicine. He has previously conducted research in the Department of Mechanical, Industrial, and Manufacturing Engineering at Oregon State University, where interviews with engineers and project managers that he conducted were the primary data source.

7. Training and Oversight

   Dr. Campbell is responsible for the conduct of the study, all human subject protections issues, and for the timely and complete submissions of IRB related documents. Jason Castaneda will work with Dr. Campbell to recruit study participants. Jason will conduct an interview with each study participant, transcribe the interview dialogue, and write about the study findings. Discussion between Dr. Campbell and Jason Castaneda will be conducted throughout the recruitment, interview, and writing processes to ensure study protocol is followed and consent from study participants is properly established and maintained

throughout the project. This on-going discussion will be facilitated via email and regular, in-person meetings between Dr. Campbell and Jason Castaneda.

8. Conflict of Interest

   No members of the study team have a financial or business interest in any aspect of this research study.

FUNDING

9. Sources of Support for this project (unfunded, pending, or awarded)

   This research study is unfunded.

DESCRIPTION OF RESEARCH

10. Description of Research

    The relationship between physician and patient is complex, yet vital to healthcare quality. For the past few decades, there has been much debate about the ideal physician-patient relationship, particularly over the give and take of patient autonomy and patient health. Ezekiel et al. evaluated four physician-patient models in a 1992 study, with patient autonomy and physician paternalism occupying the respective extremes. It was concluded that the deliberative model, characterized by a caring physician able to integrate patient values and health-related values, is generally the best approach to the physician-patient relationship (Ezekial et al. 1992). The ideal physician is able to provide a sound recommendation and convince the patient of its worth and ability to best realize his/her values. In a later article by Ezekial et al, the ideal physician-patient relationship was outlined by the six C's: choice, competence, communication, compassion, continuity, and (no) conflict of interest (Ezekial et al. 1995). One can agree that a good physician ought to possess many of the characteristics described by Ezekial et al., but these are mostly qualitative observations. Therefore, an opportunity exists to connect these ideal physician characteristics of trust, compassion, and health to the daily work of physicians. This study has two key objectives. The first is to identify how successful physicians gain these skills and what they do, from visit to visit, to establish an effective physician-patient relationship. In addition, rapid advancements in medical diagnostic technologies, electronic medical records, and others have undoubtedly changed the way physicians interact with their patients. The second main objective of this study is to understand the role new medical technologies play in forming and retaining a trusting and effective relationship between physician and patient. These two objectives will be completed by conducting audio-recorded interviews with six to eight physicians who have extensive experience seeing patients. This research study will be used to complete the requirements of an undergraduate thesis.

11. Background Justification

The objectives of this research project are to determine some of the specific actions physicians use when interacting with patients to establish an exceptional physician-patient relationship, to make a connection between the nature of the physician-patient relationship and patient satisfaction, and to investigate the advantages and challenges of establishing a positive relationships with patients in the face of advancing medical technologies. Many significant research studies, such as those by Ezekial et al., have examined the ideal physician-patient relationship from a philosophical standpoint. These studies have largely focused on describing the nature of the relationship itself that is most beneficial for doctors and patients. Another study by Bendapudi et al. interviewed 192 patients to determine seven ideal behaviors of physicians from the patient perspective and suggested specific ways doctors can achieve these traits. This study aims to fill a gap in knowledge by collecting information from successful physicians on specific actions they use to create ideal relationships with patients and how they learned these techniques.

12. External Research or Recruitment Site(s)

N.A.

13. Subject Population

Study participants are required to be physicians in the United States of America who regularly see or have in the past regularly seen and treated patients. This includes currently licensed or past licensed Medical Doctors and Doctors of Osteopathy.

The target number of enrolled subjects is eight.

No subjects from vulnerable populations will be enrolled in this research study.

Inclusion Criteria:

- Currently or previously licensed physician
- Regularly sees patients or has ample experience with patients.

