SIMULATION-BASED LEARNING IN HEALTHCARE ETHICS EDUCATION

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By

Kathryn E. Wilt, MSN, RN

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789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

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Kathryn E. Wilt, MSN, RN

Approved October 23, 2012

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Henk ten Have, M.D., Ph.D.
Professor and Director
Center for Healthcare Ethics
Duquesne University
(Dissertation Director)

_____

Gerard Magill, Ph.D.
Professor and Vernon F. Gallagher
Chair for the Integration of Science,
Theology, Philosophy and Law
Center for Healthcare Ethics
Duquesne University
(Committee Member)

_____

Sr. Rosemary Donley, S.C, Ph.D.,
ANP-BC, FAAN
Professor of Nursing
Jacques Laval Endowed Chair for
Justice for Vulnerable Populations
Duquesne University
(Committee Member)

_____

James Swindal, Ph.D.
Dean, McAnulty College and
Graduate School of Liberal Arts
Duquesne University
(Dean)

ABSTRACT

SIMULATION-BASED LEARNING IN HEALTHCARE ETHICS EDUCATION

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Dissertation supervised by Dr. Henk ten Have.

The dissertation presents an argument for the use of a nontraditional teaching method – simulation – in ethics curricula in medical and undergraduate nursing programs. It reveals the soundness of simulation as an educational approach in light of its pedagogy of engagement and formation and its appropriateness in teaching problem solving in complex and uncertain situations that center on relationships. Simulation offers a holistic approach to teaching ethics that addresses the cognitive, practical and moral apprenticeships that comprise the signature pedagogy of medicine and nursing as characterized by Shulman. When used with the traditional methods of ethics instruction, simulation is well suited to assist in the development of the ethical practitioner by its inclusion of practice, feedback and reflection that encourages development and habituation of the professional virtues, including prudential reasoning.

The dissertation includes the relevant literature on goals and methods of ethics education, virtue ethics, quality of care, and simulation. It responds to the virtue/skill dichotomy that is apparent in ethics curricula in medicine and nursing and argues for a balanced approach to ethics education. It engages the healthcare literature on virtue ethics to support the need to emphasize educational goals that prepare healthcare practitioners who exercise virtue as well as clinical ethics skills, such as ethical analysis and decision making skills.

In addition, the dissertation shows that while ethics education has many nonexclusive goals, an important and often overlooked goal of ethics education is improved quality of care for patients. The dissertation makes explicit the relationship between ethics education and the quality of care for patients and demonstrates the contribution of professional virtues and attributes to the patient perspective of quality care as measured by respect, empathy and satisfaction. It also shares an ethical imperative for the adoption of simulation in ethics education.

The dissertation concludes that simulation meets the goals of ethics education: the development of ethically-sensitive, reflective and ethically competent healthcare practitioners, with the potential, ultimately, to lead to improved quality of patient care. When used with traditional teaching methods, simulation allows the educator to better meet the ethics education goals by explicitly introducing specific virtues and values into learning experiences and providing essential practice opportunities for habituation and formation of professional virtues and skills. Suggestions for the inclusion of ethics simulations are provided. Although the focus of the scholarly research is limited to

medical students and baccalaureate nursing students, the results may be applicable to healthcare students and professionals in related disciplines.

DEDICATION

This dissertation is dedicated to my husband, Peter Madsen, and children, Peter and Elizabeth, whose support, encouragement, and constant love sustain me.

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Introduction

A. Background of the problem

Many of the interactions that nurses and physicians experience on a daily basis with patients and their families have a moral dimension. There are "everyday ethics" that confront healthcare professionals routinely and are part of the day-to-day patient care or arise from the patient-provider relationship. Caring practices, information-sharing and patient teaching, pain management and treatment protocols, initiating fall precautions, and employing physical or chemical restraints, for instance, give rise to ethical concerns. For example, a patient's need for information about a recommended treatment places the patient and healthcare provider in a relationship for which the healthcare professional has inherent obligations. The healthcare professional must prudently explain the treatment plan and present information without bias, being aware of the possibility of inadvertently pressuring the patient and potentially coercing a decision. A routine interaction, such as sharing information, finds the healthcare professional balancing the obligation to provide benevolent care and at the same time protecting the patient's right to autonomy.

Ethical issues are part of the fabric of the patient-provider relationship based on the healthcare professionals commitment to care and occur with regularity. Ethical issues may arise in clinical settings for many reasons – insufficient resources to provide quality care, pressure to discharge patients earlier than desired and pressure to continue aggressive care for patients who have little chance of improvement are common examples. Physicians must frequently manage ethical issues or ethical dilemmas regarding confidentiality, informed consent, resource allocation inequities and end-of-life

care, such as advance directives, "do not resuscitate" orders, and withdrawing or withholding treatment. Nurses report frequent encounters with ethical issues related to protecting patients' rights, informed consent, advance directives, and surrogacy issues (Ulrich et al. 2010). In some instances more difficult ethical problems may occur that require the assistance of colleagues or ethics committees to resolve, such as establishing a surrogate decision maker or managing the unethical or incompetent conduct of a colleague. Few of the daily experiences of nurses and physicians require an ethics committee and even fewer healthcare practitioners face the sensational ethical cases that garner media attention. Fortunately, most ethical problems are managed "at the bedside" or within the patient-practitioner or family-practitioner relationship. By the intimate nature of the experiences and the dynamic nature of patient-provider relationships, however, nurses and physicians interact in relationships that call for healthcare providers to be ethically aware and responsive at all times, working from a strong ethical foundation. In the most basic sense of moral obligation, nurses and physicians are called to treat patients with dignity and respect, compassion and honesty, to practice with integrity and to provide the most competent care. No matter how specific ethical concerns are labeled or categorized – everyday ethics or ethical dilemmas – nurses and physicians must be adequately prepared to meet their many ethical responsibilities.

For ethics educators in healthcare disciplines, the focus of their work is to prepare healthcare professionals to be able to practice with the essential virtues and ethical skills that comprise ethical competency. Ethics educators strive to nurture the moral development of students and guide them to recognize and respond appropriately to the moral dimension of health care in every patient interaction. Through ethics curricula,

ethics educators assist students in the development of appropriate attitudes, behaviors and skills to effectively prevent, identify and manage ethical problems. The dissertation contends that the goals to develop virtues and skills in ethics are significant and important outcomes; however, ethics education should also be driven by an overarching, correlative goal to improve the quality of patient care. To attain this, students must reach short-term or interim goals directed toward enhancing ethical awareness and sensitivity, practicing with professional virtues and demonstrating competence in cognitive, behavioral and affective skills. Achieving these goals will potentially produce positive patient outcomes and improve the quality of care for patients.

Educators are challenged, however, to meet these goals in the present educational and healthcare environments. Classroom instruction in ethics, however, even when engaging and participatory, generally lacks the sense of immersion in the complex situation. Case study analysis and group discussions offer students the opportunity to engage in dialogue and test different viewpoints, but these methods offer little in the realm of role assimilation and formation. Students view case studies from the outside and without experiencing decision making in "real" time (Jones 1995; Smith et al. 2010). Well-scripted role play exercises are limited in their ability to allow students to develop ethical sensitivity and the ethical competencies needed as a practitioner. Role play can raise emotions and feelings, but it lacks the ability to situate the student in the functional role of the healthcare professional, with his or her inherent responsibilities. Clinical teaching, a valuable teaching strategy in the role formation of healthcare students, is also limited in its ability to aid in the development of specific professional virtues and ethics skills. Unfortunately, the clinical environment lacks predictable or consistent

opportunities for students to identify particular ethical issues and gain experience for future professional practice. Moreover, as many clinical faculty will attest, one learning moment moves to the next so rapidly in the clinical setting that the student has little time for reflection on learning, an important component of habituation that is essential for moral formation.

This dissertation reviews the traditional and nontraditional methods of ethics instruction and argues for the incorporation of an innovative model – simulation – to effectively meet the goals of ethics education. Simulation, a teaching-learning method is used presently in medicine and nursing to teach and assess critical thinking, promote confidence, develop communication skills, increase psychomotor skills and more. Simulation or simulation-based learning replicates clinical situations and provides opportunities for prepared practice, reflection and feedback, which can promote the development of ethically-sensitive, reflective and prudent nurses and physicians. It would seem to follow that a teaching-learning method such as simulation, which is used to promote the learning of complex skills, decision making and even teamwork, might also be a highly desirable component of ethics instruction. Simulation would offer students the opportunity to practice, receive feedback and reflect on experiences that have an ethical dimension and do so safely, without risk to patient or student. Moreover, it also seems reasonable to suggest that this strategy would be highly useful to inculcate the professional virtues, behaviors and skills necessary for the formation of an ethical practitioner. Simulation provides opportunities for students to practice and demonstrate virtues such as openness and compassion, virtues that are essential for awareness of and

sensitivity to possible ethical problems. Likewise, simulation assists students to develop and practice prudential reasoning, a virtue-based skill central to ethical decision making.

The dissertation also examines the increased attention to quality of care for patients that has arisen in the past two decades and expounds upon the relationship between ethics education and quality of care. Although improving quality of care has not been the primary goal of ethics curricula in medicine and nursing, it is an important potential outcome of ethics education that warrants analysis. The dissertation examines the relationship between developing virtuous, ethically competent practitioners and improving the quality of care as measured by the patient's perspective.

B. Thesis Statement

The dissertation defends the following thesis statement that simulation, when used with traditional teaching methodologies, is a preferable method for teaching healthcare ethics to medical and baccalaureate nursing students when compared to traditional methods alone because it best meets the goals of ethics education: the development of ethically-sensitive, reflective and ethically competent healthcare practitioners who will have the capacity to positively influence the quality of care for patients. The results of the dissertation may be applicable to healthcare professionals in many disciplines, whether students or practitioners; however, the dissertation limits its focus to the ethics education of medical students and baccalaureate nursing students.

The above thesis statement is well-situated in the contemporary health care landscape and aligns well with current ethics education goals of medicine and nursing programs. While the literature shows that there is no consensus about what precise goals

should be set for ethics education in medicine and nursing, the dissertation examines the current discussion on these goals as well as the virtue/skill dichotomy found in ethics curricula (Eckles et al 2005). The dissertation contends that the goals to develop virtues and skills in ethics are significant and important outcomes; however, ethics education should also be driven by an overarching, correlative goal to improve the quality of patient care. The dissertation submits that simulation-based learning experiences allow the educator to *explicitly* introduce certain virtues and values that are essential to the professional behavior of nurses and physicians. The educator is able to manipulate circumstances to elucidate and reinforce particular virtues and values through simulated learning experiences and provide essential practice opportunities for habituation and formation of virtue, overcoming the lack of predictable learning experiences in clinical settings. Simulation provides an environment in which an educator can observe a student's behavior, present timely feedback related to virtues, values or ethical analysis, reinforce positive behaviors and encourage reflection on performance. Additionally, simulated learning experiences in ethics provide practice opportunities for the inexperienced or novice healthcare practitioner that lessen or remove the burden or risk of harm to patients, particularly moral harm in the form of disrespect or inequity. The dissertation argues that improving the virtues and ethics-related skills of the healthcare professional may benefit quality of care from the patient perspective by improving patient satisfaction as measured by respect, satisfaction and fulfillment of needs.

C. Methodology

The methodology of the dissertation involves analysis of the literature on ethics education, virtue ethics, simulation and quality of care. Although the dissertation

extensively employs empirical data from the scholarly literature to provide theoretical arguments to justify the thesis, it does not undertake empirical studies. It analyzes the scholarly literature from the perspective of the thesis and its claims about the benefits of simulation to ethics education and quality of care. The dissertation research includes: a) identifying the goals of ethics education and the present traditional and nontraditional methodologies employed in ethics teaching, b) the benefits of simulation as a teaching method in ethics education, c) the benefit of emphasizing virtue ethics in medicine and nursing, and d) the positive impact of the virtuous practitioner on quality of care for patients. The literature engaged in the dissertation encompasses the following five areas of study: ethics education, essential virtues of the nurse and physician, the relationship between ethics education and quality of care, simulation as a teaching-learning method in healthcare in general, and more specifically, simulation as a teaching-learning method for health care ethics education. The literature that supports each chapter is outlined below.

The literature for Chapters One provides an examination of the historical, scientific, technological, sociocultural and economic factors that have influenced the rising prominence of ethics education since the 1960s. This chapter also surveys the literature on the problems and challenges that arise from the educational and professional practice settings that reflect an enhanced need for ethics education in the healthcare professions. The historical perspective on ethics education is provided by the early pioneers in healthcare ethics, among them, Edmund Pellegrino. The literature is also surveyed to identify the particular problems that challenge ethics educators today.

The literature consulted for Chapter Two provides support for an analysis of the goals and methods of ethics education for medical students and baccalaureate nursing

students. Reviews of ethics education in medicine are consulted (Eckles et al. 2005; Miles et al. 1989). The scholarship of Benner et al. (2010) and Fry (1989) are consulted regarding the state of ethics education in nursing. Curricular recommendations and accreditation agency standards for medical education from the Liaison Committee for Medical Education and the Accreditation Council for Graduate Medical Education are reviewed. Similarly, in nursing, the recommendations of the American Association of the Colleges of Nursing and the study results of the National Nursing Education Report of the Carnegie Foundation for the Advancement of Teaching (Benner et al. 2010) are examined. International perspectives on ethics education for healthcare professionals are also included, primarily the UNESCO core curriculum in bioethics (2008). The codes of ethics in medicine and nursing are also examined for guidance in developing ethics curricular goals.

Chapter Three includes the literature on quality of care. The writings of Brook, McGlynn and Shekelle (2000) and Grol (2001) are consulted for a basic understanding of quality of care. The literature review investigates the various stakeholder perspectives of quality of care, which include those of the patient, healthcare professional and policy maker. For this thesis, the patient and professional perspectives hold much relevance, particularly the patient perspective, which is therefore emphasized. Literature that demonstrates the relationship between the attributes of the healthcare professional – such as empathy, communication skills and affective behavior – and patient satisfaction is analyzed to establish the relationship between ethics education and quality of care.

The scholarship for Chapter Four consists of literature on the topic of virtue ethics as it relates to medicine and nursing. The literature draws from philosophy, medicine and

nursing and establishes the importance of virtue to achieving well-being or as understood by patients and healthcare professionals to mean good health. The writings of Pellegrino and Thomasma are significant to understanding the relevance of virtue education to medicine and by extension, to nursing. The literature reviewed for this chapter supports ethical sensitivity and prudential reasoning as essential virtues for nurses and physicians. The scholarship on the recommended ways in which educators can teach virtues is also examined.

The scholarship that is consulted for Chapter Five maintains that simulation is an effective pedagogical method in medicine and nursing. The definition of simulation is established by reviewing the perspectives of contributors from education, medicine and nursing. The scholarship of authors who are experienced with simulation in the disciplines of medicine and nursing are shared as well as the available empirical research on simulation in these fields. The literature for this chapter also includes educational theory that supports experiential learning. The early work of Dewey (1933) and later of Schön (1983) on reflective thinking, Dreyfus and Dreyfus' (1986, 2009) model of skill acquisition, Benner's work on the Dreyfuses' model as it applies to nursing (2001) and Shulman (2005a, 2005b) on the signature pedagogies of the professions are examined for their relevance to simulation.

Lastly, for Chapter Six, scholarly literature that is specific to the use of simulation in healthcare ethics education and which supports its application as an effective teaching-learning strategy for ethics education is reviewed. The chapter is supported by literature that provides empirical evidence for simulation as well as scholarly support for the use of simulation in the teaching of ethics.

It should also be noted that in the review of relevant dissertations unrestricted by year, there were no dissertations that focused on employing simulation to teach ethics to medical or nursing students. A search of related dissertations was conducted on the following databases: ProQuest Dissertation and Theses (PQD&T), DUCat, Networked Digital Library of Theses and Dissertations (NDLTD), and WorldCat. The search was conducted using variations of the following terms: ethics (ethics, virtues, moral), education (education, pedagogy, methodology, and teaching) and simulation (simulation, role play, standardized patients). It was unrestricted by year or discipline. The search yielded only one dissertation that focused on utilizing simulation to teach ethics in either medicine or nursing, yet this paper did not assess the simulation component. This dissertation by Garman (1994) compared the effectiveness of a lecture series that employed case studies with reflective practicum sessions that were conducted by an ethicist. Garman evaluated the effectiveness of the teaching-learning method 6-12 months later by assessing the performance of the medical students in a simulation with a standardized patient. The results of the study revealed that the medical students who participated in the reflective practicum scored higher than the control group in knowledge and in confidence. The dissertation provided support for the reflective practicum, an important component of simulation-based teaching strategies; however, it did not assess the effect of a simulation-based learning activity. There were no dissertations that assessed the effectiveness of using simulation to teach ethics to either medical students or baccalaureate nursing students.

D. Summary

As noted above, the dissertation proposes that simulation is a beneficial method to teach ethics to medical and nursing students and to promote attainment of the goals of ethics education. The chapters are organized to effectively present the supporting literature that contributes to this argument. The focus of each chapter is presented below.

Chapter One presents a brief history of the development of ethics education in medicine and nursing. It reviews the health care practices and cultural changes that have given rise to the increased attention to ethics. The chapter presents a brief history of ethics education in medicine and nursing and includes the work of early pioneers in healthcare ethics such as Pellegrino and the efforts of the Society for Health and Human Values in addressing ethics education in medicine. The chapter discusses the implicit and explicit approaches to ethics education and makes note of several phenomena – the "hidden curriculum," "ethical erosion," and "moral malaise" – as well as breaches in professional conduct that have been observed in medical students and physicians that strengthen the argument for enhanced ethics education. The nursing literature is also examined for the presence of these phenomena, as well as for lapses in professional conduct.

Chapter Two continues the discussion on ethics education in medicine and nursing, but with an emphasis on goals and methods of instruction. Traditional and nontraditional teaching-learning methods are reviewed, and simulation is introduced as a nontraditional method. The chapter includes a presentation of systematic reviews of curricula in medicine and nursing demonstrating the current goals, practices and pedagogical approaches in ethics instruction as well as a review of the effectiveness of these strategies. The chapter explicates the virtue/skill dichotomy in ethics education.

Furthermore, the chapter introduces the correlative goal of ethics education to improve quality of care. The chapter contains a discussion of the codes of ethics from both medicine and nursing and examines their significance and relevance to ethics education.

Chapter Three discusses quality of care in health care and presents its importance as correlative to the fundamental goals of ethics education. Various perspectives of defining quality of care are presented and the perspective of the patient and healthcare professional are examined. The chapter argues for the contributions of ethics education to quality of care, particularly when quality of care is defined from the patient's perspective. The chapter introduces the potential for simulation-based ethics education to reduce patient risk or harm and to better prepare an ethically-sensitive, reflective and prudent healthcare professional, consequently facilitating improvement in the quality of care for patients.

Chapter Four begins by establishing a definition of virtue ethics as it relates to medicine and nursing. The importance of virtue to the healthcare practitioner is established and the specific virtues that are essential to practice, such as compassion, integrity, honesty and prudence are explained. The chapter briefly addresses the age-old question of whether virtues can be taught, concluding affirmatively and reviews how virtues may be taught, supporting this with relevant literature. The chapter concludes with a discussion of the relationship of the virtuous healthcare professional to better quality of patient care.

Chapter Five develops the concept of simulation as a teaching-learning method in healthcare education. To begin, simulation is defined and a brief history of simulation in

medical and nursing education is shared. The types of simulation are described as well as the characteristic structure and components of simulation. The chapter includes theories that support the use of simulation as an effective pedagogy in medicine and nursing, many of these drawn from the discipline of education. Current research establishing the effectiveness of simulation is shared, along with a discussion of the advantages and disadvantages of simulation.

Chapter Six relates the use of simulation specifically to healthcare ethics education. The relevance and appropriateness of this method are presented as well as the advantages and disadvantages of simulation in ethics education. The chapter describes the ethical reasons for which simulation should be utilized in ethics education. Available research detailing the use of simulation to teach ethics to medical and nursing students is analyzed. The chapter concludes with suggestions for implementing ethics simulation with medical students and baccalaureate nursing students. These suggestions emphasize learning objectives that are consistent with the goals of ethics education.

In summary, the dissertation seeks to advance the literature in ethics education, virtue ethics, simulation, and quality of care for patients. It intends to establish the potential relationship between the development of morally sensitive and morally competent practitioners and improvements in achieving quality of care. It aims to show that while ethics education has many nonexclusive goals, an important and often overlooked goal of ethics education is improved quality of care for patients. Chiefly, however, this dissertation strives to demonstrate the strength of simulation as a method to teach healthcare ethics. Simulation meets the goals of ethics education: the development

of ethically-sensitive, reflective and ethically competent healthcare practitioners leading ultimately to improved quality of care for patients.

Chapter One – Ethics Education in Healthcare

A. Recent Influences in the Development of Ethics Education in Medical and Nursing Curricula

Ethics education in healthcare professions such as medicine and nursing has developed in response to advancements in the professions themselves as well as to critical social changes. It is important, therefore, to briefly identify those factors that have contributed more recently to the prominence of healthcare ethics in society. While an appreciation of the early roots of medicine and nursing and the beginnings of ethics in the professions would be interesting, this content is well documented elsewhere (Fowler and Tschudin 2006; Jonsen 2000) and does not hold specific bearing to the thesis. Therefore, the discussion will commence with more recent historical experiences that influenced the professions, beginning with the turbulent 1960s and 1970s, a period of scientific and social revolution that contributed significantly to the growth of healthcare ethics. The factors that contributed to this expansion include science and technology; patient rights and sociocultural value changes, economic market forces and health care delivery systems; and quality of care. These factors strongly directed the expansion of bioethics and, consequently, ethics teaching in medical and nursing programs. They are explored below.

To begin, the earliest forces that stimulated change in ethics teaching resulted from the discoveries and developments in science, medicine, and technology. The developments that began in the 1960s and which continue today at an explosive rate (Cassell 2007; Miles et al. 1989; Rosoff 2011), new areas of specialization (Miles et al.

1989) along with increasingly complex medical care and limited resources (Coutts 1991; Manson 2008; Miles et al. 1989) have heavily influenced health care ethics. Miles et al. observe that these changes present challenges to "medicine's and physicians' accountability to holistic, personal ends of patient care" (1989, 706). The explosion of scientific knowledge in health care and the increasing array of treatment options place an emphasis on the technical aspects of patient care and may present obstacles to the patient-healthcare provider relationship. Rosoff (2011) explains that the dominance of science over interactive skills in medicine may contribute to the loss of professionalism in medical students. New technologies also bring with them increasingly complex ethical decisions (Miles et al. 1989; Rosoff 2011). Gene therapy and stem cell therapies, for example, are two innovative techniques that have unknown outcomes and create unique ethical dilemmas for healthcare practitioners.

Second, shifts in values since the 1970s having to do with the rights of individuals (Cassell 2007), the conception of the patient as a "person" (Cassell 2007), and the deemphasizing of paternalism (Campbell, Chin, and Voo 2007; Cassell 2007) have also greatly contributed to the increased emphasis on healthcare ethics and ethics education. Patients are more aware of their rights and have better access to healthcare information, with many individuals having improved their health literacy (Campbell, Chin, and Voo 2007; Miles et al. 1989). Healthcare practitioners need to have a greater understanding and appreciation of patient agency and respect for patient autonomy as these have transformed the dynamics of the patient-provider relationship, leading to a softening of paternalism and moving toward a model of shared decision making (Campbell, Chin, and Voo 2007; Cassell 2007; Miles et al. 1989). Cassell (2007) challenges healthcare

professionals to move forward from the basic understanding of patient autonomy to a deeper recognition of the relationships that individuals hold, the influences of others upon decision making, and their relationships with healthcare practitioners. The past few decades have also been marked by an enhanced understanding and appreciation of cultural diversity and sociocultural differences. The Joint Commission (2010) has responded to the challenges that a diverse population brings and developed standards for healthcare professionals in cultural competence and patient communication to assist in overcoming linguistic and cultural barriers that may contribute to substandard care. Problems in obtaining informed consent are well recognized where there are language proficiency issues. Healthcare practitioners are obliged to understand the importance of such changes, shifts and differences and their impact on the interactions with patients, in general, as well as their obligations to protect patients' rights and respect differences.

Third, economic market forces have contributed to changes in healthcare practices, creating a new health care delivery model in the United States in the form of managed care. The marketplace disposition of managed care has brought about many unique ethical issues and stimulated changes in ethics teaching as a result. Present economic market forces reward efficiency and threaten "the primacy of patient welfare" (Pellegrino and Thomasma 1993, 170). Pellegrino and Thomasma observe that such an approach places the physician in the position of choosing between service to the patient or to the institution and acting in such a way as to lessen patient harm (171). Physicians have traditionally focused on the care of the individual, but the practices of the marketplace in many instances shifts the emphasis to the welfare of all members of the organization. Critiques of managed care point out that the imposed constraints on

physicians' autonomous decision making also have ethical ramifications. Cost-controlling measures such as restrictions on testing and consultations with specialists may contribute to negative patient outcomes (Agich and Forster 2000). Making clinical decisions that are based on less information than the physician considers necessary places both the patient and the physician in a difficult situation. The physician has less autonomy in such situations but the physician's obligation to the patient to practice beneficent, just and competent care remains. Additionally, physicians and other healthcare professionals who hold financial interests in healthcare corporations or who are encouraged to contain costs in the interests of the bottom-line, for instance, create ethical concerns such as unavoidable conflicts of interest (Pellegrino 1998). Pellegrino argues, "Whether for-profit or not, these arrangements expose the patient's vulnerability to exploitation, under the guise of efficiency or public service. It is illusory to think that physician-administered plans will be more respectful of patient welfare" (1998, 109). Benner (1998) concurs, critiquing the commodification of health care and its effects on patients as consumers. Pointing to profits as the driving principle in the healthcare industry, Benner observes that these changes increase vulnerability in patients. In the present market-driven healthcare industry, patients are expected to act as consumers and protect their own rights and interests, yet many individuals are unable to defend their needs or competently navigate the complex system because of illness, age, reduced language proficiency, frailty, and most notably, being uninsured.

Economic forces have a direct effect on the day-to-day operations of a healthcare organization itself, giving rise to considerable ethical dilemmas and leading to an increased need for ethically aware and sensitive healthcare professionals. In the United

States, for example, higher nurse-patient staff ratios, increasingly complex patients and the rapid transfer of patients from one setting to another encumber the typical healthcare institution. The resulting moral problems have been well documented in the literature and are briefly discussed below. The practices, which are designed to increase efficiency and reduce expenditures, increase the vulnerability of patients and threaten patient safety and the delivery of quality patient care (American Association of Colleges of Nursing 2002). Describing the effects of measures to reduce nurses' time with patients and families in an effort to reduce costs, Benner asserts that "adding profit incentives to "process" patients more quickly further undermines the *moral arts* of attentiveness and care" (1998, 124, italics added). Storch agrees, characterizing the present economic model in health care as one that "overwhelms a 'caring emphasis'" (2009, 555). She reports on the stresses placed on nurses who fault the business model for the resulting problems, such as "dehumanizing practices, unnecessary suffering of patients, approaches that see some patients as more deserving than others, and failure of the system to deal with incompetence of health professionals" (556). White provides vivid accounts by nurses of moral conflicts that occur when nurse-patient communications are limited due to time constraints, resulting in poor caring practices, or when forced to choose between providing "insufficient care or no care at all" (1998, 19). She notes that nurses report frustration and demoralization as they struggle to provide more complex care to greater numbers of patients with insufficient resources. The changes brought about by the present economic models in healthcare and the restructuring of the healthcare delivery system have profoundly affected the development of ethics and ethics education in the past few decades, particularly in relation to justice principles such as equity, access to health care,

allocation of resources as well as professional ethics issues, such as conflicts of interests and moral distress.

Fourth, the prominence of quality of care initiatives in health care over the past two decades has also has influenced ethics education (Campbell, Roland, and Buetow 2000; Grol 2001). The ethical behavior of healthcare professionals bears a strong relationship to quality of care outcomes. Certain process measures of quality of care that are evaluated from the patient's perspective, such as the effectiveness of interpersonal care, can be enhanced by the actions of healthcare professionals (Campbell, Roland, and Buetow 2000). Van Mook et al. (2009) observe that studies reveal a positive relationship between the interpersonal skills of physicians and patient compliance, a quality of care indicator, concluding that efforts to develop professionalism may thereby improve patient outcomes. Other initiatives to enhance the quality of patient care are directly related to the view of the patient as an autonomous decision maker (Brook, McGlynn, and Shekelle 2000; Grol 2001). Grol (2001) notes that measures to support the patient as decision maker, such as increasing an individual's involvement and control of his or her care, are assumed to lead to improved adherence to the treatment regimen and better outcomes. In a review of research studies on physician-patient relationships and participatory decision making (an indicator of respect and autonomy), Beck, Daughtridge and Sloan (2002) report that the results revealed that patients who are more involved in the decision making process have more positive health outcomes. The relationship between quality of care and ethics education will be further developed in Chapter Three.

It is clear to see how medical and technological advances, shifts in values and increased recognition of patient autonomy, economic market forces and changes in

healthcare delivery and also quality of care concerns underscore the growing importance of healthcare ethics and ethics education in the present environment. The complex healthcare environment requires professionals who are better prepared to respond effectively to the maze of conflicting values and responsibilities. The professions of medicine and nursing have responded to the ethical challenges that this changing healthcare environment presents, recognizing the need for effective preparation in ethics. The accrediting agencies for schools of medicine and baccalaureate nursing programs require that ethics instruction be included in their respective curricula, and as a result, increased attention has been directed to the curricular goals and methods of instruction. Nonetheless, as this dissertation will review in more detail in Chapter Two, there is a lack of consistency in the goals or methods for the ethics curricula in medical or nursing programs. Furthermore, as the chapter will explore in a later section, despite the development of explicit measures to counteract the problems that the external environment presents, there is evidence that problems continue to exist and need to be satisfactorily addressed. The following section will provide a brief summary of the development of ethics education in medicine and nursing to set the stage for a discussion on the growing importance of ethics education in medical and nursing programs.

B. History of Ethics Education in Health Care

A brief description of the more recent history of medical ethics, nursing ethics, and ethics education in these professions is useful in preparing for the central discussion of an effective strategy for teaching ethics to medical and nursing students. In light of the history of medical ethics as a discipline preceding nursing ethics, the discussion will

begin with the history of medical ethics and ethics teaching in medicine. Jonsen's *A History of Bioethics as Discipline and Discourse* (2007, 3-16) provides the background for the following section.

Medical ethics has followed a steady development for most of the history of medicine. For centuries, up until the middle of the twentieth century, medical ethics conveyed fairly constant virtues and values that accompanied the traditional consideration of the physician-patient relationship (Jonsen 2007, 3-4). Medical ethics began a significant evolution around the mid-twentieth century, however, as a series of events took shape in the areas of human experimentation and science and technology. Early on, the Nuremberg Code in 1947 helped to define the guidelines for medical experimentation on humans, which provided the principles for medical research that are known today. Long-held philosophical perspectives in medicine were challenged by Joseph Fletcher in his 1954 text, *Morals and Medicine*, where he introduced a form of utilitarianism in the analysis of divisive medical topics, such as euthanasia and abortion (4). The 1950s were also marked by the introduction of the artificial ventilator, a technology that delayed or prevented cardiopulmonary death, but raised profound ethical concerns on consciousness. As Jonsen notes, anesthesiologists turned to Pope Pius XII for assistance with the unprecedented moral problems that accompanied the implementation of this technology. As a result, the traditional Catholic doctrine on extraordinary and ordinary means was raised in a new context and became influential in ethics dialogues regarding life-saving or life-extending measures (4-5).

Following the early seeds of change, the 1960s became a pivotal time in the development of medical ethics, and consequently, to the advancement of medical ethics

education. The discovery of hemodialysis in 1961 for patients with end-stage renal disease brought with it questions on the allocation of scarce resources and discussions on social utility (Jonsen 2007, 5). With insufficient numbers of hemodialysis machines to meet the demand, the ensuing debates centered on the means to select potential candidates. The moral arguments presented included utilitarian principles of social value; however, these discussions were abandoned and the selections were made by a lottery system. The successes in organ transplantation in the late 1960s, following the development of cyclosporine, raised ethical questions on excessive medical expenditures as well as an unprecedented ethical question in the case of heart transplantation on irreversible coma and the determination of death. The discussions led to a new determination of death – "brain death" – that opened up important dialogue in healthcare ethics (8).

The ramification of this rapid growth in science and technology was evident in medical curricula and witnessed by medical faculty. Dissatisfaction with medical curricula that emphasized the burgeoning medical knowledge and technical developments over the traditional humanistic stance in medicine led to a movement in this period to introduce humanities and social sciences to the curricula to counteract potential dehumanizing tendencies (McElhinney and Pellegrino 2001). Until this time of rapid change in medicine, ethics was taught informally and by implied methods, typically through professional enculturation and role modeling that stressed " 'bedside manner' and professional etiquette" (Gillam 2009, 585). One of the pioneers in medical ethics, Edmund Pellegrino, depicts the beginnings of bioethics and ethics education in *The Origins and Evolution of Bioethics: Some Personal Reflections* (1999) from which the

following historical perspective of medical ethics and ethics education is culled. He describes three stages of bioethics: educational, ethical, and global. The first phase, the education stage, is relevant to this discussion. It emerged at a time in which medical educators sought to counter the "perceived 'dehumanization' of medicine" that accompanied the scientific and technological advances and the trend toward specialization (Pellegrino 1999, 73). Concerns about the loss of the physician's humane, compassionate nature resulted in efforts to include courses on values, humanities and social sciences in medical school curricula. At the same time, ministers from medical school campuses formed similar undertakings to prevent the erosion of humanized medicine. Medical educators and campus ministers joined their efforts at national conferences and worked to enable the "ideal of the humanist physician" (77). One result of this collaboration was the formation in 1969 of the Society for Health and Human Values (SHHV) and its program arm, the Institute on Human Values in Medicine (the Institute), formed shortly after in 1971 (McElhinney and Pellegrino 2001). The SHHV along with The Society for Bioethics Consultation and The American Association of Bioethics eventually merged in 1997 to form the American Society for Bioethics and Humanities (ASBH).

Pellegrino (1999) attributes the work of the Institute as instrumental to the progress in medical ethics education that occurred in the 1970s. The Institute sponsored programs on faculty and program development and provided consultations to medical schools that were seeking to integrate values, ethics, and humanities into their curricula. Interdisciplinary programs for medical faculty and humanists were also offered. Medical and nursing faculty, humanists, and social scientists were selected for fellowships offered

through the Institute for advanced study in ethics, humanities or social sciences (McElhinney and Pellegrino 2001). In 1976, the Institute established The Journal of Medicine and Philosophy for the publication of scholarly writings on practical and theoretical ethics (Pellegrino 1999).

By 1976, forty-four percent of the medical schools (63 of 113) had required courses in ethics; by 1983 all but one medical school offered courses in medical ethics, although the courses were only required in approximately thirty percent (38 of 127) of the schools (Pellegrino et al. 1985, 52). During the 1970s, medical ethics education was in a period of tremendous change, with variation in its acceptance and the teaching methods employed (Pellegrino et al. 1985). Nonetheless, at the end of this decade marked by great scientific progress and social change, Pellegrino (1999) reports that human values, the humanities and medical ethics had converged. While many medical schools had established separate or integrated ethics programs by the late 1970s, Fox, Arnold and Brody (1995) report that by 1993, every medical school was required to teach ethics as part of the accreditation standards.

As previously noted, early ethics education in medicine relied more on implicit mechanisms, such as role modeling, for teaching ethics with little attention on explicit mechanisms such as formal classes or case studies (Gillam 2009). Efforts to enhance ethics education in medicine, however, were initially contested as faculty objected that first, it took time away from scientific knowledge that was rapidly expanding, and second, that ethics could not be taught (Bickel 1986; Veach and Sollitto 1976). Concerns regarding who would be best suited to teach ethics in medical programs, whether content should be integrated or taught as a stand-alone course and how it should be taught were

debated in the literature (Eckles et al. 2005; Fox, Arnold, and Brody 1995). A review of the literature from 1978-2004 by Eckles et al. (2005) revealed more support for ethicist-philosophers and physicians in a multidisciplinary team to teach ethics, while one article recommended that the faculty have additional experience in teaching methods. The review showed a consensus opinion on an integrated ethics curriculum, both horizontally and vertically. Importantly, the review demonstrated that ethics instruction should be considered "a process" encompassing medical students' four-year program (Eckles et al. 2005, 1148). Many studies have been conducted since the start of more formalized ethics instruction, which have evaluated the goals and methods of ethics education. These findings will be reviewed in Chapter Two. As ethics education efforts progressed, discussion on the inadequacies of implicit measures, such as role modeling, emerged. Problems inherent to the 'hidden curriculum' or the teaching that occurred outside of the formal curriculum were discussed and studied as well (Campbell, Chin, and Voo 2007; Hafferty and Franks 1994; Lakhan et al. 2009). This will be explored later in this chapter.

By comparison, nursing ethics and ethics education in nursing followed a less focused path than medical ethics education due in part to nursing's later development as a profession. Ethics in nursing was also greatly influenced by the developments in bioethics and medical ethics. The writings of Fowler and Tschudin (2006) as well as Storch (2009) are helpful in illuminating the development of nursing ethics and ethics education and are consulted in this section.

To begin, it is interesting to note, that similar to medicine, the development of nursing ethics and ethics education was affected by the sociocultural and sociopolitical changes and events occurring in the United States in the 1960s and1970s albeit for

different reasons and with different results (Fowler and Tschudin 2006; Storch 2009). While nursing ethics and nursing ethics instruction were influenced by the advances and complexities in health care and medicine as well as by a new appreciation of patient rights, nursing as a female-dominant profession also responded to the changing social expectations and roles of women. Fowler and Tschudin observe, "The nursing moral literature, both indirectly and directly, reflected the emergence of women as more fully recognized participants in the professions and in society, as well as the emergence of nursing as a scientific profession struggling for public recognition as such" (2006, 16).

The focus of ethics in nursing initially centered on virtue ethics and service to others, with much of the emphasis on character and etiquette within those relationships that were central to the practice of nursing (Fowler and Tschudin 2006; Storch 2009). Early ethics education emphasized the feminine traits and the duties of the nurse to those to whom she was responsible - physicians, patients, colleagues, and herself. The good nurse was courteous, neat, and obedient and devoted to her duties (Storch 2009; Fry 2004). Some of the expected behavioral traits came from the profession's early religious influences on caring practices (Storch 2009). Florence Nightingale, known to be the founder of nursing, considered nursing to be a vocational calling and set Christian standards of service in nursing (Fry 2004). Nursing also carried over behaviors influenced by Nightingale's military service, such as orderliness, fidelity, the value of the hierarchy, and respect for duty (Storch 2009, 551). This now archaic stance was captured in nursing journal articles covering issues such as proper public attire and cooperation with physicians (Fowler and Tschudin 2006).

Ethics education in nursing programs, however, predated ethics education in medical schools. Ethics education has been valued from the profession's inception and well documented in many early texts and journal articles (Fowler and Tschudin 2006; Fry 2004). Fowler and Tschudin depict the history of ethics and ethics education in *The Essentials of Teaching and Learning in Nursing Ethics* (2006, 13-16), the resource for the section below, unless otherwise indicated. The first ethics text was written very early, in the late 1800s, and focused on virtue ethics in the context of relationships. As early as 1916, in California, the Board of Registration of Nurses had an ethics education requirement for all schools of nursing, requiring that ethics be taught in five out of the six half-years of a three-year program. The topics for coursework were broad reaching and included clinical ethics as well as sociocultural ethical concerns on housing and poverty. By the next year, the National League for Nursing Education required ten hours of ethics for all second-year nursing students, suggesting that courses include ethics theory, personal, professional and clinical ethics, and social ethics. From the period of 1900-1965, sixty-five text books on ethics in nursing were written by nurses, priests or social workers and covered such topics as the nurse's duty to the patient first, maintaining nonjudgmental attitudes and establishing relationships of trust and empathy (Fowler and Tschudin 2006; Storch 2009). These texts often served as the basis for ethics education coursework. Additionally, almost 450 articles were published on ethics in nursing from 1900-1980 (Fowler and Tschudin). The first empirical study on nursing ethics was conducted as a master's thesis by Vaughan in 1935 describing the moral problems experienced by nurses (in Fry 2004). The results showed that the most commonly occurring ethical problem for nurses at that time involved nurse-physician cooperation,

which Vaughan attributed to changes in the nursing role and responsibilities. Later research in nursing ethics studied the values and attitudes of nurses, moral development, ethical decision making, and ethical behavior (Fry 2004).

It was not until nursing instruction moved from diploma programs to baccalaureate nursing programs that there was a shift away from the predominance of virtue ethics in curricula and in nursing literature (Fowler and Tschudin 2006). With the expansion of the nurse's role and responsibilities to include independent work and increased accountability and responsibility for ethical decisions, there was a corresponding shift in nursing ethics from virtue ethics to duty-centered ethics (Fry 2004). By the 1970s, Fry reports that the relevant ethical problems now included protecting the rights of patients, balancing benefits and harm and allocating nursing resources. Frameworks for ethical decision making were critiqued, specific ethics content was identified, and analysis of ethical issues was introduced (Fry 2004). The ethics instruction of nurses changed to meet the new expectations of the profession as it continues to do so today.

C. The Importance of Ethics Education Today

As the discussion of the influencing factors on healthcare ethics suggests, the present climate calls for healthcare professionals who can competently navigate an increasingly complex healthcare system and sociocultural environment that present more complex ethical dilemmas. Medical and nursing educators have responded positively to the substantial challenges identified above. A review of the ethics education literature reveals, however, that medical and nursing students are confronted by additional

difficulties that arise from the learning environment and the professional practice milieu itself which hinder the attainment of ethics educational goals. These problems include the 'hidden curriculum,' ethical erosion, moral distress and continued breaches in professional conduct- concerns that are more closely related to psychological influences, attitudes and communication patterns than to the knowledge and decision making skills that are typically emphasized in a traditional ethics curriculum. Although educators have been aware of these challenges to the moral development of medical and nursing students, their continued presence demonstrates a need for enhanced ethics educational programs today. A review of the specific challenges will establish the need for targeted curricular efforts that employ more effective instructional methods to defend against the negative influences inhabiting the learning and practice environment.

The first problem, the 'hidden curriculum,' is the informal teaching environment of an educational program and includes those lessons that fall outside of the planned formal instruction, which are unintentionally transmitted to students and often bear more weight than the formal curriculum (Hafferty and Franks 1994). It should be noted that the medical literature is quite extensive on this topic; nursing literature, while acknowledging the presence and effects of the informal curriculum, is limited here. The research in medicine by Hafferty and Franks (1994), though, is relevant to both professions. The hidden curriculum is comprised of implicit rather than explicit teaching methods and learning situations, such as those found in clinical learning experiences, which contribute to the socialization of medical and nursing students into their professions. While implied teaching methods, such as role modeling or clinical experiences are often positive, productive and essential, they are also an uncontrollable and insufficient means of ethics

education for healthcare professionals and can wield greater influence on the students' "moral enculturation" and ethical development than the formalized curriculum (Hafferty and Franks 1994, 861). Hafferty and Franks point out that only a portion of what is necessary for medical students to learn about ethics can be taught through formal instruction. Students internalize values and beliefs in experiences outside the classroom. Unfortunately, with poor role modeling, ethical norms, behaviors and attitudes may be incompletely or incorrectly communicated either overtly or indirectly.

Role modeling may be an effective method for socialization into the profession; however, as noted, this implicit method may be counterproductive and lead to harmful results when students are exposed to negative role models. Lempp and Seale summarize some of the negative outcomes in medicine associated with the hidden curriculum as the "loss of idealism, adoption of a 'ritualised' professional identity, emotional neutralisation, change of ethical integrity, acceptance of hierarchy, and the learning of less formal aspects of 'good doctoring'" (2004, 770). A qualitative study by Lempp and Seale on this phenomenon revealed that while ethics courses stress the concepts of professionalism, over half of the medical students in the study reported experiencing humiliation while in the clinical settings (771). Half of the students observed competition rather than cooperation among their peers in clinical settings and many described a prevailing hierarchical atmosphere (772).

Hospitals are complex institutions with set behaviors and norms for its members, which serve as the learning ground for the socialization of students (Storch and Kenny 2007). While these learning environments are necessary for the development of moral skills and behaviors, the unplanned learning in the clinical settings can challenge the

formal ethics curriculum. Gallagher notes that the practice environment " may challenge or contradict learning on the explicit curriculum" (2006, 225). Hafferty and Franks (1994) argue that medical school curricula must acknowledge the influence of the informal learning environment in planning ethics programs. They stress that the informal environment, such as interactions with peers, clinical experiences and role models are more powerful influences than formal lessons in ethics and at times "can be antithetical to the goals and content of those courses that are formally offered" (1994, 865). Nevertheless, the clinical environment is essential for internalization of values. Hafferty and Franks' well-known article on the hidden curriculum is almost two decades old, yet the effects of this tacit curriculum continue to be a concern for educators (Coulehan and Williams 2001; Gillam 2009; Mahood 2011). A lack of interest in ethical concerns, disrespect toward patients and staff, avoidance of patients' family members, cultural insensitivity and erosion of ethical principles are just some examples of the attitudes and behaviors that continue to permeate the learning environment (Mahood 2011), creating negative influences on the moral development of students. Ethics educators, therefore, have a responsibility to recognize this phenomenon and integrate teaching about the informal curriculum into the formal education plan (Gillam 2009; Hafferty and Franks 1994; Mahood 2011). They must support students and assist them with the skills to confront these negative influences on their moral and professional development.

What is more, educators need to consider that the hidden curriculum extends beyond the clinical setting and interactions with other healthcare professionals. Ethics educators themselves convey an informal hidden curriculum through the decisions they make related to the ethics content included and the approach and attitudes adopted in

teaching ethics (Gillam 2009; Hafferty and Franks 1994). For example, educators may stress ethical decision making skills over virtue ethics, attributing more worth to clinical analytic skills than to the attributes of the physician or nurse, sending the message that the character or attributes of the professional are less important than one's analytical skills. The time allotted o ethics instruction may also convey the value that ethics instruction holds to the educator. Ethics educators in the health professions must be aware of the influence that these implicit, informal measures have in the socialization of the student to the profession and the effects of these on the development of the moral agency of the physician and nurse. If the informal curriculum wields such influence, then ethics educators should attempt to mitigate its negative effects. Efforts that attend to this informal, 'hidden' learning environment are directly addressed in the accreditation standards for medical schools, which are presented in Chapter Two.