Exclusion Criteria:

- Subject has an expired license to practice medicine
- Subject has not regularly interacted with and treated patients

Recruitment:

Study participants will be identified from local providers who have collaborated with the PI in educational settings in the recent past, and have expressed interest in conversations with facilitation of the education of pre-medical students. Recruitment of these potential participants will be done through email

correspondence. Privacy will be protected throughout this process by contacting potential participants individually, never through any kind of public or shared forum.

See attached recruitment email.

14. Consent Process

I am seeking a waiver of documentation (signature) of informed consent. A waiver of documentation of informed consent is justified because enrolled subjects will incur no more than minimal risk. The study will consist of in-person, audio-recorded interviews. Any potential risks to a subject's confidentiality or professional reputation will be mitigated by using no-identifying language in all study documents and reports and by keeping all audiotapes in a safe location, only accessible by the research team, for at least three years after the study's conclusion.

15. Assent Process

N.A.

16. Eligibility Screening

N.A.

17. Methods and Procedures

The study procedure will include recruiting participants via email or in-person conversation, obtaining verbal informed consent, conducting a recorded interview, analyzing interview transcripts, synthesizing information from interviews, and writing up results and study conclusions.

Step-by-step procedure:

Step one: Dr. Courtney Campbell will identify potential research subjects and contact them via email. Step two: Dr. Campbell will provide Jason Castaneda with the email contacts of the potential research subjects who have expressed interest in enrolling in the study. Step three: Jason Castaneda will send each potential subject that has shown interest a recruitment email and overview document about the study. Step four: Jason Castaneda will schedule interviews with potential subjects who respond to the recruitment email and remain interested in participating in the study. Step five: In-person interviews will be conducted, individually, with the study subjects in a quiet, private space. Each interview will, with authorization of the participant, be audio recorded. Otherwise, transcripts will be compiled from interview notes. Subjects will be provided the opportunity to skip any question they wish not to answer. Step six: The audio from each interview will be transcribed and stored on a secure computer. Interview data gathered from withdrawing subjects will be retained, unless otherwise stipulated by the participant. Step seven: Jason Castaneda and Dr.

Campbell will discuss study findings. Step eight: Jason Castaneda will write about the study results and pertinent conclusions. Step nine: the audiotapes will be stored in a secure location only accessible to the research team for at least three years after the study has concluded.

18. Compensation

    None

19. Costs

    None

20. Drugs or Biologics

    N.A.

21. Dietary Supplements or Food

    N.A.

22. Medical Devices

    N.A.

23. Radiation

    N.A.

24. Biological Samples

    N.A.

25. Anonymity or Confidentiality

    The chance of a breach in confidentiality will be minimized by conducting interviews in a private and quiet space such as an office or conference room with a closed door. The research team will ensure that interview conversations will not be heard by people outside of the interview space before beginning the interview process. All research related data will be stored by the PI in a secure location for three years after the conclusion of the study. All interview transcripts will be stored on a secure computer that is accessible only to the research team. Information will be shared and stored in a manner that provides access only to authorized individuals. Data will not be disclosed to additional parties without prior IRB approval specifically authorizing the disclosure. The computer on which data will be stored will have fully patched operating systems and applications, and current antivirus software with current virus definitions. Data will not be stored on cloud servers. The security and confidentiality of information collected from study participants online cannot be guaranteed. Confidentiality will be kept to the extent permitted by the technology being used. Information collected online can be intercepted, corrupted, lost, destroyed, arrive late or incomplete, or contain viruses. In the report of the research, the student researcher will use direct quotations and pseudonyms for interviewees.

26. Risks

    All physical, financial, emotional, and legal risk to study participants is minimal. There is small potential for social and employment risk if participants disclose information about the way they approach their profession that is unconventional or stigmatized by other members of their profession. This reputational risk will be mitigated by protecting the identity of study participants and using non-identifying language.

27. Benefits

    There are no direct benefits to the participants.

28. Assessment of the risks and benefits.

    The prospect of gaining knowledge that will help the way doctors interact with their patients and help advance society certainly outweighs the minimal risks associated with enrollment.