The second problem, ethical erosion, which is a loss of professionalism and dulling of moral virtues, has been observed in medical students and is closely related to the discussion on the hidden curriculum (Charon and Fox 1995; Crandall and Marion 2009; Hojat et al. 2009). While the phenomenon of ethical decline and its associated cynicism and skepticism may occur in nursing students, it does not seem to occur with notable frequency in nursing. In a summary of the Carnegie Foundation National Study of Nursing Education, researchers note that "very little cynicism" was observed in nursing students and nursing faculty (Benner et al. 2008, 476). Ethical erosion in medicine has been attributed in part to the emphasis of science and technology over the humanities in medical school curricula. As a result, students feel excessive pressures to acquire more knowledge in an ever-expanding discipline (Rosoff 2011). Ethical erosion

may be closely related to the informal curriculum described above, with negative influences in the learning environment breeding cynicism in medical students (Charon and Fox 1995). Significant to this discussion, Charon and Fox (1995) provided specific feedback from students, which illuminated the degree of ethical erosion experienced by students. In a report of medical students' responses to an essay assignment, "How can medical students best develop ethical thinking and behavior?," the students' essays revealed how they felt about their preparation in ethics. The authors noted that many students expressed concern "that their professional socialization abrades their ethical sensitivity and subverts their moral development" (Charon and Fox 1995, 767). Students worried that their education might erode their idealism and dehumanize them. Students shared concerns about witnessing or unwillingly participating in possible ethical wrong-doing and feeling powerless to avoid or stop their involvement in these situations. The essays identified many ethical challenges that medical students face, among these, withholding information, representing themselves falsely as physicians, and observing breaches in professionalism, such as misconduct or impairment of colleagues or medical staff. Students feared ethical erosion and wondered how to manage the stresses of being a physician without losing the virtues they value. Notably, the students identified some measures to thwart this phenomenon, suggesting that ethics education be included in all four years of a medical program, and in addition to principlism, instruction should include virtue-based ethics, casuistry and narrative ethics. Charon and Fox summarized the students' comments, noting, "ethics teaching should be rigorous, required, and examined" (1995, 767). Additional recommendations to thwart ethical erosion included methodologies that extend beyond lecture, involve students and include collaborative

teaching methods. Small group discussions were recommended to allow adequate time and provide a safe environment to examine views. Students requested dialogue that encouraged the "intricacy, ambiguity, and pluralistic differences intrinsic to ethical issues" (1995, 767).

In a review on identify transformation in medical students Cohen et al. (2009) outlined the stressors associated with the learning process and medical training environment that may contribute to a decline in professional role development, moral development and ethical erosion. While many role models inspire students with their professional attitudes and behaviors, regrettably, the presence of cynical, arrogant, and aloof role models has been well-documented and cited as a significant factor in identity diffusion among medical students (Cohen et al. 2009, 49). The authors reported that students are also exposed to humiliating situations in their clinical work, as well as in situations in which they must compromise their own values to "fit in" and avoid being chastised by health team members (49). In addition, the review found that students are negatively influenced by a system that ignores the indifference and disengagement of fellow students who cheat, make moral compromises and are driven by financial gain. Students require assistance in maintaining their ethical values system. Given this significant evidence, the authors contended that educators are obliged to assist students in identifying and forming relationships with positive role models. Cohen et al. stressed the integration of teaching methods that incorporate discussion and reflection to mitigate the negative effects of the learning environment and suggest faculty development programs centered on producing effective role models for students.

Other studies demonstrate a specific decline in empathy during medical school, declining in third year of the program (Hojat et al. 2009) and in the clinical years (Chen 2007). Empathy decline is relevant here as a specific trait or virtue important to the physician. Hojat et al. observed that the decline in empathy was twice as great in medical students in "technology-oriented" specialties compared to their peers in "people-oriented" specialties, and a higher decline was observed in men versus women (2009, 1187-88). Similar to the research on ethical erosion and loss of professional identify, the authors attributed this trend to lack of positive role models, "affective distance," and environmental factors, among others (1188-89).

The third problem, moral distress, is the cognitive, affective or physical suffering that occurs when one is unable to pursue what he or she believes is the right course of action because of constraints (Jameton 1984; Pendry 2007; Wilkinson 1987). The definition of moral distress has been expanded from the basic definition first proposed by Jameton and later Wilkinson that recognized the external constraints or barriers, such as hierarchy and communication structures, legal obligations, and resource allocation, as hindrances to the ability to act as a moral agent (Pendry 2007). Current definitions of moral distress also recognize that internal barriers, such as lack of skills or confidence, may contribute to moral distress (American Association of Critical-Care Nurses 2005; Pendry 2007). Moral distress has been documented and studied extensively in nurses since the 1980s and more recently studied in nursing students, medical students and physicians as they encounter obstacles that prevent them from acting on their moral decisions.

Medical and nursing students may experience moral distress if they are unsuccessful in attempting to respond to ethical concerns that they witness or in which they are involved. Research on moral distress in nursing students reveals that students report discomfort as they witness breaches of patients' rights, including autonomy, a lack of professional integrity, unsafe conduct, breaches in confidentiality and disrespect toward patients (Callister et al. 2009; Cameron, Schaffer, and Park 2001). Woods (2005) examined evidence from several studies that illustrated the moral passivity and powerlessness of nursing students in such situations, noting that students feared rejection by staff nurses. Doane et al. (2004) described nursing students' moral passivity as resulting from their vulnerability and lack of influence in clinical situations. What may begin as a lack of moral confidence in nursing students may progress to moral passivity, moral compromise and eventually, moral distress (Drought 2006).

Moral distress has been acknowledged as a significant problem in nursing, and as a result, the North American Nursing Diagnosis Association- International (NANDA-I) created "Moral Distress" in 2006 as a new nursing diagnosis (Carpenito-Moyet 2009). Examples of ethical problems that result in moral distress for nurses include the inability to effectively advocate for the patient in situations where the nurse's authority is restricted, limitations in providing the best care due to lack of resources, and end-of-life issues in which the nurse is required to provide aggressive care that the nurse deems unwarranted. Nurses also acknowledge problems in competing obligations to the patient and to the institution that contribute to moral distress. In a survey of everyday ethical issues in nurses, Ulrich et al. reported that almost three-fourths of the nurse respondents experienced ethical problems about which they felt could do nothing and over a third

reported feeling "powerlessness" (2010, 2514). The survey revealed that younger, less experienced nurses in direct care positions reported more stress related to ethics than more experienced nurses.

Medical students also report experiencing moral distress in the clinical environment. Lomis, Carpenter and Miller (2009) assessed the causes and levels of stress present in third-year medical students by examining the students' reflective writing assignments, which recorded situations associated with either stress for the students or exemplary behavior that could be modeled. The findings overwhelming demonstrated that communication problems were cited most frequently, and those that occurred within the care team were associated with higher distress. The findings showed, however, that appropriately managed communication problems were associated with lower levels of distress. Other sources of distress were related to the structure of the hierarchy, the presence of negative role models, allocation of resources, and lack of access to care. One item deserves particular mention. The review of the writing assignments showed a strong correlation between a student's remorse over a lack of action in responding to ethical problems and higher levels of distress. Conversely, students who overcame their lack of confidence or fear of reprisal and took action expressed lower levels of distress. The authors acknowledged the value of preparing students for situations associated with moral distress to help lessen the degree of suffering. They suggested informing students of the lower stress experienced by students who took action with non-confrontational approaches and creating strategies to assist students to manage these situations. Suggestions included incorporating communication exercises directed toward encounters

with colleagues and creating discussion groups that are "safe environments" to share experiences (111).

Nurses and physicians share similar experiences in moral distress, reporting that end-of-life care situations are frequent triggers of moral distress. While many physicians and nurses are not sensitive to the other's moral distress, several commentators have addressed the similarities in moral distress between the groups. Oberle and Hughes (2001) found more similarities in the levels of distress experienced by nurses and physicians than differences. They note that the concerns and problems are similar, but the expression of associated responsibilities is different due to role. Each group experienced moral distress in end-of-life care situations that stemmed from value conflicts, communication problems, challenges inherent in the hierarchical processes and limited resources. Differences in their respective roles, however, influenced their perspective of ethical concerns. Another study by Hamric and Blackhall (2007) showed that while both physicians and nurses experience moral distress in end-of-life care situations, nurses report more moral distress and more intense levels of distress in these situations than physicians. Both groups, however, identify powerlessness and conflicts between institutional goals and patient care goals.

The final challenge considered here is the continued presence of professional ethics breaches in informed consent, confidentiality, conflicts of interest (Devettere 2010), and disciplinary actions (Papadakis et al. 2004), supporting the importance of ethics education today. Some of these problems in professional ethics may result from external factors, such as the market-driven healthcare environment or the rapidly expanding cultural diversity of the population that present new challenges to healthcare

professionals. Yet, there is some evidence of a correlation between the conduct of a student and his or her future professional behavior. One significant study revealed a correlation between the unprofessional behavior of medical students and future breaches in conduct. To identify predictors of ethical misconduct, Papadakis et al. (2004) reviewed the disciplinary records of physicians practicing in the State of California from 1990-2000 who were graduates of the University of California, San Francisco (UCSF). Disciplinary actions of the Medical Board of California that were included in the study were negligence, fraud, inappropriate prescribing, unlicensed activity, patient endangerment as the result of the physician's use of drugs and alcohol, conviction of a crime, sexual misconduct and unprofessional conduct (2004, 245). One percent of the UCSF graduates were disciplined by the State Medical Board during this period, the majority for negligence that resulted from unprofessional behavior rather than from incompetence. Interestingly, the study found that the students who displayed unprofessional behavior while in medical school (as reflected in Professional Evaluation Forms) were twice as likely to have disciplinary action taken against them when in practice (248). The authors stressed that professionalism is a critical competency for medical school graduates and argued that assessment and evaluation measures of professionalism hold significance. Educators need to consider the evidence of the impact of unprofessionalism in students on the quality of care for patients in planning ethics teaching and nurturing the professional growth of students.

A review of studies by Baxter and Boblin (2007) on the unethical behavior of nursing students reflects that the number of incidents in the classroom and clinical settings has been increasing. The behaviors involve lying, cheating, plagiarism, deception

and misrepresentation, falsifying medical records (for instance, claiming to have done something that was omitted), and failure to report data, errors or incidents (20). The unethical behaviors reflect a lack of integrity and hinder the development of trusting relationships in both the academic and clinical environments and pose potential harm to patients. The authors reported that there have been no studies with nursing students, however, that demonstrate the effect of unethical academic behavior on patient outcomes or any studies similar to Papadakis et al. that demonstrate a correlation between unethical behavior as a nursing student and behavior as a nurse. Baxter and Boblin strongly suggested that educators "create and sustain a positive learning environment that promotes honesty and allows students to make mistakes and solve problems so they may develop their moral thinking" (2007, 24).

Conclusion

In spite of efforts to develop an explicit, formal ethics curriculum that meets the educational needs of students, the problems outlined above have been persistent and pervasive in medical and nursing programs. In addition, they tend to fall outside of the traditional ethics curriculum, which gives emphasis to ethical dilemmas and decision making. To better address the needs of students, explicit, formal ethics instruction must acknowledge and address the effects of the hidden curriculum, ethical erosion, moral distress and professional breaches in ethics that surface in prelicensure programs. The curriculum should acknowledge the presence of these influences and the associated negative effects on successful professional development and socialization in medicine and nursing. Ethics educators should identify measures, such as training, as an integral component of an ethics curriculum in the health professions to mitigate their effects. To

some degree, the problems are far-reaching, involving informal learning environments and individuals for whom ethics educators have no reach, and as a result, require institutional or system changes for better outcomes. A discussion of measures at the systems level is beyond the scope of this dissertation. This dissertation argues, however, that specific, targeted educational methods are necessary to better equip students with the skills and attributes needed to effectively cope with the potentially demoralizing effects of the hidden curriculum, to lessen the inevitable moral distress that arises in clinical situations and to resist ethical cynicism or erosion. Educational methods are also needed to assist educators in identifying unethical conduct in students that may have serious consequences.

Moreover, explicit measures in ethics teaching are needed to develop the professional attributes and virtues of the nurse and physician and sensitize the practitioner to the ethical issues inherent in the current healthcare system. As the review of the health care system changes and challenges reveals, it is fraught with complexity and places patients at risk for depersonalized care. Behaviors that focus on conveying respect through shared decision making, interpersonal care, and improved communications are important for positive patient outcomes and are driven by the nature of the practitioner-patient relationship. Development of professional virtues, such as compassion and integrity, sensitize the healthcare practitioner to ethical problems and support the creation of a meaningful practitioner-patient relationship. Ethics teaching can support these positive elements in the practitioner-patient relationship by explicitly teaching and reinforcing professional virtues and values as part of the formal curriculum.

A specific education method, simulation, provides students the opportunity to practice and develop the virtues and skills needed for ethically sensitive practice. Simulation experiences can also be used to enhance the awareness of ethical problems and develop ethical analytic skills. Additionally, simulation can be used to explicitly counter the negative influences in the learning environment. The benefits of this experiential learning method as an adjunct to traditional ethics teaching will be argued in Chapter Six.

Chapter Two – Goals and Methods of Ethics Teaching

A. The Goals of Ethics Education in Medicine and Nursing

It is important to begin with a discussion of the goals of an educational program because the goals or program objectives serve to direct the content and teaching methods that are used. This chapter identifies the goals of ethics education in medical and nursing programs and illustrates effective teaching methods for goal attainment. Section i begins with a review of the professional competencies and educational outcomes in ethics in medical and baccalaureate nursing programs. Section ii examines the codes of ethics for both disciplines, which through their identification of ethical practice provide the goals of ethics education. Section iii includes a review of curricular practices in ethics education in medical and baccalaureate nursing programs, identifying goals that are set as ideals, but perhaps not reached. Section iv identifies short-term and long-term goals in ethics education that serve to guide an ethics curriculum. Section v examines the fundamental goal of ethics education, that of improving the quality of care for patients.

i. Review of the Professional Competency Standards and Educational Outcomes in Medicine and Nursing

This section is supported by the literature of the Liaison Committee for Medical Education (LCME) report *Function and Structure of a Medical School: Standards for Accreditation of Medical School Education Program Leading to the M.D. Degree* (2011); the American Association of Colleges of Nursing (AACN) publication, *The Essentials of Baccalaureate Education for Professional Nursing Practice* (2008); *The American Society of Bioethics and Humanities (ASBH) Task Force on Ethics and Humanities*

Education in Undergraduate Medical Programs (2009); and the Accreditation Council for Graduate Medical Education's (ACGME) "Six General Competencies" for resident education (Accreditation Council for Graduate Medical Education 2011). The global perspective on ethics education is captured with the UNESCO *Core Curriculum in Bioethics* (2008). In addition, the American Society for Bioethics and Humanities (ASBH) *Core Competencies for Health Care Ethics Consultation* (2006) is also consulted in light of its relevance to the ethics education of the developing physician and nurse.

Accrediting organizations in medicine and nursing have responded to both the burgeoning field of healthcare ethics and to the increase in clinical, professional and organizational ethical problems by requiring that the core curricula of the respective programs include instruction in ethics. The LCME report (2011) on Standards for Accreditation of Medical School Education Program Leading to the M.D. Degree includes criteria for ethics education in several of its educational objectives and reveals a strong commitment to ethics instruction. The language of the report carefully employs the terms "must" and "should" to indicate the degree of required compliance with the standards – "must" to reflect necessary compliance and "should" to reflect compliance except in "extraordinary and justifiable circumstances that preclude full compliance"(1). Educational objective ED-23 specifically addresses ethics instruction: "A medical education program must include instruction in medical ethics and human values and require its medical students to exhibit *scrupulous ethical principles* in caring for patients and in relating to patients' families and to others involved in patient care" (10, italics added). Furthermore, this objective stresses that education in ethics, values and

communication skills should occur before the student engages in patient care experiences. In addition to honesty, integrity and confidentiality, the most recent edition of the accreditation standards defines "scrupulous ethical principles" to include the virtue of respect and extends this responsibility to patients and their families, peers and other healthcare members (11). Of particular relevance to this thesis is the directive's call for the use of "formal instructional efforts" in the assessment and reinforcement of ethical principles (11).

This educational objective makes a strong statement for ethics education and aligns well with the AMA Code of Medical Ethics. The LCME report (2011) emphasizes the professional virtues and values that are included in the code of ethics such as honesty and integrity and calls for faculty to ensure that students adhere to ethical principles. It sets standards for educators to provide instruction on professional behaviors, attitudes and skills, communication skills, and ethical theory. Significantly, the LCME standards call upon educators to provide this instruction to students *prior* to engaging in the care of patients. Although the LCME does not specify the type or amount of instruction in ethics, the criterion emphasizes that the ethical behavior of medical students should be examined closely and evaluated. Objective ED-46 emphasizes the need for evaluation measures and specifically addresses the need for programs to collect outcome data on the "professional behavior of its graduates" (16).

Ethics education is supported in several other LCME standards, each of which addresses a specific area of concern. Objective ED-17-A focuses on the need for instruction in research ethics; objective ED-19 on communication skills with patients and families, colleagues and other professionals in health care; objective ED-20 on common

societal problems, such as violence and abuse; objective ED-21 on diverse cultures and belief systems, and objective ED-22 on gender and culture bias. Important to this thesis, the LCME standard MS-31-A directly stipulates the creation of a learning environment that "promotes the development of explicit and appropriate professional attributes in its medical students (i.e., attitudes, behaviors, and identity)" (2011, 21). This standard describes the need for careful management of both formal learning environments, as in planned activities, and informal learning environments, which include "the attitudes, values, and informal 'lessons'" (21), acknowledging the hidden curriculum. Educators are encouraged to enhance the learning environments and work to diminish the effects of negative influences on professional development. Objective IS-16 directs educators to develop an environment that engages students in the development of cultural competency and attributes that contribute to social responsibility, such as altruism and social accountability.

The ASBH task force on Ethics and Humanities Education in Undergraduate Medical Programs has also addressed medical ethics education. In 2005, the task force responded to the LCME requirements for the core content in medical school curricula. By 2009, the ASBH task force had developed a report to assist educators in the design and development of a curriculum that would enhance ethics education. The task force recommendations address specific LCME education objectives and provide a curriculum outline to assist educators in developing bioethics and humanities content for their programs. The learning objectives encompass both the skills and attitudes essential in ethics education. The task force also developed a "Template for Topic Development" to aid medical educators in curriculum development and evaluation (ASBH 2009). The

template acknowledges the domains of learning and addresses knowledge, skills and attitudes distinctly. Ethical skills and attitudes are assessed for knowledge ("know how to"), demonstration ("show how to") and competent performance ("do") (5) .

Graduate medical education continues this emphasis on the importance of ethics education by establishing core competencies for residency programs. These competencies commonly referred to as the "Six General Competencies" were introduced in 1999 by the ACGME to clearly identify the expected knowledge and conduct of residents upon program completion (Doukas 2006). Many of the requirements set by the ACGME stress professionalism and ethical knowledge, skills and attitudes (ACGME 2011, IV.A.5). An examination of these competencies reveals, for example, the prominence of professional attributes and attitudes, such as compassion, respect, sensitivity and responsiveness, self-appraisal, ethical principles, communication skills, cultural competency, advocacy, and risk-benefit analysis, among others (Doukas 2006).

A review of The Essentials of Baccalaureate Education for Professional Nursing Practice (The Essentials) of the AACN (2008) shows a similar emphasis on ethics education in nursing. The Essentials provides competency standards for baccalaureate nursing education curricula that are required for accreditation. The recent revision of The Essentials in 2008 was written to address the Institute of Medicine's report on "core knowledge required of all healthcare professionals" (3). The document is comprised of nine Essentials, each of which represents a particular outcome for the baccalaureate nursing graduate. Essential VIII: Professionalism and Professional Values is pertinent to the teaching of ethics. This Essential addresses ethics as integral to nursing and cites the importance of respect, honesty, advocacy, accountability and civility to nursing practice.

Essential VIII also outlines the professional values of altruism, autonomy, human dignity, integrity and social justice. The document acknowledges nursing as a caring practice and emphasizes the significance of empathy, compassion and a caring stance to nursing while recognizing the relationship of professional values and "value-based behavior" to the nurse's ability to provide quality care (27). It is clear from The Essentials that there is a consensus view of nursing as a value-laden practice. Nursing programs are obligated to prepare graduates to practice with professional virtue and values. The report recommends that baccalaureate nursing programs prepare graduates who model professional behavior, are compassionate, accountable, self-reflective, respectful of confidentiality and privacy, employ ethical decision making frameworks and assist others in resolving ethical dilemmas (27-28). In addition, nursing students are to be prepared to identify risks that influence their professional and personal choices, prevent unethical and unsafe practices, and promote the image of nursing. The report offers suggestions for curricular content that include content on the code of ethics, ethical frameworks, communication, human rights, and moral agency.

The global perspective on ethics education as represented by the United Nations Educational, Scientific and Cultural Organization (UNESCO) reveals an emphasis on both ethical sensitivity and ethical reasoning in ethics curricula. The UNESCO publication, Bioethics Core Curriculum Section 1: Syllabus Ethics Education Programme (2008), presents minimum standards for bioethics instruction of medical students. It is important to note that although the core curriculum was developed for medical students, the organization suggests that this curriculum is appropriate for students in nursing, health sciences, dentistry, public health, law, philosophy and social sciences. The

curricular framework was based on the principles included in the Universal Declaration on Bioethics and Human Rights and moves from the individual perspective that is the typical focus of medical and nursing school ethics curricula to a social and community view. The framework stresses virtues and values, such as dignity, respect, social responsibility, and justice, among others, and the development of ethical reasoning skills, with the aim of developing practical wisdom. The bioethics curriculum clearly demonstrates a balance between the need for ethical sensitivity and reflection and the need for reasoning skills to make prudent decisions when faced with ethical conflict. Of note, the curriculum addresses the different types of harm that patients may face and presents an expanded view of harm – "harm to interests, harm as unfairness, harm as disrespect" – to include social-economic harm (role harm, stigmatization), psychological harm, physical harm, and moral harm (24). This expansive definition of harm holds relevance to later discussions of quality of care and ethics education that are explored in Chapter Three.

Another source for guidance in ethics education of nurses and physicians is the ASBH (2006) Core Competencies for Health Care Ethics Consultation. The ASBH Core Competencies include ethical assessment skills, process skills and interpersonal skills. Although the Core Competencies have been developed for clinical ethics consultation, the recommendations are not exclusively the province of ethics consultants, but are also relevant to the developing physician and nurse. Graduate physicians and nurses must promptly recognize an ethical problem and initiate the appropriate steps toward resolution. The attributes, attitudes and behaviors that are essential for ethics consultants are also fitting for nursing and medical students. The recommendations stress that

attributes and attitudes can be taught and supported through reflection, modeling, accountability, and evaluation. Ethics educators in medical and nursing programs can find guidance in the Core Competencies for Health Care Ethics Consultation and strive to nurture the knowledge, skills and attributes outlined in the recommendations.

By and large, the competency standards and professional outcomes identified by the above educational and professional organizations demonstrate consistency in the requirements for ethics instruction. To meet these requirements, ethics education must meet the following goals: to promote the development of the virtues and values inherent to the professions of medicine and nursing, to affect attitude formation, to increase understanding of ethical theory, to promote the prompt identification of ethical problems, and to improve ethical analysis and decision making. To achieve this, the standards reveal that ethics education for medical and nursing students should in general include a foundation of knowledge of ethical principles, codes of conduct, and application of theory; development of skills, such as communication and critical reasoning skills; and attitude formation, as seen in the development and nurturing of professional virtues and behaviors. The above standards suggest that a balance is needed in ethics education that supports professional values and virtues as well as the development of ethical skills. An examination of the codes of ethics in medicine and nursing that follows will also provide direction and assist in identifying the goals for ethics teaching in the respective professional programs.

ii. Review of the Codes of Ethics in Medicine and Nursing

In addition to the above review of curricular guidelines and professional standards, it is also instructive to review the codes of ethics of nursing and medicine for

their utility in this discussion. It is not in the purview of this paper to do a thorough analysis of the professional codes in medicine and nursing; however, an overview of the codes illustrates their applicability to ethics education. A code of ethics describes the healthcare professional's expected ethical values and behavior. It is not a legally binding document; but rather, a code of ethics provides the model of professionalism to which its members aspire. The Code of Medical Ethics of the AMA (2001), the Code of Ethics of the American Nursing Association (ANA) (2001) and the International Code of Ethics of the International Council of Nurses (ICN) (2006) each affirm the expected virtues, values, responsibilities, scope of practice and standards of conduct of the respective professional. The codes reflect the goals of ethical practice; thus it can be inferred that the codes provide guidance for an ethics curriculum.

Physicians in the United States are guided by the AMA Code of Medical Ethics (2001), which includes the Preamble and Principles of Medical Ethics. The nine Principles are accompanied by Opinions and Reports that offer clarification of professional responsibilities in particular circumstances, for instance, on issues of informed consent and futile care. The Preamble of the code makes clear that the purpose of the code is for the "benefit of the patient," which is the physician's first and primary responsibility. The principles delineate the virtues and responsibilities of the physician and recognize the physician's duty "to patients first and foremost, as well as to society, to other health care professionals, and to self" (Preamble). Virtues and responsibilities described in the Principles of Medical Ethics include respect, compassion, honesty, and professionalism. Responsibilities identified in the code include competently providing medical care, protecting confidentiality and privacy, reporting incompetent physicians,

and advocating for changes that would benefit patient care. Although the code of Medical ethics was last updated in 2001, the inclusion of the Opinions and Reports reflects the AMA's considered response to the changing cultural and societal issues.

Nurses in the United States are guided in their professional practice by the ANA Code of Ethics with Interpretive Statements (2001). The Code of Ethics consists of nine Provisions, each of which contains statements that elucidate and further develop the themes of the Provisions. The first Provision is primary and establishes the nurse's responsibility to practice "with compassion and respect for the inherent dignity, worth, and uniqueness of every individual" (11). The code has three areas of focus: values and responsibilities; boundaries of duty and loyalties; and duties that extend beyond the patient. Revisions of the code are thoughtful and reflective of the profession's changing and expanding roles and the relational aspects of nursing. Fowler notes that the code's periodic reviews and revisions have been effective in addressing changing societal goals and standards while successfully maintaining the underlying values of the profession as a constant (2008, xiii) . These constant virtues and values of the profession include respect, compassion, integrity, right to self-determination, advocacy, respect for privacy, confidentiality, accountability, among others (ANA 2001). Nurses are also expected to create environments that nurture virtues and values.

The ICN (2006) is another important source of guidance for ethics education. Similar to the ANA Code of Ethics, the ICN code stresses the values and virtues of rights, dignity, respect, privacy, competency, accountability, confidentiality, and advocacy. The ICN code places a heavy emphasis on social action and advocacy related to health care. The code differs from the ANA code in that it provides recommendations for its

application in various settings, such as practice, management, education, research and professional organizations. Of particular interest are the suggestions for nursing curricular development which recommend teaching the concepts of human rights, justice and equity issues related to health care, ethical decision making, and specific topics, such as informed consent, privacy and confidentiality.

The codes of ethics in medicine and nursing reveal the expectations for professional values and behavior, which are also echoed in the curricular recommendations for ethics education in the professions. The respective codes emphasize professional virtues and values, ethical sensitivity, the process for ethical decision making and the development of appropriate knowledge areas, skills and attitudes for ethical competency. Accreditation requirements for educational competencies in medicine and nursing, professional organizations' recommendations, and the codes of ethics provide guidance for ethics education in the respective programs. It is important to discern, however, whether these requirements (as in the case of accrediting organization guidelines) or recommendations (as in the ASBH task force suggestions) are actually implemented in medical programs and baccalaureate nursing programs.

iii. A Comparison of the Requisite Standards and Current Practices in Ethics Education

There is agreement that ethics education is integral to the instruction of medical students and baccalaureate nursing students – most significantly, it is a required component of the curricula of each profession, and its inclusion is essential for accreditation. Given this weight, however, it is surprising to find a lack of agreement in the literature on the primary goals of ethics education. A review of the literature reveals

two perspectives in ethics education that have emerged. One position stresses the development of skills in ethical analysis, and the other stresses the development of the virtues of the health professional. It is necessary to consider the major arguments in the literature related to the goals of ethics education for they have direct bearing on ethics curricula and, consequently, on the instructional methods employed and thus are particularly relevant to this thesis.

Discussion on the goals of ethics education has been a persistent topic in ethics literature for many decades. In a foundational work on ethics education, Daniel Callahan (1980) outlined the goals of ethics education. A review of the accrediting guidelines and professional codes of ethics shows that the general educational goals that he proposed continue to guide ethics curricula in undergraduate and graduate education as well as in professional programs. Thirty years hence, the dialogue on ethics education goals in medicine and nursing continues, but the initial goals that Callahan delineated continue to be relevant for educators today. Callahan put forward the following five goals of ethics education:

- Stimulating the moral imagination
- Recognizing ethical issues
- Eliciting a sense of moral obligation
- Developing analytical skills
- Tolerating –and reducing–disagreement and ambiguity (64-69)

In describing the first goal to stimulate the "moral imagination," Callahan noted the need to stir students' feelings and imaginations, which would serve as a necessary counterpoint to analysis. "Imagination without analysis is blind; analysis without imagination is sterile," he explained (1980, 65). Callahan's statement may serve to bridge

the differing positions toward ethics education that are reflected in the literature today – that of developing professional virtues, in particular, ethical compassion and sensitivity, and that of developing analytical skills. Moral imagination is needed to sensitize the student to ethical problems and to help "sort out those elements in emotional responses that represent appraisal and judgment" (65). Callahan reports that, in general, moral education includes a goal to instill virtues and improve behavior; yet, the classroom setting does not allow for this. He claims that there is no way to know if changes in attitude or behavior occur or if the desired behavior is consistently applied. Callahan contends, however, that it is an appropriate aim for educators to improve the way in which students think and feel about ethical issues. He argues that ethics educators should teach students how to articulate ethical positions, analyze ethical issues, and critique their positions. Callahan summarizes this behavioral goal as helping "students to know the importance of changing his or her behavior if that was what a moral judgment seemed to entail" (70). He expands these goals in a discussion of applied ethics and adds the importance for professionals to grasp the meaning of their disciplines' codes, mores, values, and ethical problems.

Pellegrino and Thomasma (1993) offer a different view of the goals of medical ethics education, providing support for the development of virtues as well as the ethical analysis skills that are emphasized by Callahan. They argue that medical schools have a responsibility to society to ensure that physicians practice from a moral stance, due to the moral nature of the healing relationship that physicians have with patients. They also contend that virtues are teachable "by practice, by example, and even by the study of ethics" (1993, 176). Pellegrino and Thomasma specify, however, that the virtues taught in

ethics education should fit the goals of medicine and be appropriate to the "physician *qua* physician," not to physician as person. The authors point to the "subtle" influence of personal virtues in the professional role and vice versa, but they contend that the goal of teaching virtues in medical programs is for the formation of the good physician as physician, not as person (176). This argument will be further developed in Chapter Four.

An early review of medical ethics curricula by Miles et al. (1989) presents ethics education goals that exclude the development of virtues. The authors contend that medical students should be taught to "recognize the humanistic and ethical aspects of medical careers… [and] examine and affirm their personal and professional moral commitments" (1989, 706). Even so, the authors reject a medical program's responsibility to teach or nurture virtue. Rather, they submit that students enter programs equipped with the moral characteristics required of physicians, and the school's responsibility is limited to providing students with the knowledge and skills to manage ethical issues.

Eckles et al. (2005) conducted an extensive review of the literature on formal undergraduate medical ethics education encompassing the period of 1978-2004. The authors reviewed sixty articles for features of ethics education, including goals, teaching methods, descriptive studies, empirical studies and so forth. The review revealed a lack of consensus related to the goals of ethics education and uncovered two perspectives in ethics education– a goal to produce virtuous physicians and a goal to produce physicians who skillfully analyze and manage ethical problems. The authors found three articles submitting that the primary goal is to develop the virtuous physician and ten articles that support the development of skills in ethical analysis and decision making as the primary

goal of medical ethics education. The authors refer to this as the "virtue/skill dichotomy" (2005, 1145). Eckles et al. note that they concur with the position of the majority of the research articles on ethics education curricula that support a primary goal to develop ethical decision making skills.

In nursing, Fry (1989) examined four educational models used to teach ethics in undergraduate and graduate nursing programs. She identified the goal of ethics education in nursing "to produce a morally accountable practitioner who is skilled in ethical decision making" (1989, 485). Two of the models include instruction on the moral agency of the nurse, nursing virtues and the value dimensions of nursing – the Moral Concepts and Moral Issues models. The Moral Concepts model emphasizes nursing virtues, values, ethical reasoning and ethical analysis, aligning well with proposed baccalaureate nursing program standards. The Moral Issues model includes a little discussion of virtues and values, but overall, stresses ethical theory, ethical dilemmas, and skills in ethical decision making.

Although no recent comprehensive reviews of nursing ethics curricula have been identified, one key study of the nursing profession illustrates the general practices in ethics teaching. The Carnegie Foundation National Nursing Education Study identified the signature pedagogies, competencies and methodologies of nursing education. The study revealed that nursing programs are effective in forming "professional identity and ethical comportment" (Benner et al. 2010, 11). The study gives support for two primary goals for ethics education that are consistent with accreditation standards and the code of ethics for nurses – developing the virtuous practitioner and developing the skillful, analytical practitioner. While the Carnegie Foundation Study has shown that nursing

holds both views as important, current educational practices reveal a different emphasis depending on the learning environment. The authors observed that formal curricula emphasize ethical issues, while the informal curricula of the clinical setting focus on the development of professional identity and attributes (Benner et al. 2010, 11; Benner et al. 2008, 475). The authors recommend that ethics instruction should include more than a focus on bioethics, principles and professional standards. They strongly encourage the development of ethical comportment, advocacy, social ethics and "good practice" (Benner et al. 2008, 475). Interestingly, the study includes nursing students' interviews that describe "good practice" as presence, meeting the patient as a person, preserving dignity, advocacy, improving competency and responding to substandard practice (476).

Despite the educational standards of accrediting organizations and the behaviors and skills identified in nursing codes of ethics, ethics education literature is skewed toward the development of critical thinking skills, ethical reasoning, and ethical problem solving (Gillam 2009). Gillam notes that this trend is also observed in ethics curricula in the health professions in general. Curricula are heavily weighted with content on ethical theories, principles, fundamental concepts (autonomy, patient rights), confidentiality, informed consent, problems in end-of-life care, and a laundry-list of special ethical topics related to reproduction, genetics, transplantation, euthanasia, research ethics and so on (Gillam 2009).

More recently, though, nursing literature reveals a renewed call for a virtue-ethics approach to ethics education. This is attributed in part to the growing recognition of an ethic of care in nursing based on the ethical relationship of the nurse and patient, which undergirds nursing practice (Gillam 2009; Johnstone 2009). Assessing ethics education,

Gastmans claims that what is needed is "an *attitude*- versus an *action*-focused ethics education" (2002, 500, emphasis added). He argues that actions are the result of a virtuous stance; that is, virtue is necessary to "do the right thing" (501). Woods (2005) summarized research on nurses and reports that although many are able to identify ethical problems, they are passive in ethical situations because they lack moral confidence and moral courage, are uncertain, and may experience moral distress. It is probable that preparing nursing students to be oriented toward virtuous behavior might strengthen the moral courage needed to face ethical challenges.

Internationally, there is also a trend to emphasize virtue over skill. The Global Ethics Observatory (GEObs), an initiative of UNESCO, provides a database of ethics programs and curricular materials from educational programs around the world (ten Have 2008, 58). Standardized information on ethics programs from member states is gathered and entered into the database, thus providing information on goals of ethics education in programs across the world. Ten Have, past director of UNESCO, observes that the database reveals that Central and Eastern European countries tend to emphasize virtues and values more than analytical skills (pers. comm.). This is in contrast to the review of formal medical and nursing ethics curricula in the United States that tend to put emphasis on ethical principles and analytical skills.

Additionally, it should be noted that there are fewer explicit means in place in both medical and baccalaureate nursing curricula for education on the development of professional virtues. Several explanations are offered to address this. Faculty in schools of medicine and nursing are in disagreement about the relevance and effectiveness of measures to nurture professional virtues and values (Eckles et al. 2005). Some ethics

educators believe that the virtues of students are set and cannot be further developed (Miles et al. 1989). Others observe that virtues and values have been difficult to control and to evaluate (Sellman 2007). Yet, the value of virtue-based instruction and its significance for medical and nursing students are sustained through the standards and guidelines of medical and nursing programs. Moreover, the professional organizations specifically address the virtues of the nurse and physician. The contribution of virtues to the ethics education of nurses and physicians will be argued in Chapter Three. It is important, however, to note at this point that ethics education can be effective in the development of virtues, for example, in developing prudential reasoning (Begley 2006), ethical sensitivity and a caring attitude (Callister et al. 2009; Vanlaere and Gastmans 2007).

iv. Short-term and Long-term Goals of Ethics Education

The assessment of ethics education in medicine and nursing, as outlined in program standards, codes of ethics, and as reflected in customary educational practices, yields short-term and long-term goals. Short term and/or intermediate goals aim to introduce and nurture professional virtues, values, attributes and behaviors in order to produce a beginning nurse or physician who is compassionate, reflective, honest, and more sensitive to ethical problems. Short-term goals include producing a practitioner who respects patient values, practices with integrity and is competent in communication and interaction skills. Furthermore, short-term goals are orientated towards creating a healthcare professional who is better able to apply ethical principles, identify and analyze problems, employ an ethical process and framework and assist patients and others in the decision making process. While medical students and baccalaureate nursing students are

generally exposed to wider community and societal issues and able to recognize ethical issues in social justice and distribution of resources (UNESCO 2008), program outcome goals do not require competency in these areas.

Long-term goals, on the other hand, focus on improving patient care (ASBH 2006; Pellegrino, Siegler, and Singer 1990; UNESCO 2008). As the professional codes of ethics for both nurses and physicians also indicate, the aim of developing excellence as a healthcare professional is ultimately for the benefit of the patient. Individually, medical and nursing students who practice with professional virtues, respect values and demonstrate sensitivity to ethical concerns have the capacity to produce a positive effect on the practitioner-patient relationship. In addition, individual students and practitioners who are better able to identify and analyze the ethical problems that arise may produce positive outcomes for patients, protect the dignity of the patient and prevent ethical harm (Pellegrino, Siegler, and Singer 1990). It is reasonable to contend that ethically practicing nurses and physicians also have the capacity to contribute to other long-term goals of ethics education. Ethics education can produce long-term goals aimed at improving work environments, enhancing organizational ethics and promoting the integrity of the medical and nursing professions. Ethically sensitive and skilled physicians and nurses can act as agents of change, creating an environment that supports the ethical behavior of others (AACN 2008), enhancing the image of the profession and the public's trust (UNESCO 2008), improving the ethics quality of the healthcare organization, enhancing the perception of the institution, and maintaining competency in the profession by reporting deficient practitioners (AMA 2001). In theory, ethically skilled practitioners also have the

capacity to reduce litigation by preventing ethical harm, thus improving their welfare and that of the institution.

Medical and nursing curricula focus chiefly on individual patients; likewise, the short-term goals of ethics education within these programs tend to focus on improving the learner or practitioner in his or her relationship with individual patients and their families. The reach of these goals predominately affects issues that arise in the "microethical" level (Parker 1995, 308) of the nurse-patient or physician-patient relationship rather than on issues larger in scope, such as social justice issues. These individualistic goals are critical, however, in advancing the overarching and ultimate goal of ethics education – to improve the quality of care for patients (ASBH 2006; Pellegrino, Siegler, and Singer 1990; UNESCO 2008).

v. Quality of Care

The review of accreditation standards and curricula in ethics education reveals largely practitioner-focused goals. This dissertation argues that while goals to improve the individual practitioner are essential and indispensable, the fundamental goal of ethics education remains to improve the quality of care for patients. The curricular goals to produce virtuous healthcare practitioners and to produce competency in ethical analysis are critical in advancing this ultimate goal. Furthermore, while skills in analysis are very important in achieving quality care, the attributes of the individual practitioner who applies the skills are ultimately more influential in obtaining better outcomes (Pellegrino, Siegler, and Singer 1990). Likewise, achievement of the long-term goals that are

identified above is dependent upon the attributes of the individual practitioner. This position will be fully developed in Chapter Four.

Quality of care can be viewed and evaluated from several perspectives. In brief, three perspectives are presented in the literature – the patient, professional, and policy perspectives. Recent quality measures related to the professional perspective include patient-centered care and shared decision making, which promote patient autonomy and are assumed to lead to better patient care (Grol 2001). It would seem that reaching success with practices that place more autonomy on patients requires healthcare professionals who have carefully come to know their patients, are open to dialogue, compassionate and empathetic. This requires development of a virtuous healthcare professional. The research of Grol is in medicine, but it is applicable to nursing as well as to other healthcare professions. The professional perspective of quality of care assesses appropriately applying standards or guidelines to individual patients, which involves knowledge and skill, but also requires sensitivity to the patient's wants and needs, an open and trusting relationship, effective interpersonal skills, and prudential reasoning to effectively weigh the benefits and burdens of standard of care guidelines in individual situations. The professional perspective is also responsible for the development of guidelines and standards, a process that is potentially influenced by values and biases (Shaneyfelt 2001). To successfully negotiate appropriate care, the physician and nurse require more than cognitive and behavioral skills – they must possess professional virtues and attributes.

Perhaps even more relevant to this argument is the patient perspective of quality of care. The patient perspective is generally defined, assessed and measured as patient

satisfaction, although it may be more specifically measured by fulfillment of expectations (or needs) and experiences (Sixma et al. 1998). Improvement in quality of care from the patient perspective necessitates a prudent and ethically sensitive healthcare professional who can successfully fulfill the patient's expectations and provide a satisfactory healthcare experience. Successfully meeting this quality standard requires a healthcare professional who is caring, sensitive and able to develop a trusting relationship in order to identify and respond to the patient's expectations or needs. The successful professional must be prudent in order to negotiate care with the patient, respecting and responding to the patient as person. Improvements in quality of care from the patient perspective, therefore, require prudence, sensitivity, compassion and respect, among other attributes. These issues are the province of virtue-based ethics. It is here that ethics education can make a significant contribution to quality of care. This argument will be further developed in Chapter Three.

B. The Methods Applied in Ethics Education

i. Relationship of Goals to Methods

Designing ethics education activities requires an understanding of expected outcomes as well as understanding the nature or category of goals in order to select the most effective pedagogical methods. The above review of educational and professional standards, codes of ethics, and curricular practices reveals three categories of goals or domains of learning that are required for ethical practice – cognitive, behavioral and affective. Cognitive goals include knowledge of ethical theory, principles, codes, moral reasoning skills, ethical decision making frameworks and analysis skills, values, virtues

and responsibilities, and other ethical issues or content common to medical ethics (see Miles et al. 1989 for specific content) and nursing ethics curricula (e.g., informed consent, confidentiality, withholding and withdrawing treatment) (AACN 2008). Behavioral goals include interactive or communication skills important in developing relationships with patients, families and other healthcare professionals and also process skills in ethical analysis, ethical decision making and management of ethical conflicts. Behavioral skills allow practitioners to "put their knowledge to work in everyday clinical encounters" (Pellegrino, Siegler, and Singer 1990, 177) such as explaining end-of-life considerations, advocating on behalf of the patient or breaking bad news. Affective goals represent attitudes and attributes (i.e., professional virtues, character traits) such as compassion, caring, interest, sensitivity, honesty, integrity, patience, altruism and prudence. Professional attitudes and attributes promote trust, increase sensitivity to ethical concerns, aid in preventing moral harm, and create ethical working environments.

Cognitive goals have received more emphasis in medical and nursing curricula, namely because they form the foundation from which skills arise and are easiest to teach and evaluate. Behavioral goals have received growing attention in curricula, with many programs including instruction on interactive and communication skills in the early years of their programs. Attitude formation in the development of virtues and values of the professional, while mentioned in all accreditation standards and a significant component of the codes of ethics in medicine and nursing, has received less attention in ethics curriculum programming as noted in the previous section (Eckles et al. 2005; Miles et al. 1989; Sellman 2007). Yet, as Pellegrino, Siegler and Singer observe, "ethics requires that the physician be a person of character, one who can be expected habitually to act in the

patient's interests when no one is watching" (1990, 177). This entails that adequate educational effort be directed to affective outcomes in order to produce virtuous physicians and nurses. This has been argued equally in nursing (Fry 1989) and will be further developed in Chapter Four on virtue-based ethics.

Review of the literature shows much discussion on the most effective means to teach ethics in medical and nursing programs. Students require both knowledge of ethical theory, values, professional virtues, decision making frameworks, and so forth, and also experience in developing professional virtues, interactive skills and management of ethical problems to promote competency in ethics. Educational strategies to attain the different types of goals require a variety of instructional methods (Campbell, Chin, and Voo 2007; Miles et al. 1989). In medical schools and baccalaureate nursing programs, formal teaching approaches range from traditional to nontraditional methods and didactic to interactive measures. Each teaching method has associated advantages and disadvantages and is better suited for the attainment of particular categories of goals. It follows then that it is important for the ethics educator to select an approach that is best suited to the desired outcome.

ii. Traditional Methods

Traditional teaching methods primarily include lecture, small group discussion and case study analysis or a combination of these approaches. As Goldie (2000) notes, early ethics courses in medicine were taught by moral philosophers and theologians who focused on cognitive goals; therefore, lecture was the predominant pedagogical approach. Fox, Arnold and Brody observe that traditional approaches in ethics teaching tend to

stress the "process of moral deliberation more than its conclusions" (1995, 762). Lectures, however, remain an important instructional method (Fox, Arnold, and Brody 1995; Rosoff 2011; Woodring and Woodring 2011). Many medical programs have developed ethics curricula that provide formal instruction through lecture presentations in the first two years of the program, prior to clinical experiences, which sets a foundation of knowledge necessary for the development of behavioral and affective outcomes (Lehmann et al. 2004). Lectures can be an appropriate means to accommodate teaching larger groups of students and are efficient to communicate foundational concepts, such as ethical theory, ethical principles, communication theory and so forth. Didactic methods such as lectures or presentations may provide some opportunity for dialogue and reflection, yet these methods tend to be fact-based and driven by the teacher. They are useful in conveying complex content, however, such as ethical theory, and create a base for future experiences. Many medical schools employ lectures, as is evident in reviews of medical ethics curricula in the United States (DuBois and Burkemper 2002), the United States and United Kingdom (Lehmann et al. 2004) and in the United Kingdom (Mattick and Bligh 2006). Lehmann et al. (2004) surveyed the ethics curricula of the medical programs in the United States and Canada at the turn of the twenty-first century and found a variety of pedagogical methods for ethics instruction; however, the authors observed that the majority of instruction was in lecture and/or small group discussion. They reported that case discussion was used most often within ethics courses, with less use of reviews of empirical articles, moral philosophy and literature/humanities. Dubois and Burkemper's survey of medical schools in the United States revealed the frequency of inclusion of specific teaching methods (via rank-ordering) and also found a

predominant use of traditional methods with discussions/debates (84.5%), readings (82.8 %), writing exercises (63.8%) and lectures (63.8%) used most often (2002, 434).

Many schools have adopted a model in which content is conveyed through large group presentations that are followed by small group discussions (Fox, Arnold, and Brody 1995; Lakhan et al. 2009; Lehmann et al. 2004). Small group discussions are used regularly to allow dialogue and reflection on the topics. Students appreciate discussion sessions as a secure space to "examine their own moral viewpoints and emotions in supportive environments" (Charon and Fox 1995, 767). Small group discussions are also integral to Problem-Based Learning (PBL) strategies, which have been instituted in many medical schools and other health-related programs (Cordingley et al. 2007; Parker 1995; Solomon 2011). Some schools employ PBL to teach medical ethics, finding that "meeting a variety of views in a friendly atmosphere will stimulate critical scrutiny of students' settled ideas" (Parker 1995, 308). Mattick and Bligh's (2006) report on medical ethics education in the United Kingdom revealed that educators preferred teaching small groups but felt that lectures were a sufficient method for particular topics.

Case study analysis has emerged as an important teaching method for medical and nursing students and is relied on heavily in ethics teaching. Lehmann et al. (2004) report that this method is used most often in medical ethics courses. Case analysis, like lecture and/or small group discussion, is also useful for reaching cognitive goals in ethics teaching and bringing out the complexity of moral dimensions in health care. Case discussion has the advantage of helping students understand the practitioner's moral agency and apply learned theory (Miles et al. 1989). Charon and Fox report on students' suggestions for ethics teaching and recommend exploration of the "intricacy, ambiguity,

and pluralistic differences" that present in ethics (1995, 767). Case analysis is useful here. Cases may be of sensational quality or everyday ethical problems, hypothetical or actual, teacher or student-generated (Southgate et al. 1987) but should preferably be relevant to students' current experiences (Charon and Fox 1995). Case study discussion is useful in advancing both cognitive and behavioral skills needed for critical reasoning and analyzing ethical problems. Fry (1989) recommends case study presentations with small groups of nursing students, finding this beneficial in helping students recognize the values of the patient and nurse, analyze moral problems and identify the nurse's role in ethical decision making. Moreover, Campbell, Chin and Voo (2007) observe that case study analysis can also assist students to reflect and develop empathy and sensitivity to ethical issues. The authors recommend case analysis as a means to teach the affective domain and also to assess the student's moral development.

iii. Nontraditional methods

Nontraditional methods have been introduced over the years, and along with group discussions and case analysis, they are favored because many of these approaches engage students in active learning, an approach favorable to adult learners (Woodring and Woodring 2011). Nontraditional methods may incorporate the use of literature, poetry and media, such as film and art to "stir the moral imagination," as Callahan recommends (1980, 65) and provide opportunity for reflection and discussion. Commercial films, such as *Wit* and *Miss Ever's Boys*, documentaries such as *The Suicide Tourist* (PBS Frontline), and interactive multimedia, for example, *A Right to Die? The Dax Cowart Case* (Anderson, Cavalier, and Covey 1996), expose students to challenging ethical situations

and raise theoretical and affective perspectives. Films, accompanied by discussion, may be useful for developing empathy and sensitizing students to challenging ethical problems (Fox, Arnold, and Brody 1995). Many documentaries also provide instructor guides to assist in developing group dialogue and critical reasoning skills.

Other nontraditional methods have advantages in developing knowledge, skills and attitudes. Student portfolios, case studies with reflection, development of case scenarios (Campbell, Chin, and Voo 2007) and reflective writing (Callister et al. 2009) have been used to nurture students' ethics competencies. One medical school reports enhancing ethics education with the integration of scholarly projects and elective coursework in ethics (Kanter, Wimmers, and Levine 2007). Games, panel discussions, debates, and quiz shows formats have been used (Fox, Arnold, and Brody 1995) and can help to develop critical reasoning skills. Nontraditional teaching methods also include interactive computer programs (Fleetwood et al. 2000) and online instruction (Stoddard and Schonfeld 2011). Other schools incorporate ethics clinical conferences, post-clinical debriefing sessions and ethics grand rounds (Lakhan et al. 2009; Pellegrino, Siegler, and Singer 1990), but it should be noted that these are often not part of the formal curriculum.

Teaching for the behavioral and affective domains of learning particularly benefits from active, experiential methods. Presently, ethics literature supports teaching-learning activities that are better suited to these goals, such as role play (Fox, Arnold and Brody 1995; Garrett 2010; Lakhan et al. 2009), the use of standardized patients or actors (Litzelman and Cottingham 2007) and interviews. One program demonstrates an unusual way to provide students with practical experience by placing "unannounced" standardized patients in outpatient clinics to provide practice in managing ethically

challenging situations and to assess a student's performance as well (Litzelman and Cottingham 2007, 416). In addition to providing active learning, these methods present important practice opportunities for students to experience the emotions and feelings that accompany ethical situations as well as to develop relevant skills. Students are unaware that the interaction is an educational exercise, however, and one can rightly question the integrity of this approach. Nonetheless, in order for a medical student to compassionately and effectively "break bad news" or for a nursing student to successfully advocate for a vulnerable patient, students must develop a compassionate and sensitive orientation and possess an understanding of their role and responsibilities and the process and skills involved. Students also need a degree of proficiency with critical reasoning and communication skills to perform effectively. Practice opportunities with standardized patients or patient actors present students with needed opportunities to develop ethics competencies in safe, supported environments, avoiding risk for actual patients.

Many of the above mentioned active learning methods have been available for the past decades but have been used less frequently than group discussions and case study analysis. Dubois and Burkemper's (2002) survey reveals the following in a rank ordering of nontraditional teaching methods: multi-media presentations (29.3%), role playing/standardized patients (20.7%), clinical round/field visits (19.0%) and computer exercises (10.3%) (434).

The most recent method introduced to teach healthcare ethics is simulation. In brief, simulation involves the creation of a reality-based setting in which students engage with actors, standardized patients or high- or low fidelity mannequins to work through a teaching exercise, as a practice, assessment or evaluation session. Chapter Five focuses

solely on simulation as a teaching method and explains it in more detail. It is important at this point, though, to clarify the differences between role play, mentioned above, and simulation. Some commentators use role play and simulation interchangeably, or see role play as falling on a continuum of simulated exercises, but there are significant and meaningful differences. Jones (1995) describes the subtle distinctions between these methods. In a role play activity, he submits that the participants take on their assigned roles for which, in many cases, personalities and emotions have been provided (for example, an angry patient or a bullying physician). Participants in role play have authorship of the role; that is, they can create and expand upon the role, in effect acting the part (1995, 10). Participants work to perform the role convincingly. In a simulation, there is a concerted effort to develop an environment that simulates reality, but the participants do not simulate their personalities. Rather, they take on functional roles and strive to carry out their professional roles most effectively. While many individuals would distinguish simulation from role play by the simulated environment, Jones notes that "the thoughts and attitudes, and the emotions and behaviour, are the evidence for distinguishing between simulations and other interactive techniques" (12). Participants are inwardly focused as they work to develop the competencies expected in the professional role. "Play acting" is discouraged in simulation, and the results of the participants' actions are considered real (135). In a simulation, the participants are provided extensive background information about the event or activity, perhaps a patient's medical history or physical exam results and an opportunity to incorporate this into their work in the simulation. The student is immersed in a professional "functional" role during the simulation and awareness of learning may not occur until the debriefing

session that follows. The learning that occurs with simulation often happens in the debriefing session or at a later point, after time for reflection.

Simulation is employed frequently in medical and nursing programs to teach cognitive and psychomotor skills, but it has been less frequently used to teach ethics. Some medical programs have incorporated simulation using standardized patients to teach ethics concepts (Fleetwood, Novack, and Templeton 2002). In these simulations, the standardized patient has learned the expected role, does not veer from his or her assigned role and displays the same functional role in repeated situations. The environment is simulated (an examination room, for instance). Simulation-based activities have also been used to evaluate the ethical behavior of medical students, using the Objective Structured Clinical Exam (Singer et al. 1996). Yet, a review of the literature shows that there are only a small number of articles that illustrate its use in teaching ethics to medical and nursing students (Arnold et al. 1988; Edinger et al. 1991; Fleetwood, Novack, and Templeton 2002; Gisondi et al. 2004; Gordon and Tolle 1991; Gropelli 2010; Perlman 2008; Vanlaere, Coucke, and Gastmans 2010). The few studies that have been published focus on using simulation to teach ethical analysis, clinical skills (communication and interpersonal skills), the role and function of ethics committees, and less commonly, to teach professional virtues. This methodology strongly supports practice and experiential learning and will be argued in more detail in Chapters Five and Six.

iv. Other Pedagogical Considerations Related to Goals and Methods

The literature on the process and methods of ethics education reveals much discussion on the comprehensiveness of ethics education, including the relevant content

areas to include, the amount of time to dedicate to ethics education, whether it should be integrated into current courses or taught as a stand-alone course and who is best prepared to teach ethics content. In medicine, there is also significant discussion on the value of a standardized or uniform curriculum in ethics (Doukas, McCullough, and Wear 2010; Lakhan et al. 2009; UNESCO 2008).

These issues, while raising important process and methods concerns, are not expressly relevant to the thesis of this dissertation, and therefore, will only be briefly mentioned. It is important to the success of an ethics program that there is adequate time dedicated to ethics in the curriculum to allow for the development of ethics competencies. Another important consideration is having sufficient resources, such as adequate numbers of educators who are adequately prepared to teach ethics and sufficient financial support for labor-intensive educational approaches (Campbell, Chin, and Voo 2007). Ethics may be taught as a stand-alone course or integrated vertically and/or horizontally, and each approach has its advantages and disadvantages that are argued in the literature. Many ethics educators in medicine are working for the advancement of a uniform curriculum, which could assist in ensuring that all proposed goals of ethics education are more readily met. Lakhan et al. (2009) argue strongly for a standardized medical ethics curriculum and assert that it can benefit students and patients by increasing patients' trust in physicians, a measure of improved quality of care. Nevertheless, while these are valuable areas for research, the accrediting organizations have expressly declared the value of teaching professional virtues and attributes as well as ethical theory and skills and indicate that these should be taught explicitly as part of the curriculum. The guidelines and standards for ethics education in medicine and nursing provide clear directives that if effectively

instituted will help to ensure the development of ethically-sensitive, reflective and prudent practitioners.

C. Evidence of the Effectiveness of Teaching-Learning Methods in Ethics Education

It is important to review the teaching methods used in ethics education for their effectiveness in achieving the educational goals. Reviews of medical programs find no single favored method, and teaching methods vary according to the students' level in the program, moving from classroom to clinically-focused teaching (Dubois and Burkemper 2002; Eckles et al. 2005; Fox, Arnold, and Brody 1995; Lehman et al. 2004; Mattick and Bligh 2006). Many ethics teachers employ a variety of methods, pulling from the traditional and nontraditional categories, which is educationally appropriate since ethics curricula have many different objectives. Lectures are appropriate for factually-based theory, case studies and small group discussions are suitable to objectives that focus on analysis and developing sensitivity, and role-play and simulation have value for development of professional attributes, clinical reasoning, and interactive skills.

A summary of articles that review the effectiveness of specific teaching methods is included below. Many of the studies employ surveys that assess students' satisfaction with a teaching strategy or students' perceived learning (Kyle 2008). In theory, teaching methods can be evaluated for their effectiveness in meeting students' learning needs or their effectiveness in improving knowledge, skills (in moral reasoning, analysis, communication, for example) or attitudes and attributes (nurturing professional virtues and values), but few studies have attempted to measure the impact of ethics education on the student's behavior. Those that do are included below and reflect changes in moral

reasoning (Self, Wolinsky, and Baldwin 1989), ethical awareness (Goldie 2001), and improvement in ethical analysis (Callister et al. 2009; Smith et al. 2004), for instance. Improvements in moral reasoning have been identified following ethics education; however, the results measure skill sets in hypothetical situations, typically as students respond to case studies (Smith et al. 2004). Empirical studies can also be performed to measure the effectiveness of a particular teaching method in meeting students' learning needs or to gauge the effectiveness of the ethics curriculum overall in producing favorable outcomes (Sulmasy and Marx 1997, for example). There is a lack of consensus in the literature about which outcomes should be measured (Fox, Arnold, and Brody 1995). Theoretically, teaching methods could also be evaluated for their effectiveness in helping to achieve the long-term goals of the curriculum, for example, improving patient outcomes, but this task has proven difficult for ethics educators. No empirical studies were found that revealed the effect of ethics education on patient outcomes (Siegler 2001), although there is anecdotal evidence to suggest this potential (Gropelli 2009; Vanlaere, Coucke, and Gastmans 2010).

It is essential, though, for evaluation methods in ethics education to align well with the goals or objectives of teaching. For instance, to meet a goal to improve the understanding of ethical theories, a written test is an appropriate measure. To attain a goal to develop ethical analysis or decision making, many teachers would consider having students evaluate a case study and employ an ethical framework for analysis in writing or verbally discuss their approaches to the case. A more suitable evaluation method, however, might be a simulation-based exercise in which a student works through a simulated experience and is evaluated on demonstrated behaviors and skills in managing

the ethical situation. Additionally, to achieve a goal to develop professional attributes and virtues, simulation may be employed to allow faculty to observe and evaluate the student's performance in a simulated setting.

As noted previously, these evaluation methods measure students' learning at a particular moment, often in hypothetical situations, and are limited in their ability to predict future behavior of students. The scarcity of evidence for many of the approaches used in ethics education is an area that is ripe for study. Following are examples of some of the evidence on effectiveness of commonly used teaching methods in ethics education. Chapters Five and Six will examine the evidence that is available on simulation as a teaching method in health care and in health care ethics education.

Evidence of the effectiveness of small group discussions and use of case study analysis has been favorable and may account for the extensive use of these methods. In an influential study by Self, Wolinsky and Baldwin (1989), researchers sought to demonstrate the effectiveness of teaching medical ethics and the relative benefits of two methods, small-group case-study method and lecture method. A control group was used, which received no ethics instruction. The value of ethics education was assessed by its contribution to the moral reasoning of medical students as measured by the Sociomoral Reflection Measure (SRM) test. The study found that ethics instruction contributed to a statistically significant improvement of moral reasoning ($p \leq .0001$) in both the small-group case-study method and the lecture method groups when compared to the control group. Furthermore, when the two instructional methods were compared, students in the small-group case-study method had a statistically significant increase in scores than did

students in the lecture group ($p \leq .03$), demonstrating the advantages of the small-group case-study approach (757).

In a later study, Goldie et al (2001) compared the effectiveness of small group case discussion sessions to large group lecture format to achieve medical ethics education goals to increase first year medical students' awareness of ethical issues and to nurture self-awareness. The small groups also participated in seminars and sessions with experts in ethics and legal issues. The study used the Ethics and Health Care Survey Instrument (an adapted version) to measure the students' agreement with consensus views on ethical issues and observed that students in the small group discussion sessions had stronger agreement with consensus groups than the lecture format group. The authors concluded that the smaller group sessions promoted "normative identification with the profession of medicine" (301).

In a study of third-year medical students, Smith et al. (2004) compared the effectiveness of written case analysis alone to written case analysis with a group discussion and observed an increase in the ability of students to identify and assess ethical problems regardless of the teaching method used. Students who participated in the group discussion, however, experienced improvement in a final case analysis and also reported a greater increase in satisfaction with the ethics education sessions. The authors note the importance of demonstrating improvement in outcomes and positive feedback in light of the increased time and effort associated with facilitated group discussion sessions.

Southgate et al. (1987) illustrated the benefits of using an interactive, student-centered approach to ethics instruction. Rather than analyze cases that were assigned by the faculty, medical students developed their own ethics cases for presentation in ethics session, using a provided framework for the development and analysis of the cases. The authors note that the cases reflected the students' experiences and interests and generally included common, recurring issues.

Teaching allied health students, Stoddard and Schonfeld (2011) compared online ethics instruction to traditional classroom teaching. The authors provided identical content and resources for students in an online course and a traditional face-to-face course. The courses only differed in that students in the online course posted responses to an asynchronous online discussion board to earn points, while students in the traditional classroom earned points through live discussions. The study showed no difference in the participation between the two groups. Although the study authors expected to find lower outcomes on writing assignments in the online student group, the results showed that online students performed better on the assignments. The authors attributed the finding, which they did not expect, to demographic characteristics of the students. The online students tended to be older, nontraditional students and perhaps more self-directed. Ethics educators interested in evaluating online ethics instruction for medical or nursing students might find it interesting to repeat this study.

In a qualitative descriptive study on reflective journaling, Callister et al. (2009) found this teaching method to be effective in capturing ethical reasoning in nursing students. Students were asked to identify, describe, analyze and reflect on ethical problems that they encountered in their clinical experiences. Students received

foundational ethical knowledge to aid in the assignment. The authors assessed the reflective journals for the students' level of reflection and analyzed the themes. The results showed a high level of commitment to nursing and a high level of critical thinking ability. Callister et al. found that teaching ethics by reflective journaling was an effective teaching method to meet goals of increasing ethical sensitivity, critical thinking and ethical reasoning.

A qualitative study by Kyle (2008) evaluated the effectiveness of anonymized reflection as a method to teach ethics to nursing students. This teaching method consisted of anonymously written summaries of actual clinical experiences, which students share within a small group. Each group participant randomly selected a case summary and anonymously reviewed it, employing an ethical framework in the process. The group then discussed the anonymous reflections and reached a consensus decision, mimicking actual clinical practice. The qualitative study measured the students' perceptions of the teaching method on achieving learning outcomes. All students rated the learning experience as relevant and felt that their knowledge had increased, but the anonymized reflections were not highly rated, leading the researchers to conclude that the students felt that learning took place in the discussion segments. The author acknowledged the study's limitation because of the subjective nature of evidence, but points out that the experience was an "exciting and relevant way of teaching and learning ethics" (2008, 14).

Peer-tutored problem-based learning was evaluated for its effectiveness in comparison to conventional teaching ethics to senior nursing students (Lin et al. 2010). Although the problem-based learning (PBL) method has been used in medicine for many years, it is fairly new to nursing education. It involves teaching from real problems,

includes group discussion and differs from conventional teaching in that it is student-generated. This study employed peer tutors as group discussion leaders rather than expert tutors. There was a statistically significant difference between the ethical discrimination scores of the PBL and conventional method groups, with higher scores in the PBL group. Both groups showed statistically significant improvements in the ethical discrimination scores from their pre-intervention scores; however, this study showed the PBL group to be a more effective teaching method (379-380). The PBL group also scored significantly higher than the conventional group in self-motivated learning and critical thinking.

Some empirical studies have focused on the overall curriculum rather than on particular teaching methods. For instance, an early study by Sulmasy and Marx (1997) conducted in 1992-1994 with medical house officers (residents) evaluated the long-term effects of a two-year ethics program that included monthly ethics reports and scheduled didactic conferences. The authors provided an integrated curriculum with opportunities for house officers to analyze ethics cases that were of concern to them. The study assessed for improvement in knowledge, confidence and attitude following the two-year curriculum. The study showed a statistically significant increase in knowledge scores, which improved 14% on average and an increase in confidence (89). Confidence levels increased in the ability to recognize ethical problems, form and justify ethical decisions, obtain informed consent and so on. Interestingly, the study showed that knowledge and confidence tended to go up together (91). With one exception, attitudes did not change significantly; the proportion of residents who felt that ethics should be required during residency increased, however, from 57% to 80% (90).

D. Conclusion

In summary of this chapter, the review of relevant sources reveals that while there is no consensus on the goals of ethics education, there is agreement on the essential importance of ethics education for the developing nurse or physician. The review shows that there are two goals of ethics education that have emerged– that of developing the professional virtues and that of developing ethical analytical skills. Short-term goals tend to focus on developing the ethics competencies of the individual student in relationship to the patient. Long-term goals focus more broadly on communities and larger social issues. The overarching goal of ethics education that drives these important objectives is to improve the quality of care for patients. The review of current methods for instruction in ethics reveals while there is no teaching-learning methodology that emerges as exclusively the best method, it is important to chose methods that best meet specific goals. There is growing support for incorporation of nontraditional methods to teach ethics and methods that actively engage the learner in critical thinking and reflection. Simulation's benefits as an engaging, active and reflective practice will be demonstrated in Chapters Five and Six, showing it to be advantageous as a method for ethics instruction.

Chapter Three – Improving Quality of Care as a Fundamental Goal of Ethics Education

A. Quality of Care Defined

As Chapter Two has established, the ultimate goal of ethics education is to improve the quality of care for the patient. Just as the goal of medical and nursing education, in general, is directed to improving patient care, the goal of ethics education is for the betterment of the patient. To reach this goal, there are short-term or interim goals in ethics education that must be met, which focus on the knowledge, skills and behaviors that are essential to ethical practice. For instance, physicians and nurses must develop and exhibit professional virtues, attain knowledge essential for ethical analysis, and develop skills in ethical decision making in order to best meet the patient's needs and to avoid engaging in ethical harm. The long-term goal of ethics teaching to enhance the quality of patient care is aided by the attainment of these short-term or intermediate goals. In addition, nurses and physicians have an ethical responsibility to improve the quality of care for patients, which is made clear in professional codes and accrediting organizations' standards as presented in the previous chapter. Nurses and physicians are obligated to provide benevolent, ethically-sensitive, competent care that appropriately balances risks and benefits to promote optimal health for patients.

The relationship of ethics and quality of care is reflected in the definition of quality of care. Quality of care can be defined by the nature of care and the characteristics of care delivery. It can also be described from the different perspectives of stakeholders. In addressing the first sense of quality of care, Brook, McGlynn and Shekelle identify

two central components. The first element is "providing care of high technical quality …[such that] the patient receives only the procedures, test, or services for which the desired health outcomes exceed the health risks by a sufficiently wide margin; and that each of these procedures or services is performed in a technically excellent manner" (2000, 282). This component of quality care addresses the nature of the care received and stresses that quality care consists of more than highly competent care; it requires the prudent weighing of risks and benefits. The inclusion of the phrase "the patient receives only the procedures or services…" in the definition also recognizes the importance of resource allocation and justice issues in the provision of care.

The second element of quality of care acknowledges, "that all patients wish to be treated in a humane and culturally appropriate manner and be invited to participate fully in deciding about their therapy" (Brook, McGlynn, and Shekelle 2000, 282). This component emphasizes the characteristics of the provider, calling for respect, cultural competency, and patient-centered care that engages the patient in decision making. It underscores the relational aspect of health care and the significant role that professional virtues and values play in the delivery of quality of care. Patient-centered care is an important aim of ethics in that it respects the patient as a person, "placing the patient at the center of the provision of care" (Grol 2001, 2582). It necessitates empowering the patient and respecting the patient's autonomy, a fundamental principle of ethics.

Quality of care has also been defined from the different perspectives of the stakeholders who interface within medical settings. In a broad sense, quality of care can be defined from the perspectives of the patient, the healthcare professional and the policymaker (Grol and Wensing 1995). The perspectives of additional stakeholders such

as payer organizations, and aggregates such as communities, organizations or specific patient populations may also be included in quality of care evaluations. For the purposes of this dissertation, only the perspectives of the patient and healthcare professional will be reviewed. Undoubtedly, the contributions of individual experts, groups and organizations in medicine and nursing are essential in establishing policies that directly influence patient care outcomes, for example, setting state-mandated nurse-patient staffing ratios in California (Serratt et al. 2011) and advising and collaborating in health care reform (AMA 2012; ANA 2012). The emphasis of this dissertation, however, is on the ethics education of medical and nursing students as novice practitioners; therefore, while the dissertation may make mention of the importance of this stakeholder perspective, the policymaker perspective on quality of care involves issues more suited to a discussion of organizational ethics, which is beyond the purview of this research.

As discussed in Chapter Two, ethics education bears a strong relation to the patient perspective, a quality measure that is generally gauged by patient satisfaction regarding expectations and experiences (Sixma et al. 1998). Although the patient perspective has been studied extensively and defined by many experts, Campbell, Roland and Buetow provide a useful operational definition of the patient perspective on quality of care as "whether individuals can access the health structures and processes of care which they need and whether the care received is effective" (2000, 1614). This definition identifies two areas– access and effectiveness of care– that are essential components of quality of care from the patient perspective. Access includes items such as geographic and physical accessibility, the availability of facilities and services, and affordability of health care (Campbell, Roland, and Buetow 2000). While access is certainly an important

aspect of quality of care, it is not directly relevant to the concerns of this investigation. Effectiveness of care, however, is highly relevant when considering quality of care from the patient perspective, and its parameters will be discussed here.

Campbell, Roland and Buetow (2000) characterize the effectiveness of care in two domains- clinical care and interpersonal care. In the conceptual framework that the authors develop, they maintain that both domains are equally important in the quality process. Healthcare professionals are highly engaged, and therefore, highly influential in both the clinical and interpersonal care of the patient. The knowledge, behavior and attitudes of healthcare professionals, therefore, will have a significant effect upon patients' views of the care they receive. It would follow that improving the professional's competencies in these areas should significantly improve the quality of interpersonal care and clinical care as measured from the patient's perspective. This understanding reinforces Brook, McGlynn and Shekelle's definition of quality of care - to be treated humanely, with culturally appropriate, patient-centered care. Interpersonal care necessarily involves sensitivity and respect along with effective communications skills in order to successfully attend to the psychosocial needs of the patient and develop an effective, therapeutic patient-provider relationship. The practitioner must develop trust, convey empathy and obtain and relay information successfully (Campbell, Roland, and Buetow 2000). The patient perspective, therefore, underscores the central role of ethics in the quality of care. Achieving high levels of quality in health care means that professionals need to acquire certain virtues and attributes, such as sensitivity, integrity, empathy, respect and prudence. Consequently, enhancing the virtues and attributes of the professional through ethics education can in turn effect desirable improvements in quality

of care. In other words, ethics education is a crucial step in the direction of providing quality care to patients. This will be examined further in Section C.

It is also important to consider the professional's perspective as a stakeholder in quality of care assessment. The professional perspective includes variables such as setting standards of care and employing evidence-based guidelines (Grol 2001). While the goal of evidence-based guidelines is to ensure best practices, the guidelines are general approaches and not required treatment formulas. For that reason, selection and implementation of guidelines require the professional's experienced interpretation regarding the suitability for individual patients. Interestingly, Grol (2001) observes differences in the professional perspective across the globe, noting that despite the availability of similar research findings, the interpretation of research may vary widely in diverse countries, leading to different recommendations for the treatment and management of patients' problems.

To illustrate the significance of the professional perspective in defining quality of care and also the role of the professional in shaping quality care outcomes, it is helpful to use a recent example from medicine. The latest treatment guidelines for thrombotic therapy demonstrate the need for the practitioner's prudential judgment and expertise in applying the recommended standards (Guyatt et al. 2012). These recommendations have been developed to address a wide range of patient situations, and yet the practitioner's careful consideration remains critical in weighing the benefits and risks of treatment and prevention of thrombosis for individual patients in clinical settings. Various factors strengthen or weaken the need for the recommended protocols, while patient preferences

regarding medication therapy and associated risks also significantly influence the type of treatment, if any, that is initiated.

The process of formulating the standards was also conducted with care. In establishing a panel of experts to formulate the treatment standards, the Executive Committee of the American College of Chest Physicians (ACCP) took into consideration the likelihood of panelists' personal biases and conflicts of interest as potential influences in the formation of the guidelines. To manage this, the committee carefully screened the potential panelists for their financial relationships with external agencies (pharmaceutical companies, for example) and, for the most part, excluded participants who held significant financial conflicts of interest. The ACCP was also careful to prohibit participants with intellectual conflicts of interest from voting on the proposed guidelines (Guyatt et al. 2012). Intellectual conflicts are those viewpoints that arise from academic work, such as research or publications, which would unfairly influence and bias participants' opinions on the guideline recommendations (Guyatt et al. 2010). The ACCP developed a method to both engage the opinions and expertise of professionals with conflicts of interest but at the same time safeguard the final recommendations from undue bias. As a result, experts with conflicts of interest were able to present and review research findings, but they were prohibited from discussions that would influence the voting committee members (Guyatt et al. 2010). Additionally, the ACCP took into consideration sociocultural concerns when formulating the thrombotic therapy guidelines. The ACCP addressed this concern by including "health economists and experts on patient values and preferences" among the committee members in a concerted effort to address "issues related to resource allocation and variations in patient management related to

individual and societal norms" (Metersky and Nathanson 2012, 285). As a result of its approach to formulating recommendations for therapy, the ACCP constructed guidelines that were sensitive to particular groups and acknowledged the need for individualization in setting treatment plans for patients.

As the above example illustrates, evidence-based guidelines are subject to interpretation by health care practitioners and may be influenced by personal and sociocultural values (Grol 2001; Shaneyfelt 2001). In selecting and applying the recommendations, practitioners require an appreciation of the patient's understanding of his or her own needs, a practice that is consistent with patient-centered care, rather than a broad and general application of standards (Campbell, Roland, and Buetow 2000; Naylor 1995). This requires skillful communication that sensitively and effectively uncovers the patient's wishes and needs, respecting the patient's autonomy. As Naylor efficiently summarizes, "even good evidence can lead to bad practice if applied in an unthinking or unfeeling way" (1995, 841). The expert, prudent judgment of the professional is integral to successful utilization of any guideline.

The professional perspective of quality of care requires a delicate balancing of the practitioner's judgment of the best course of action, the patient's values and wishes, and cost considerations (McGlynn 1997). Despite efforts to take into consideration many patient variables, formulated guidelines can never fully address the complexity of patient situations; therefore, decisions are often challenging (Grol 2001). Practitioners need to be aware also that while many guidelines arise from high-quality research with a high confidence level, recommendations may also follow from lower-quality evidence or may result from bias and "vested interests of specific parties or industries" (Grol 2001, 2579).

Decision making in this context requires clinical competency, ethical awareness of the potential problems, excellent communication skills, and professional virtues, such as prudence and integrity, to achieve an optimal outcome. Practitioners also need to be sensitive to their own values and potential for bias as well as possible conflicts of interest in selecting the optimal treatment plan for patients. Ethics education, therefore, can positively shape the professional perspective of quality of care by preparing healthcare professionals with the knowledge, behavior and attributes essential to ethically develop, select and apply the most beneficial standards or guidelines for quality patient care and develop patient-centered approaches to care.

Surveys of patient-provider interactions and variables such as patient satisfaction, compliance and recall have been traditionally conducted to gauge the effectiveness of the patient-provider relationship (Hall, Roter, and Katz 1988). These surveys provide an indicator of quality of care from the patient perspective (Barnes et al. 1995; Davidson and Mills 2005; Hall, Roter, and Katz 1988). A meta-analysis by Hall, Roter and Katz (1988) evaluated medical encounters and patient outcome measurements and identified specific provider behaviors that are more consistently associated with measures of increased patient satisfaction. The meta-analysis found that factors such as the amount of information provided, positive nonverbal communication, positive talk, partnership building, and technical and interpersonal competence have been correlated with increased patient satisfaction (666). Among the variables included in the studies, patient satisfaction was more consistently related to the amount of information given, with more information contributing to increased satisfaction. Greater sharing of information was also associated with increased compliance (661). There was also a relatively large

positive association between patient satisfaction and interpersonal competence of the provider (663). A second meta-analysis by Hall and Dornan (1988) rank-ordered aspects of patient satisfaction, identifying how satisfied patients are with particular correlates of care. The meta-analysis of 107 articles revealed that higher patient satisfaction was associated with the overall quality of care, humaneness ("warmth, respect, kindness, willingness to listen, appropriate nonverbal behaviors, and interpersonal skill"), and competence of the care provider (936-937). Interestingly, the analysis revealed that certain aspects of care such as humaneness and "informativeness" (related to diagnosis and treatment) were more frequently assessed in patient satisfaction studies, while other aspects, such as attention to psychosocial problems and continuity of care were evaluated much less often.

In a review of the literature on patient satisfaction, Miaoulis, Gutman and Snow (2009) identified eight dominant themes. These include empathy/being cared for as a person, communication/information, satisfaction with medical service, improving patient satisfaction, perceptions of quality, importance of the physical environment, patient satisfaction and compliance, and organizational change (58-60). The authors found that the most important factor in patient satisfaction is 'empathy/being cared for as a person,' noting that "a lack of empathy is interpreted by most patients as being disappointing and equivalent to a lack of quality" (59). The review showed that second most important factor is communication/information, including both the amount and quality of provided information. The authors noted that the theme of 'satisfaction with medical service' included caring behaviors of the provider as well as the provider's competence, but they

concluded that "satisfaction is related more to the human dimensions of how the service was delivered, and less to the technical competence of the provider" (58).

The above analyses of patient satisfaction reveal that professional attributes, such as empathy, effective communications skills that build partnerships, and behaviors that convey 'humaneness,' are highly related to the patient perspective of quality of care. These predominant themes will be briefly examined below with an emphasis on their relationship to medical and nursing ethics.

B. Empathy and Communication and Their Relationship to Quality of Care

The definitions of quality of care presented above confirm the role of professional ethics in achieving positive outcomes for patients. While technical competence is vital to quality care, both the patient and professional perspectives of quality of care are also greatly influenced and determined by the professional's values, virtues, attributes, and decision making abilities. In the next chapter where virtue ethics is the focus, the significance of virtues to the healthcare professional will be underscored, demonstrating, for example, how integrity is critical to establishing trust, and prudence is vital to decision making. These virtues are outward expressions of the values of the healthcare professional and instrumental to developing and maintaining the patient-practitioner relationship. Properly engaged, they are influential in creating positive outcomes for patients.

Empathy, communication skills, and affective behavior, while not virtues, are essential to ethics, and correlatively, they are also fundamental to the quality of care for patients. Empathy, for example, has been defined as having a moral component that

enables the development and expression of altruism and ethical agency (Mercer and Reynolds 2002). Oxley observes, however, that "empathy is not intrinsically moral" (2011, 4). She asserts that "empathy *alone* is insufficient as a moral guide"; yet, when used with appropriate ethical principles, empathy supports moral deliberation, reflection and action (5). Empathy and affective behavior also assist in establishing effective communication, which is vital to agency in ethics. The meta-analyses and reviews of the patient perspective of quality of care presented in the above section stress the importance of specific professional behaviors that are fundamental to ethics - empathy and communication - which are explored below.

The definition of empathy has long been debated in medical literature, particularly as to whether empathy is a cognitive or affective construct or if it is actually comprised of both cognitive and affective elements (Hassenstab et al. 2007; Hojat 2009; Kim, Kaplowitz, and Johnston 2004). This point, although interesting, is not significant to the present discussion. A practical definition of empathy for the health care professional is "the patient's perception… of his or her feelings of being understood and accepted" (Kim, Kaplowitz, and Johnston 2004, 239). The Scottish Enlightenment scholar, Adam Smith (1790), developed a useful argument on empathy that will be shared here, although it should be noted that Smith used the term sympathy to describe this construct. Commentators observe that the word for empathy was not in use during Smith's time (Agosta 2011, Introduction); therefore, Smith's argument will be presented using the terminology of his era. Smith understands the fundamental position of sympathy (i.e. empathy) as a moral sentiment and argues that it is the foundation of moral judgment. He writes that a person's idea of right and wrong stems from an "immediate

sense and feeling" (Smith 1790, VII.III.14). For Smith, moral judgment flows from sympathy, which he describes as "fellow-feeling," rather than from reason (I.I.3 and VII.III.14). He writes that sympathy "is the source of our fellow-feeling for the misery of others, that it is by changing places in fancy with the sufferer, that we come either to conceive or to be affected by what he feels" (I.I.3). Changing places "in fancy" is to imaginatively enter the other's situation or as in the German translation of empathy, *Einfühlung*, "feeling one's way into" the other (Agosta 2011, Introduction).

For Smith, the moral sentiments encourage an appreciation of the experiences of the person and serve as the foundation for making moral judgments. This process of thought and feeling, which is based upon an affective understanding of the position of another, clearly highlights the importance of relationships. To use Brooks' parlance about human relationships, it fills the "spaces between people" (2010). It also brings to the forefront the significance of the professional's skillfulness in empathy as vital to the process of ethical decision making. Göçmen observes, "in order to understand and communicate with one another, human beings must, according to Smith, sympathise with one another and therefore always go beyond themselves. Furthermore, if they cannot understand one another, they also cannot understand themselves" (2007, 3-4). The significance of empathy to relationships, particularly in the context of healthcare delivery, cannot be understated (American College of Obstetricians and Gynecologists [ACOG] 2011; Platt and Platt 1998; Reynolds and Scott 1999). Empathy requires the person to imagine or "step into the other's shoes" in order to appreciate the experiences and feelings of the other. Additionally, empathy in a healthcare setting also necessitates communicating one's perceptions of the patient's feelings or experiences for validation

(Platt and Platt 1998; Reynolds and Scott 1999). Successfully appreciating and communicating the other's experiences or feelings requires skills formed with experience, practice and habituation.

Smith's eighteenth century view places emphasis on the healthcare professional's empathy as an essential skill and strengthens the fundamental role of the person in meeting the ethical needs of the other, establishing the constitutive position of empathy in ethics. Smith's views of the relational aspect of empathy also reinforce the essence of communication to empathy - effective communication is vital for empathy and, therefore, to ethics, in general. Empathic physicians and nurses require effective communication skills and education on these skills (ACOG 2011). Highly empathic nurses and physicians have developed effective communication skills and have honed their abilities to interpret verbal and nonverbal cues of their patients. Empathic practitioners, therefore, can gain a more accurate view of the patient's perspective.

The literature treating empathy in medicine and nursing, therefore, has relevance to ethics. Empathy may be seen as an outward expression of respect and valuing of the person, setting into motion beneficence, altruism, caring practices and justice (Agosta 2011; Gelhaus 2012; Oxley 2011). As an emotion, it reflects a dimension of our "interpenetrated" social existence, as Brooks (2010) would describe our human connection. Empathy also has considerable bearing in communication processes. Excellent communication skills are necessary for "recognizing and responding empathically to patients' verbal and nonverbal clues, thereby inviting patients to express their concerns" (ACOG 2011, 4). The empathic practitioner, therefore, characteristically displays openness, compassion and sensitivity.

Literature from medicine, nursing, psychotherapy and related health disciplines offers much evidence to demonstrate the therapeutic benefit of empathy within the practitioner-patient relationship and how it leads to positive patient outcomes. A review by Squier (1990) highlights the range of patient outcomes to include patient satisfaction, enhanced adherence to treatment, reduced anxiety and stress, increased trust, better exchange of information and increased self-efficacy. Squier maintains that the evidence shows that healthcare professionals not only have an ethical responsibility to attend to the quality of their relationships with patients, but quality relationships are "necessary to ensure that patients in fact benefit from the health care which is being given them" (326).

Kim, Kaplowitz and Johnston (2004) measured patients' perceptions of empathy in their physicians and the effect on patient outcomes. The study showed that empathic communication by physicians had a statistically significant influence on patient satisfaction and compliance (246). The results indicated that "the cognitive component of physician empathy led to better exchange of cognitive information, and the affective aspect of physician empathy led to partnership" (244). Furthermore, the study revealed that partnership was shown to increase interpersonal trust, and in addition, affective empathy and partnership contributed more significantly to increased satisfaction and compliance. The authors concluded, "The effective use of empathic communicative skills may be one of the best ways to improve patient satisfaction and patient compliance" (248). Additional favorable outcomes may follow from enhanced satisfaction and adherence, such as improved health outcomes, reduced health care costs and decreased malpractice claims.

Zachariae et al. (2003) investigated the communication behaviors of physicians in relation to outcomes of satisfaction, lowered emotional distress, self-efficacy and perceived control in oncology patients. The study authors found that cancer patients who rated their physicians as higher in attentiveness and empathy reported greater satisfaction, less distress and higher self-efficacy. Conversely, patients of physicians who received lower ratings for attentiveness and empathy had lower levels of patient satisfaction. In a factor analysis, empathy was a strong predictor in reducing distress. Of interest, the study findings also showed that patients in palliative care were less satisfied with the communication sessions than the other participants, which is unfortunate because patients in palliative care have a greater need for support and empathy. This finding calls attention to the need for practitioners working with patients in palliative care to form better quality relationships.

A study by Williams (1979) examined the relationship of empathic communication to the outcome of self-concept in patients in long-term care facilities. The study revealed that the presence of higher empathic communication by a nurse therapist enhanced the self-concept of the patients in long-term care facilities. Conversely, lower empathic communications resulted in a decline in self-concept. The results illustrate the power of empathy to support patients' psychological and social dimensions and presents opportunities for physicians and nurses to draw on this communication skill to enhance patient outcomes.

A review of the literature conducted by Beck, Daughtridge and Sloane (2002) on physicians' communication behaviors and their relationship to positive patient outcomes found a positive correlation between physician behavior and favorable patient outcomes.

The database for the review was comprised of research studies of primary care office interviews conducted from 1975-2000 that measured either verbal or nonverbal communication skills. Of the studies measuring verbal communication skills, the majority assessed patient outcome measurements of satisfaction (n= 23), while others evaluated compliance with a medical regimen (n= 13) and less often, comprehension. The review showed that twenty-two verbal behaviors, such as communicating empathy, reassurance, support, patient-centered behavior, courtesy, openness, listening behavior and more, were associated with favorable patient health outcomes (31). Conversely, the review revealed fourteen verbal behaviors that were negatively associated with patient outcomes. The negative behaviors included lack of respect and compassion, inattentiveness, one-way flow of information, directiveness, and dominance, among others. The review reinforces the value of empathic behavior and competency in communication and supports medical education that develops these abilities.

As the above studies of empathy and communication skills reveal, empathy is a powerful interpersonal skill of the healthcare professional. Although empathy has been traditionally linked to improved patient satisfaction in the emotional and social dimensions of care, studies have also shown a positive association between empathy and improvement in physical health outcomes. Hojat et al. (2011) examined the relationship between physician empathy and improvements in the physical health status of diabetic patients. Health status was assessed by blood glucose control as measured by hemoglobin A1c (A1c) and the levels of low-density lipoprotein cholesterol (LDL-C). Empathy was assessed with the Jefferson Empathy Scale; physicians were categorized as high-, moderate-, or low-scoring. Overall, the association between empathy and A1c ($p<.001$)

and empathy and LDL-C ($p<.001$) was highly significant, revealing that empathy had a statistically significant and substantial effect on the measurements (361). Specifically, the results demonstrated that patients of physicians who scored higher in empathy were more likely to have good control of A1c ($p<.01$). Patients of physicians who scored high in empathy also were likely to have good control of LDL-C ($p <.01$). The study authors hypothesized that empathy enhances trust and facilitates the patient-physician relationship, leading to improved diagnosis and adherence to therapy (362). The authors submit that the results add further support to efforts to develop the empathic skills of medical students and physicians.

Empathy of the healthcare provider also has the potential to enhance the placebo effect (Meissner et al. 2011; Turner et al. 1994; Wells-Federman et al. 1995). A study by Kelley et al. (2009) on placebo effect and patients with irritable bowel syndrome (IBS) revealed that empathic practitioner communication style has the potential to actually heighten the placebo effect. In this study, licensed acupuncturists provided placebo or "sham" acupuncture to two groups of patients with IBS. One group received placebo acupuncture with limited interactions that were "neutral and business-like" (790). The other group received placebo acupuncture but with augmented interactions in which the practitioner was intentionally "more empathic, more sensitive to the patient's feelings, more supportive of the patient, more validating of the patient's perceptions, more nonjudgmental and accepting of the patient, and more responsive and affectively involved" (794). A third group served as a control and received neither acupuncture nor an interaction with a practitioner. The study demonstrated a significant placebo effect with improved symptoms in both the limited and augmented interaction groups, but

greater results in the augmented group. More pertinent to this discussion, the results showed a statistically significant practitioner effect on the treatment outcomes, with greater effect in the augmented group, inferring that empathy, sensitivity and other characteristics of a therapeutic relationship produced more favorable patient outcomes in this population.

It is clear to see that empathy and communication cannot be easily separated. Communication is used to bridge the gap in relationships, allowing a person to discover and affirm the joys, needs, and suffering of the other. The effect of communication on patients' well-being has been established, but it is not yet well understood. Communication skills that effectively convey respect and empathy, affirm perceptions, and provide information in the physician-patient or nurse-patient relationship have the potential to lead to positive outcomes for patients. Street et al. theorize various "pathways" through which therapeutic communication leads to positive patient outcomes (2009, 295). The authors call for more direct studies that identify specific pathways linking communication and patient outcomes. For instance, in a study by Stewart et al. (2008) patients' perceptions of patient-centered communication were associated with self-reported positive outcomes in health, such as lower levels of discomfort and improved mental health. The results were obtained two months after the patient-physician encounter, inferring a longer duration of effect from patient-centered communication. The study authors controlled for confounding variables and concluded that the positive results infer a "pathway [that] suggests a process through which patient-physician communication influences patients' health, by first influencing the patients' perceptions of being a full participant in the discussions during the encounter" (799). For the most

part, researchers may infer the effect of a particular behavior or attribute on a patient outcome, but it is difficult to control for other influences, such as from additional care providers, that may contribute to the outcome. It is encouraging to observe that the effect of patient-centered practice is associated with prolonged positive outcomes. It is difficult, though, to distinguish the effect of this behavior from additional influences during the two-month period.

The healthcare literature provides many excellent examples that demonstrate the positive impact of good communication skills. As a result, it is critical that medical and nursing education programs continue to place emphasis on developing and nurturing excellent communication skills in students to enable empathic, therapeutic relationships with patients.

C. The Contributions of Ethics Education to the Patient and Professional Perspectives of Quality of Care

The above elements of medical and nursing ethics have been examined over the past decades for their effect in improving patient outcomes, and the results confirm that there is a positive relation between provider behaviors - empathy, communication skills, openness, ability to consider the patient's perspective, competency in weighing benefits and risks - and quality of care. It follows then that ethics education that teaches, facilitates and reinforces these behaviors can ultimately lead to better outcomes for patients. This is particularly relevant at this point in the history of medical and nursing education, as some commentators and researchers have observed a decline in ethical behaviors as noted in Chapter One in the discussion of ethical erosion. Moreover, there

has been pressure to increase competencies in other areas of medicine and nursing to accommodate the growth of knowledge and new initiatives, such as quality and safety, which can potentially alter educational priorities and lessen programming in ethics education, professionalism and communication (Ward et al. 2012), factors which contribute to the patient and professional perspectives of quality of care.

The strength of the professional attributes to foster better quality care outcomes for patients demonstrates how vital and necessary continued educational efforts are to develop and nurture these characteristics and skills in healthcare students and professionals. For example, physicians who received an eight-hour training session in communication skills that focused on recognizing and managing psychosocial problems were more proficient in identifying patients' emotional distress and employing strategies to assist patients (Roter et al. 1995). Patients of physicians who received communication skills training also reported lower levels of emotional distress. This group of physicians also scored higher in empathy skills. Furthermore, the effects of training were evident over a six-month period; the patients of the physicians who had received communication training had reduced levels of emotional distress when assessed six months following the physician-patient encounters (1883). The results of this investigation suggest that education and training that enhances psychosocial skills and interpersonal competence, such as active listening, empathy, acknowledgment and reassurance, can create positive outcomes and enhance the quality of care.

The following study did not measure quality of care outcomes but provides evidence for the effectiveness of educational programming in empathy and communication training. In a study on communication skill training to improve patient-

centered discourse, Sheldon (2011) noted that communication training with oncology nurses has the potential to enhance empathic behavior, reassurance, allow for more uninterrupted dialogue, improve reciprocity and reduces medically-oriented dialogue.

In an analysis of the effectiveness of empathy education in nursing, Brunero, Lamont and Coates (2010) examined seventeen quantitative and qualitative studies in undergraduate and graduate programs. The majority of the studies used an active learning approach, such as case-based learning, role play or media-based learning. Interventions varied widely in length, from six to 105 hours, and a variety of measurement tools were used to assess for a change in empathy levels pre- and post-intervention. The authors found that a majority of the studies (approximately 65%) demonstrated a statistically significant improvement in empathy skill level in the participants following educational interventions. The authors noted that eight of the eleven studies that employed an experiential method observed an increase in empathy skills. Interestingly, shorter educational interventions were associated with favorable outcomes (70). These findings suggest that focused, active learning experiences can produce positive results in developing empathy, an essential component of ethics education.

An analysis of empathy research in medical programs shows similar findings. In a review of empathy education in medical school programs. Stepien and Baernstein (2006) identified thirteen research articles focusing on methods to enhance empathy. Similar to the findings of Brunero, Lamont and Coates above, the studies included both quantitative and qualitative design and used various methods for measuring empathy. The research articles also showed that a variety of educational methods were employed; however, the majority used active learning methods, such as communication workshops, and two used

experiential approaches. The most highly experiential approach placed medical students as patients with fake diagnoses in a teaching hospital for a 24-30 hour period (Wilkes, Milgrom, and Hoffman 2002). The students were cared for by residents who were unaware that the students were not actual patients. The experience was highly effective in producing empathic responses in the students. All of the research articles included in this analysis reported improvements in empathy among the medical students following the interventions.

As the review of studies on professional attributes such as empathy and patient-centered communication implies, activities that strengthen professional attributes contribute to the development of ethically sensitive and responsive practitioners. The ethically-responsive nurse or physician can better understand the patient as a person and develop an enriched patient-practitioner relationship. Approaching the patient-provider relationship in this manner is more likely to improve patient satisfaction and outcomes, thus advancing certain measures of quality of care. In addition, ethics education aims to produce a prudent healthcare professional who is better able to discern and weigh the benefits and harms of established standards of care and consider the patient's preferences in clinical decision making. Skills in prudential reasoning will facilitate the selective application of recommended standards as appropriate to individual cases, producing better patient outcomes, and thus improving quality of care as measured by the professional perspective.

A recent initiative by the National Center for Ethics in Health Care (NCEHC 2012) showcases a major educational and organizational program that aims to improve the quality of care in ethics. In an effort to proactively prevent, identify and/or manage

ethical problems more effectively and at an early stage, the NCEHC developed *IntegratedEthics: Improving Ethics Quality in Health Care* for the Veterans Health Administration (VHA) (2012). This is a comprehensive program that uses a quality approach to systematically address and manage actual and potential ethical issues in the healthcare system by narrowing "ethics quality gaps" (Fox et al. 2010, 15; Fox et al. 2012). The three-pronged program includes major modules dealing with such areas as "Ethics Consultation," "Preventive Ethics," and "Ethical Leadership." The goal of "Ethics Consultation" is to improve the resolution of ethical concerns, thereby improving quality of care. "Preventive Ethics" addresses recurring ethical issues using systems measures. "Ethical Leadership" seeks to provide an ethically supportive environment. Each arm of the program has an educational component, employing a variety of teaching methods for the healthcare team that include video courses, training exercises and written materials. The IntegratedEthics program has demonstrated that education, effective resources and a supportive administration can create an environment that has a positive effect on patient outcomes.

The following example from the IntegratedEthics program illustrates the effectiveness of ethics education on the quality of patient care. In an instructional video included in the "Preventive Ethics" educational materials (NCEHC 2012, Preventive Ethics), a healthcare team of nursing and social service employees address the ethical concerns posed by patients who are without any identified surrogate (or proxy) decision makers. The healthcare team recognizes the potential problems that might arise should such a patient lose his or her decision making capacity. The team considers the frequency with which patients were admitted without an identified surrogate decision maker.

Although the team noted that a hierarchy for decision making would be employed, they observe that this protocol is not always the most effective means to manage the situation. "Preventive Ethics" makes use of systems theory to aid in problem identification, goal setting, strategies, implementation and evaluation to address recurring issues, called the ISSUES approach (NCEHC 2010). The team's interventions have significantly reduced the numbers of patients who do not have identified surrogates, demonstrating that education, effective resources and a supportive administration can create an environment that has a positive effect on patient outcomes. It is reasonable to suggest that the efforts of nursing and social services to obtain surrogate information in advance to protect patients' rights are positive influences in achieving better interpersonal and clinical care and would be perceived satisfactorily by the patients. New guidelines to ensure and maintain standards of care, in this case, to protect the patient's right to self-determination, resulted from the health teams' efforts, thereby improving quality of care from the professional perspective.

D. Conclusion

The chapter began by linking ethics and quality of care and concludes by making explicit the relationship between ethics education to quality of care. This is principally in its contribution to the development of the provider's attributes and behaviors, such as empathy, communication and prudence. Examination of quality of care from either the patient or professional perspective shows that success is dependent upon the professional. Importantly, ethics education can and must explicitly direct its goals to positively influencing the quality of care. Healthcare professionals must act with empathy, respect and care to contribute positively to both the interpersonal and clinical care measures of

quality of care. Furthermore, they must exercise prudence in selecting and applying standards of care and act with consideration of the patient's preferences. Standards and guidelines are not foolproof, nor mandated; they must be prudently considered and applied, not imposed upon patients. By including effective ethics education in medical and nursing school curricula, schools better meet their responsibilities to the profession and to society to prepare graduates who are most prepared to relate successfully to patients, communicating with the patient as a person. It is important for educators and students to keep in mind that the ultimate goal of ethics and ethics education is for the betterment of the patient.

Developing the capacity of students to relate to the patient as a person is a critical component of ethics education and entails the development and nurturing of professional virtues. Educational efforts at the institutional level, as the VHA program illustrates, continue the development of the professional and improve goal attainment in the quality initiatives. Responding with ethical-sensitivity and reflection will enable prevention, early identification, and satisfactory resolution of ethical problems. In the next chapter the relevance of virtues to health care and the specific virtues that are essential to the nurse and physician are examined.

Chapter Four – Virtue-based Ethics in Medicine and Nursing

A. The Relevance of Virtue Ethics in Health Care

As demonstrated in Chapter One, the need for an increased emphasis on ethics education is due in part to the current state of affairs in health care delivery that presents obstacles to the humanistic aspects of the patient-provider relationship. In addition, the increased stress on students in educational programs to acquire vast amounts of knowledge has worked to the detriment of instruction in ethics in both medical and nursing programs. The persistent negative effects of the hidden curriculum and a decline in professionalism - decreased empathy, moral erosion, increased cynicism as well as the continued presence of moral distress- continue to create challenges to humanistic care. As established in the preceding chapters, ethics teaching that features virtue-based ethics has the potential to counteract these dehumanizing tendencies.

Presently, ethics education in healthcare is characterized by a reliance on traditional ethical theories, such as deontology and utilitarianism, and sets of principles (e.g., principlism) that stress the obligation or duty of the healthcare professional (Devettere 2010). The review of ethics education in medical and nursing programs presented in Chapter Two confirms this state of educational affairs, where the teaching of ethics predominantly emphasizes decision making skills over the virtues, character traits or attributes of the professional. Theory and principles are certainly important to ethics education, but an overreliance on these has resulted in an incomplete set of tools in ethics education for nurses and physicians. Theory and principles, in effect, are necessary but not sufficient in producing the best educational results (Devettere 2010). Duty or

obligation-based theories and principles are concerned with the actions a person ought to take, but these theories and principles do not focus on the qualities of the person who serves as the moral agent. Virtue-based ethics, alternatively, offers another perspective and means of applying ethics in healthcare, one that focuses on the disposition and character of the person. With roots in the ancient cultures and first formulated by Aristotle, virtue-ethics has been influenced by the Judeo-Christian tradition as well as by secular philosophy. It centers on both moral and intellectual elements along with highlighting the dispositions of the moral agent and ethical decision maker. Virtue-based ethics, while not sufficient by itself either, is essential in the ethics preparation of nurses and physicians. Ethics is complex, and reliance on one approach alone may not provide the student with adequate tools to navigate the ethical dimensions of the patient-provider relationship and any subsequent ethical quandaries. The role of virtue ethics has been minimized at times since the 1970's (Johnstone 2009), and yet it provides excellent guidance to the practitioner in terms of the dispositions necessary to be an effective moral agent.

The major categories of ethics – principles, duty, virtue and rights – are interrelated and essential to understanding ethics (Drane 1988). Drane explains their relatedness, observing that principles "serve as the ground of duties," rights provide claims for what one is due and claims for noninterference, while virtues "establish dispositions and habits of living according to objectively right standards" (1988, 155). He observes:

> Virtues are not the whole of ethics, but they contribute to good behavior, good persons and even to good societies. Virtuous acts contribute both to the good (fulfillment) of others and the good of the acting person by creating a readiness

> and orientation to right action. As virtue is developed, it provides practitioners with a practical moral wisdom, and with a way of achieving the good which is different from act analysis and norm creation (Drane 1988, 159).

Although Drane is writing about virtue ethics and the development of the "good doctor," his observations apply to nurses, as well. He rightly observes that not all of ethics in medicine (and nursing, by extension) involves ethical dilemmas for which act analysis and rule applications are required. Physicians and nurses encounter many situations that have an ethical dimension, but these are not always conflict-based and for which "what is needed is not a strategy or a rule but rather a style of life, or way of being that fits or is appropriate" (Drane 1988, xi). For Drane, virtue-based ethics fills this need. Virtue-based ethics is understood as "lived ethic," where ethics arises from the vital relationship of the patient and practitioner (Drane 1988, 16). As a lived ethic it comprises both the internal and external dimensions of the person; that is to say, what is important in virtue ethics is both the private character of the person and the public action that the person takes as a moral agent. Individuals should embody the virtues needed to do what is right (Athanassoulis 2004). As noted in the passage by Drane above, virtue provides the disposition or "readiness and orientation" to do the right thing. The fundamental intellectual virtue of prudence or practical wisdom enables the person to understand the right action (Drane, 1988). As this conception of virtues shows, virtue is closely aligned with character.

Virtue-based ethics has its origins in the philosophy of Aristotle and while always an important set of tenets, it enjoyed a resurgence starting in 1958 with the writing of Anscombe and again in the 1980s with the work of MacIntyre (Athanassoulis 2004; Pellegrino and Thomasma 1993). Presently, there is growing appreciation of virtue ethics

in medicine and nursing (Pellegrino and Thomasma 1993). The word virtue comes from the Greek, *arête*, meaning excellence, which is that toward which individuals should aim (MacIntyre 2007). Aristotle wrote of virtue or excellence as having three forms– moral virtue (excellence of character), intellectual virtue (excellence of intelligence) and physical or bodily excellence (Begley 2006). It can be noted that in contemporary society, physical excellence is no longer considered relevant to one's moral being (Begley 2006); commentators on virtue-based ethics in health care, however, are concerned with the moral and intellectual virtues, and this will be described in more detail in section B below. Moral virtues are attributes or dispositions of character and include temperance, justice and courage. The intellectual virtues include both theoretical knowledge and practical wisdom or prudence. Prudence or *phronesis* is knowledge applied to practical concerns. Aristotelian scholars note that moral virtues require practical wisdom. One needs excellence of character for prudential reasoning, and prudence is instrumental in achieving moral excellence (Devettere 2010; MacIntyre 2007). As Devettere explains, moral virtue and practical reasoning work in concert:

> A degree of moral virtue is necessary for the relevant intellectual virtue, prudence, to function well, and a degree of prudence is necessary for morally virtuous decision making in each particular situation. Every moral virtue presupposes prudential reasoning, and sound prudential reasoning presupposes the person has already developed some level of moral virtue (2010, 28).

Writing on the historical perspective of virtues, MacIntyre (2007) notes that virtue is a social phenomenon and contextually-driven, and as such, the understanding of virtue has changed over time. He points to the different conceptions of virtues - from the Aristotelian view of virtues as aimed at attaining *eudaimonia* or well-being to the

medieval view that virtues are directed to overcoming hardship; of the historic shift from pagan virtues to Christian virtues; and the juxtaposition in cardinal virtues (justice, temperance, courage, prudence) with the theological virtues of faith, hope and charity. This conceptualization frames contemporary virtues in their social contexts and strengthens the importance of relationships in virtue-based ethics. It is from the relational aspects of the patient-nurse or patient-physician relationship that the lived experience of ethics arises.

Arguments in support of the relevance of virtue-based ethics to health care turn on the relational aspect of health care and the personhood of the patient and practitioner in navigating the complex issues that comprise the healthcare system, many of which have no ready answer (Drane 1988, 18). As Drane observes, virtue ethics has an important place in clinical ethics but not to the exclusion of norms and principles. Most nurses and physicians would agree. Virtue-based ethics supports the development of a caring practitioner who may be better disposed to nurture the patient-professional relationship. Cassell states simply, "Ethics is about relationships" (Cassell 2007, 21). He observes that practitioners may have no "answers except as fellow human beings" Cassell reminds the reader of the intricacies of relationships, submitting that "whatever is done for one person inevitably has implications for others, some of whom are so close to that person as to be almost one with him or her" (20). From this perspective it is argued that healthcare professionals need particular virtues, attributes and excellent interpersonal skills to build a trusting relationship and effectively engage the patient as a person. While it is important that a physician or nurse can competently articulate and defend a value or ethical position, solve a pressing dilemma or sort out an ethical issue, it is more important that

the same physician or nurse be virtuous, considering an issue from a position of caring, integrity and honesty. Furthermore, it is the humane and compassionate physician or nurse who is better able to recognize and respond to a potential or actual ethical problem. The intellectual virtue of prudence, in particular, appreciably helps the person to shape the action that is needed.

Gastmans provides support for the significance of ethics in nursing that is based on the foundation of the nurse-patient relationship. The nurse-patient relationship is a personal model, established on a model of caring that is "ethically laden" (2002, 9). In such an engagement, a nurse's "ethical practice becomes concrete through the personal relationship between the nurse and the patient" (2002, 496). As a practice, nurses strive to provide holistic care that comprises all dimensions of the person, including the physical, psychosocial, relational, spiritual and moral levels (Gastmans, Dierckx de Casterle, and Schotsmans 1998). The nature of the care provided is goal-oriented that seeks to achieve an ideal of the best care for patients. Nursing practice entails care decisions from many options, requiring careful consideration as they are applied to particular patients to achieve good care. Aristotle understood virtue (arête) or excellence as the means toward achieving the "good." It follows then that a nurse's practice is a moral practice, because it has as its aim producing a particular good for a patient, namely a healthy body and/or mind or a healthy patient-practitioner relationship (Gastmans, Dierckx de Casterle, and Schotsmans 1998). The relational nature and the goals of the relationship give rise to the ethical practice of the nurse. Caring practices require much more than technical competency to achieve excellence. Good care necessitates a caring attitude. Gastmans, Dierckx de Casterle and Schotsmans clarify, "It is only by integrating a virtuous attitude

of caring with the competent performance of care activities (*caring behavior*) that *good care* can be achieved" (1998, 45).

Writing prominently on the value that virtue has and should have to the healthcare professional, Pellegrino's stance supports virtue-based ethics from his conceptualization of the patient-physician relationship. Like Drane, while his arguments have been written mainly for medicine, his concepts are also highly relevant to nursing and other healthcare professionals as his position highlights the ways in which virtues nurture the relationship between the patient and the practitioner. This is particularly true in nursing, whereby the nurse-patient relationship encompasses a holistic patient perspective, as Gastmans, Dierckx de Casterle and Schotsmans (1998) underscore. The value of virtue stems from the human nature of health care and the relationships formed that have a "fundamental human grounding"(Pellegrino 2008b, 152). To navigate these human relationships, the healthcare professional requires a virtuous stance. Pellegrino submits that virtue ethics does not provide answers to ethical problems, but it provides a balance to the reliance on ethical norms and principles (Pellegrino and Thomasma 1993). The development of the virtuous professional consequently nurtures the relationship with the patient. The virtuous professional will also protect patients and guard against questionable practices that although legal, border on the unethical (Pellegrino and Thomasma 1993). Nurses and physicians may find themselves functioning at the "moral margin" – the place "where law, custom, or principle would allow certain acts (or fail to prohibit them) that virtue would prohibit" (Pellegrino and Thomasma 1993, 169).

Pellegrino and Thomasma provide an example of the moral margins that result from the current economic model of health care, where unavoidable conflicts of interests

arise when health care professionals become owners of medical equipment, laboratories or skilled care facilities. Virtue-based ethics, they argue, is incompatible with the contractual model of health care implied in these entrepreneurial efforts. They also caution against the "moral malaise" that develops when self-interests trump professional virtues (1993, 145). The authors describe situations in which healthcare professionals circumvent care for those who are difficult to treat- notably, poor patients with complicated cases that pose a malpractice risk. Moral malaise also presents in nurses and physicians who fail to challenge a healthcare institution's practices that threaten quality of care or pose harm to patients. Identifying and responding to moral complicity in a situation such as this requires a virtuous professional who not only perceives the potential harm but is also disposed to act to protect patients. Educating for and nurturing virtue in nurses and physicians will help to guard against these moral gray zones where acquiescing to hierarchical pressures creates inequities or conflicts of interest (Pellegrino and Thomasma 1993). In light of the subtle, insidious nature of moral margins, moral complicity and moral malaise, one can argue that while virtues, ethical theory and principles are all necessary to the ethics education of the healthcare practitioner, virtue-based ethics that focuses on the dispositions or characteristics of the moral agent is in effect more fundamental and necessary in affecting the well-being of patients than theory or rule-based ethics. In essence, the virtuous physician or nurse perceives potential or actual problems and holds the necessary virtues to affect the good. Furthermore, many of the ethical problems that nurses and physicians encounter are not conflict-based but stem from the ethical dimensions of the patient-practitioner relationship, a metaphorical space that appropriately applied virtues can bridge.

B. What Virtues Are Important In The Nurse And Physician?

The preceding section and chapters have argued that virtues are essential to the nurse-patient and nurse-physician relationship. The question remains, though, as to which *particular* virtues should be developed and nurtured. One can make a determination of which virtues or dispositions the professional should hold and educationally develop by examining several pertinent sources, such as classic virtue-based ethics, the expectations of accrediting organizations, the provisions of professional codes of ethics and the demands of quality of care perspectives.

Traditional accounts of virtue-based ethics provide an instructive place to begin. While numerous lists of virtues have been posited from the classical period to the present, Aristotle maintained that the dispositions that one needs are those that will lead to *eudaimonia*, often translated as well-being, flourishing, or good (Devettere 2010; MacIntyre 2007, 148). One can debate about what Aristotle and subsequent writers of virtue-based ethics understand by "good"; however, in healthcare, producing good or what is right is generally understood as providing excellent care for the patient. From the classical perspective, the moral virtues or dispositions that are required to bring about good include love, justice, dignity, temperance, courage and gentleness, among others (Devettere 2010). Significantly, the Aristotelian perspective contends that it is of equal importance to possess both moral virtues (dispositions of character) and intellectual virtues (theoretical and practical wisdom) to achieve what is good or right (Begley 2006; MacIntyre 2007). MacIntyre explains that for Aristotle "excellence of character and intelligence cannot be separated" (2007, 154), an important consideration in the ethics teaching of the nurse and physician. Thus, both are needed to create what is right or good.

Some have maintained that while both moral virtues and intellectual virtues are essential, a certain virtue is more important than the others. MacIntyre makes a strong case for the centrality of prudence or *phronesis*. He claims that the intellectual virtue of prudence is necessary to apply the moral virtues, submitting, "it is that intellectual virtue without which none of the virtues of character can be exercised" (2007, 154). To show wisdom is to "exercise judgment in particular cases" (MacIntyre 2007, 154), knowing what is good or right, and in addition, to know which virtue to exercise to achieve this aim. According to MacIntyre, Aristotle's views on the relationship of the virtues underscore the inseparability of moral and intellectual virtues:

> The exercise of intelligence is what makes the crucial difference between a natural disposition of a certain kind and the corresponding virtue. Conversely the exercise of practical intelligence requires the presence of the virtues of character; otherwise it degenerates into or remains from the outset merely a certain cunning capacity for linking means to any end rather than to those ends which are genuine goods for man. (2007, 154).

Prior concurs, noting that "it is the virtuous person who sees what is morally salient in most situations, and the virtuous person sees the morally salient fact as a reason for action because he or she already is predisposed by virtue to act appropriately" (2007, 59). The perception that Prior describes is a feature of prudence. One needs to be predisposed to act appropriately on these perceptions, revealing the relatedness of the moral and intellectual virtues. Prudence or practical reasoning compels professionals to reflect upon and recognize the effect of their dispositions toward patients. The nurse or physician also requires practical wisdom or prudence in everyday practice to deliberate among choices when weighing projected outcomes of care.

Writing specifically on virtues in nursing, Johnstone explains that the end or *telos* of nursing is a "moral end" in which the nurse works toward the promotion of health and wellbeing and toward the alleviation of suffering (2009, 60). This goal is understood as "good" care and establishes the moral behavior or "moral practice" of the nurse (60). She observes that good care as an end encompasses both competent care and "virtuous caring" (see Gastmans, Dierckx de Casterle, and Schotsmans 1998, above). Johnstone clarifies that virtuous caring comprises both the virtuous dispositions of the nurse as well as the motivation to act morally, that is, "caring about" the patient, family or community (60). Therefore, the virtues that are required for nursing consist of those that support caring practices as well as "right attitudes" and include "compassion, empathy, concern, genuineness, warmth, trust, kindness, gentleness, nurturence, enablement, respect, mutuality, 'giving presence' (being there), attentive responsiveness, mindfulness, providing comfort, providing a sense of safety and security and others" (60).

Pellegrino and Thomasma offer a slightly different account of the position of virtue-based ethics to the physician. The authors write on the virtues of the physician, but their position can be applied to the healthcare practitioner, in general. Generally, for Pellegrino and Thomasma, virtue is defined by the ends or goals of the profession, not by the definitions of good character and is evident in the "ends to which those professions are dedicated" (1993, 146). They describe the virtues of the "physician *qua* physician, not the virtues of the physician *qua* person, which is a broader and more private enterprise" (1993, 178). Thus, they assert that only the virtues of the physician as he or she acts in the professional role are of concern. The excellent professional knows what virtues are necessary to apply from examining his or her moral responsibilities as a professional.

Pellegrino and Thomasma's observations, therefore, would necessitate that the physician reflect on the values and responsibilities of the professional ends or goals and act with the appropriate virtue. For example, if the physician has a responsibility to provide informed consent, the correlative virtues needed to meet this end are respect, truthfulness, sensitivity and prudence. If the physician's duty is to protect patients from medical harm and the physician observes an impaired colleague, moral courage and advocacy are required. If the nurse has a responsibility to provide comforting practices for the dying patient, the correlative virtues that would enable the attainment of this end are care, compassion and empathy. If the nurse's goal is to preserve the dignity of the drug-dependent patient, virtues of respect, presence, and care are required. In Pellegrino's terms, the virtues appropriate to a situation are those "essential to achieving the ends of medicine optimally and without which those ends would be frustrated or attained in less than optimal fashion" (1995, 268). This approach to virtue ethics stops short of referring to codes of ethics and laundry lists of virtues. Rather, the virtuous practitioner acts in accordance with the virtue required for the best outcome, being guided by a well-developed sense of prudence and practical wisdom.

Yet, well-considered lists of virtues are helpful in teaching ethics to students. A medical or nursing student cannot always perceive the virtues that should be applied to reach certain ends or goals. It is essential that medical and nursing students learn which virtues and attributes are fundamental to the profession and be given opportunities to practice and internalize these (Kopelman 1999). Some commentators assist here in defining the virtues that are essential to nurses and physicians. Kopelman (1999) presents respect, fidelity, confidentiality, relieving suffering and promoting well-being as

important virtues. One can argue that confidentiality is actually a professional responsibility and not a virtue. The virtue of respect ensures that the patient's right to privacy is protected. Tsai and Harasym (2010) identify a broad range of virtues to include curiosity, sensitivity, respect, trustworthiness, honesty, caring, compassion and humanity (871). Curiosity in the context of health care could well be understood as a willingness and openness to learn about the patient.

Drane (1988) provides five fundamental virtues for physicians- benevolence, respect, friendliness, truthfulness and justice. Many of these have been mentioned as attributes of professionals that are valued by patients and lead to improved patient satisfaction in quality of care studies. Although the virtues that Drane provides are self-explanatory, benevolence merits further discussion here, as it shares similarities with caring, a virtue central to nursing practice. Benevolence is the virtue that disposes the practitioner to carry out acts of good or beneficence "according to highest ethical standards" (33). Furthermore, Drane notes that benevolent practice "disposes the self of the doctor to the needs of the patient who is a person and not just a body. It opens the doctor to the lived experience, personal intimacies, personal concerns, personal needs, personal fears, and to a recognition that they are all connected with the patient's illness" (37). Benevolence, therefore, supports the relational aspect of care, allowing the practitioner to respond to the patient as a person. Drane's description of benevolence evokes the virtue of caring that is fundamental to the nurse-patient relationship. In her review of caring, Brody (1988) shares how the concept of care has multiple meanings in nursing: as a virtue (an ideal), as an act (a virtuous act) and as a responsibility. She informs that the nursing literature primarily recognizes caring as a virtue, that is, the work

of nursing is understood as both technically and compassionately delivered, where the feelings and dispositions of the nurse are central to care (92). In addition, Brody explains that the act of caring can be understood from the relational aspects of the act alone, apart from the moral disposition of the nurse, where the merit of caring is in the virtuous, caring act. As she notes, the writings of Noddings (see *Caring: A Feminine Approach to Ethics and Moral Education* 1984) and Gilligan (see *In a Different Voice* 1982), who have written extensively on the ethics of care, also underscore this perspective. The third perspective that Brody offers places care in a central role as a responsibility that defines nursing as a profession. The characterization of care from these three perspectives makes clear its place as a principal virtue for nurses.

As demonstrated in Chapter Two, ethical codes of conduct in medicine and nursing and the standards of accrediting institutions in medicine and baccalaureate nursing programs reflect the professions' positions on the dispositions and behaviors required of nurses and physicians to produce what is right or good in the patient-practitioner encounter. The American Nursing Association *Code of Ethics for Nurses with Interpretive Statements* (2001) makes clear that the virtues of honesty, integrity, caring, compassion, patience, fairness, justice, respect, self-respect, courage and professional competence are essential (Lachman 2008). The American Medical Association *Code of Medical Ethics* (2001) emphasizes the virtues of respect, compassion, honesty, professionalism, advocacy and courage. The accreditation standards of the American Association of Colleges of Nursing (2008) for baccalaureate nursing education are consistent with the American Nurses Association *Code of Ethics for Nurses with Interpretive Statements* (2001) and underline the virtues of respect,

honesty, altruism, integrity, empathy, compassion, caring stance, accountability, self-reflection, and moral agency. In medicine, the Liaison Committee for Medical Education (2011) highlights honesty, integrity, respect, altruism and professional behavior, attitudes and skills. The Accreditation Council for Graduate Medical Education (2011) emphasizes professional attributes and attitudes that include compassion, respect, sensitivity, responsiveness, self-appraisal, and advocacy. These various virtues identified in the codes and accreditation standards reflect a long tradition in the professions and clearly indicate the dispositions and behaviors that are considered essential for excellence in medicine and nursing.

Finally, in the discussion of quality of care developed in Chapter Three, it became evident that the virtues of the healthcare practitioner can enhance the patient-provider relationship. Quality of care has been shown to encompass care that is provided with technical excellence and whose benefits widely surpass any risks. Moreover, quality care consists of humane and culturally appropriate treatment that ensures respect and preserves the patient's autonomy (Brook, McGlynn, and Shekelle 2000). Quality patient outcomes may include partnership building, increasing a patient's satisfaction with care, enhancing empathy, reducing anxiety, increasing trust, enhancing self-efficacy and improving adherence to therapy (Hall, Roter, and Katz 1988; Squier 1990; Zachariae et al. 2003). Specific professional behaviors have been associated with quality patient outcomes, such as empathy, respect, reassurance, support, courtesy, openness, and effective listening (Beck, Daughtridge, and Sloane 2002). Humaneness and culturally appropriate care as noted in the definition of quality of care are associated with the professional's warmth, kindness, willingness to listen, interpersonal skills, and

empathy/being cared for as a person (Hall and Dornan 1988). Other professional behaviors central to achieving quality care are integrity, trust and prudence. In achieving quality outcomes the practitioner needs to strive for excellence in moral disposition and also needs to know how best to exercise these virtues.

C. How Are Virtues Taught and Learned?

The question of *how* virtues are taught and learned presupposes that virtues *can* in fact be taught. This age-old question has intrigued scholars and suggests that virtue education is highly problematic. Most contemporary philosophers and educators accept that virtues are formed and cultivated through experiences (Brody 1988; see also Gillam 2009; Pellegrino and Thomasma 1993; Prior 2007; Siegler 2001); therefore, with and through the right experiences, they may be taught and learned (Begley 2006; Brody 1988). However, such an understanding has not always held sway. The writings of the ancient Greek scholars, Plato and Aristotle, introduced this provocative question and provided a paradigmatic formulation of virtue theory in response to it (Pellegrino 1995). In *Meno*, a dialogue on moral knowledge, Plato attempts to answer the question of whether or not virtue can be taught. Speaking through the character of Socrates who answers Meno's questions on virtue, Plato concludes that virtue is a form of knowledge and for that reason, it can be taught; but because no teacher of virtue can be identified, it is also likely that virtue cannot be taught:

> Socrates: And there are no teachers of virtue to be found anywhere?
> Meno: There are not.
> Socrates: And if there are no teachers, neither are there scholars?
> Meno: That, I think, is true.
> Socrates: Then virtue cannot be taught?

> Meno: Not if we are right in our view. But I cannot believe, Socrates, that there are no good men; and if there are, how did they come into existence? (Plato 1949, 56-57)

The dialogue in *Meno* concludes with the possibility "that virtue is neither natural nor acquired, but an instinct given by God to the virtuous" (61). Some scholars have proposed that Plato may have been writing ironically about the lack of teachers of virtue, airing his disapproval of some of the renowned teachers of the period, such as the Sophists (Gooch 1987). Be that as it may, Aristotle, Plato's student, concluded otherwise. He did affirm that virtue is a special type of knowledge and that this knowledge can be acquired through teaching and experience:

> Virtue, then being of two kinds, intellectual and moral, intellectual in the main owes both its birth and its growth to teaching (for which reason it requires experience and time), while moral virtue comes about as a result of habit, whence also its name *ethike* is one that is formed by a slight variation from the word *ethos* (habit). From this it is also plain that none of the moral virtues arises in us by nature; for nothing that exists by nature can form a habit contrary to its nature. (*Nicomachean Ethics*, Book II, sec 1, 1103a)

As noted in the earlier section on virtue, Aristotle identifies the forms of virtue to include intellectual virtue (excellence of theoretical and practical reasoning) and moral virtue (excellence of character). The intellectual virtues are of various forms of knowledge, some of which are acquired through theory - the form of wisdom as *sophia* or scientific knowledge, for instance - while other forms of knowledge - *phronesis* or practical wisdom and *techne* or technical skill - are acquired through "art" or practice (McKie et al. 2012). MacIntyre explains that Aristotle distinguishes between these virtues by how they are taken up:

> "intellectual virtues are acquired through teaching, the virtues of character from habitual exercise. We become just or courageous by performing just or

> courageous acts; we become theoretically or practically wise as a result of systematic instruction. Nonetheless these two kinds of moral education are intimately related. As we transform our initial naturally given dispositions into virtues of character, we do so by gradually coming to exercise those dispositions *kata ton ortbon logon*" (i.e., according to right reason) (2007, 154).

For Aristotle, the moral virtues require practice that allows the individual to form virtuous habits. The individual also needs practical wisdom, gleaned from experience, to know how to apply the right virtue in a particular circumstance. For Aristotle, then, "exercising" one's dispositions requires experience, a point that is central to the thesis of this dissertation. More so, the intellectual virtue of practical wisdom is also developed through life lessons or lived experience. Practical learning develops habits that are formed from repeated experiences. Theoretical knowledge, on the other hand, is developed through theory.

Aristotle's insight on virtue has significantly influenced the present understanding of virtue education. Informally, virtues have been taught experientially, through oral traditions, such as story-telling, observations of the behaviors of others, or through personal experiences that reinforce the effects of "good" or "bad" behavior. Writing on character education, Noddings (2002) observes that, historically, people have been engaged in teaching virtues either individually or as communities through narratives, traditions, exemplars and role modeling. As part of a society, "we are products of as well as contributors to traditions of behavior" (Noddings 2002, 62). Noddings illustrates how virtue education, in the form of character education, was part of the early public school and religious education curricula. She points to the McGuffey reader series that were used in the early twentieth century as well as the Character Education Development League curriculum, both which were developed for the moral education of youth (see the

Project Gutenberg eBook, www.gutenberg.org, for examples of the McGuffey readers). The use of exemplars whether fictional (Atticus Finch, Luke Skywalker, Belle) or real (Jesus, Mother Theresa, Gandhi) points to paradigm persons who by their actions convey the traits or attributes that individuals are encouraged to develop (Pellegrino 1995). The paradigm person, consequently, is the person who possesses excellence and "sets the standards of noble conduct for a culture" (Pellegrino 1995, 255). Like Pellegrino, Begley observes that the norm for virtue ethics is based on the virtuous moral agent; therefore, the concept of the paradigm person is integral to understanding and incorporating virtue into the healthcare professions. Exemplars in medicine and nursing could include historical (Elizabeth Blackwell, Florence Nightingale) or contemporary (Paul Farmer, Henry Marsh) individuals that students learn of through literature, narrative and media but would more likely be found among those with whom they interact with in their student lives. Positive role models in everyday clinical experiences can serve as exemplars that have a beneficial influence on the hidden curriculum.

Noddings notes that, in general, the early efforts in character education in many disciplines were supplanted in the 1980s by the cognitive developmentalism of Kohlberg that created a shift in moral education from character education to an emphasis on moral reasoning (2002). Facility for moral reasoning continues to be highly valued at present, and for instance, testing instruments that measure moral reasoning are sometimes used as part of the admissions process in medical programs (Glick 1994). Nonetheless, while a deemphasis in virtue education was observed in the later part of the twentieth century, the educational value of virtues has maintained its importance in medical and nursing programs (Pellegrino 1995). Importantly, most philosophers and educators accept that

virtues are formed and cultivated through experiences, and therefore, with the right experiences, they may be taught and learned. Begley submits that "if we accept that *virtue is a type of knowledge then virtue can be taught*" (Begley 2006, 259).

Virtues as a form of knowledge, therefore, can and should be taught, developed and nurtured. This is no less true for the medical or nursing student than it is for a growing child. A person learns the value of virtues from life lessons – for example, to behave in a particular way in order to develop trusting relationships or through experiencing what it means to be treated with respect. People are also influenced by negative experiences and learn, for example, the downside of dishonesty as either victims or as the result of their own bad decisions. Begley reminds the educator that while students can be taught about virtue, "not all students will learn" (2006, 264). Methods presented in this section aim to illustrate that with creative teaching and careful feedback and reflection, medical and baccalaureate nursing students are better able to acquire those dispositions and habits that are necessary for excellence. Begley suggests realistically, though, that those students who cannot learn the virtues that are required of them as professionals (physician *qua* physician, nurse *qua* nurse) should be directed to other careers.

The principal question, then, about how to teach virtues is addressed by considering the type of knowledge that is required, how it is acquired and the educational goals or outcomes. Developing a virtuous disposition requires knowledge, habituation, and action (Campbell, Chin, and Voo 2007; see also Begley 2006; Brody 1988). The student needs to learn about virtues and their relation to other ethical theories, principles, and rules to have a base for habituation and action. Students require habituation or

practice activities to promote the development of empathy, sensitivity and critical reasoning. Opportunities for the student to put virtues into action also are essential. Determining which instructional method is most effective to teach a virtue is similar to determining how to teach any concept in ethics or for that matter in education in general – that is, teaching methods should be based on how particular knowledge is acquired as well as the aims of education (Issenberg et al. 2005). The educator must take into consideration whether the goal is a theoretical understanding of moral virtues and prudential reasoning, for which theory-based teaching methods are appropriate or whether the goal is developing and cultivating moral virtues and prudence or practical wisdom, for which teaching through practice via experiential learning is appropriate. It is very appropriate that educators set goals in virtue-based ethics education that seek competency in both theoretical knowledge and practical knowledge; consequently, teaching methods would engage the various domains of learning (cognitive, affective and psychomotor) to achieve competency in theory, attitude and behavioral skills. It is also necessary to consider the overarching goal of ethics education of providing quality care for patients; therefore, teaching needs to be focused on the specific virtues that contribute to excellence of character and excellence of intelligence that have been identified in the previous section. It is important to note that the language used in this dissertation thus far with regard to teaching and learning ethics has consistently applied "growth" terminology, such as developing, nurturing and cultivating, that takes into account this kind of learning as a life-long process (McKie et al. 2012). Whichever pedagogical approaches are adopted, educators in medical programs and baccalaureate nursing

programs should view ethics education as a long-term process and view themselves as nurturers of traits and abilities that will improve with additional exposure and maturity.

Virtue education, therefore, should be comprised of both theory and opportunities for practice and habit formation. There are many methods recommended to reach these goals, but it is essential that the way in which virtues are taught is appropriate to the type of knowledge to be acquired and the educational goals. Shumway and Harden (2003) summarize those methods that are well-suited in producing particular learning outcomes in medical students' education. The authors report that more complex learning outcomes that require a change in attitude or behavior, as virtue-based ethics does, are at the top level of the learning pyramid ("knows," "knows how," "shows," "does") that moves from comprehension to application and action-oriented practice (2003, 580). Outcomes related to attitudes, ethics, decision making, role of doctor, and personal development are classified at the topmost level - "does." Consequently, the methods that educators select to reach higher level outcomes must include opportunities to apply learning in practice situations and eventually in actual clinical situations. While lectures may be effective for conveying fundamental theoretical knowledge about moral and intellectual virtues essential to the nurse and physician, the hierarchy of learning outcomes supports that they are not sufficient for knowledge that is formed through practice, habituation and action. A review of the various methods proposed and used to teach virtue ethics - lecture, case studies, humanities and narrative, portfolio, role play/drama format and simulation - is presented below.

While lecture alone is an insufficient teaching method for virtue knowledge, this is not to say that lectures have a limited role in virtue ethics education. The lecture format

has traditionally been used in ethics education and is a convenient and useful way to convey complicated and thorny information. In a review of lecture as a pedagogical method, Benner (2012) shares the example of how an educator can effectively apply lecture to teach the intellectual virtue of practical reasoning or *phronesis*. Understanding that Aristotle's writings on virtues are complex, she points out that lecture can be used to help students work through the difficult concepts of the text (in this case, *Nicomachean Ethics*) and create a dialogue about the many interpretations that his writings on prudence and practical reasoning have raised. She reminds the educator that lectures need to be engaging and reciprocal where both teacher and students participate in the exchange of ideas to avoid a one-directional flow of information. Benner suggests that lectures that are interpretative and translational and used "in the context of a lively, interactive, engaged learning community … can guide the emotional learning climate of the classroom" (2012, Conclusion). Nonetheless, she cautions against an over-reliance on lecture and argues for focused mini-lectures of perhaps 10 to 15 minutes or so that are used in conjunction with other instructional methods. Mini-lectures are valuable in aiding comprehension of complex topics (such as Aristotelian virtue ethics), to develop students' moral sensitivity and insight, and to develop clinical reasoning skills. Many of the suggestions that Benner presents to develop concepts in lecture-style classes draw upon narratives, either stories of students' clinical experiences or unfolding case studies. As an example, in a lecture that aims to bring about a deeper understanding of moral virtues, a mini-lecture that reinforces assigned readings can help to focus small group discussions, debates or case analysis, applying virtue ethics to solve dilemmas. Additionally, following an interactive lecture in which questions are clarified and

perspectives are shared, students can be asked to identify the appropriate virtues to use in certain situations or to solve a healthcare problem using prudential reasoning.

As indicated above, case-based discussion or casuistry is another teaching method that provides students the context in which to apply their learning in practice situations. Cases can be actual accounts (classic, current ethics cases, or students' clinical experiences) or conveyed through various media. Begley highlights the importance of case studies, noting, "Students… need to be introduced to the subject of a case *before* the dilemma arises. They need to see the person affected by the situation..." (2006, 262). She suggests that the humanities in the form of literature, poetry and film have a valuable role to play in providing vicarious experiences from which students can develop moral sensitivity, compassion, empathy and moral insight (262). Teaching methods that allow students to observe or read about virtues in contexts, such as film, literature, case analysis, interactive multimedia, and reflective writing, provide opportunities for students to reflect upon character traits and practice decision making. In *Medical Ethics and Living a Life*, Robert Coles (Coles 1995) makes a strong case for incorporating the humanities in healthcare education as a way for students to develop moral sensitivity and learn about the ethical problems and decisions they will face. Integrating literature into healthcare education, for example, can cultivate skills of observation, interpretation, expressiveness, self-awareness and curiosity, and in addition, enhance moral education and empathy (Hunter, Charon, and Coulehan 1995). Hunter, Charon and Coulehan (1995) outline three approaches to including literature into medical education that have relevance for the ethics educator considering this pedagogy. The three approaches – ethical, aesthetic and empathic – differ in their educational aims and in the selection of

literature. The ethical approach considers the lived experience (much like Drane's conceptualization) and focuses on moral reflection. The authors suggest that typical readings in this approach would focus on justice issues, views of illness, and the ethical dimension that is inherent to the patient-practitioner relationship. The aesthetic approach engages the student in the patient's narrative and "encourages tolerance for the ambiguity and turmoil of clinical situations" (789). Readings for this approach are used to demonstrate aesthetic distance, identification and perspective. The empathic approach centers on understanding the patient's feelings, emotions and perspective as a patient. Readings that support this approach often include persons who vary in age and culture. While there is overlap in these approaches, the authors explain that the educator should understand the goals of the approach. Teaching methods should include the use of small group discussion, writing exercises, along with interactive methods such as role play (Hunter, Charon, and Coulehan 1995).

Illingworth offers that the richness of the humanities comes from its capacity to draw out the narrative in a person's life, engage the learner in other perspectives, and recognize the emotional and psychological responses of the practitioner, "thereby reminding all that healthcare is a *human* science" (2004, 55). Many ethics educators successfully engage narratives as a method for teaching ethics (Charon 2001; Hunter, Charon, and Coulehan 1995). In her work in medical ethics, Charon calls for "narrative competence," which she describes as the ability of physicians to "listen to the narratives of the patient, grasp and honor their meanings, and be moved to act on the patient's behalf" (2001, 1897). The appropriateness in employing narratives to teach virtues lies in the ability of a story to elicit professional virtues that are exhibited or required, such as

moral sensitivity and awareness, compassion, empathy and courage, through dialogue and reflection. Illingworth cites the value in using humanities-based learning activities in ethics education:

> Indeed if one accepts, that the aims of healthcare education are to produce practitioners who are reflective, empathetic and humane, professional, patient-centred, honourable and responsible, drawing on emotion and offering contrasting human perspectives on moral dilemmas in healthcare may be an essential part of ethics teaching and learning. (2004, 55)

Ashcroft finds narrative to be useful as an educational tool given its ability to contextualize an individual's life and problems, showing life as "fuzzy" and "rarely, if ever linear," a contrast to the linear thought processes and decision making frameworks that are often part of ethics education (2000, 289). He offers that narratives which place the patient at the center have the advantage of reducing the emphasis on the problem or dilemma (quandary ethics) and instead contribute to patient-centered care, explaining:

> The role of narrative ethics as a supplement to virtue ethics (and the ethics of care popular in nursing circles) is to handle decision-making in the context of a patient's life-story; something which is rarely, if ever, linear. In this understanding, dilemmas are to some extent artefacts of the narration, and it is the shape of the narrative as a whole, not just its turning points, which is important-with the consequence that dilemmas are less important to ethical reflection. (2000, 289)

Ashcroft's comment highlights the importance of placing the patient's story at the center in the student's deliberate processes. Narrative, an instructional method abundant in the humanities as well as in classic ethics case studies, helps the medical and nursing student develop an awareness of the wholeness of the patient. Being patient-centered is foundational to virtue ethics in that the end or telos of virtue ethics is that which is good and right – interpreted as best care outcomes for the patient. In addition to ethics case studies, which are plentiful in medical and nursing ethics literature, there are online

resources that provide patient stories. One of these, Healthtalkonline.org, produced by Health Experience Research Group at the University of Oxford, houses many video interviews of patients and caregivers. As ethics is embedded in the patient experience, any of these interviews would provide excellent patient stories to be used as starting points for a class dialogue.

When possible, using cases developed by students from their actual clinical experiences can provide rich discussions for virtue ethics education. Caldicott and Faber-Langendoen (2005) found that while most student-generated cases involved treatment decisions (for example, conflicts between the physician and patient concerning an intervention, improperly obtained informed consent or futility concerns), ten percent of the cases involved issues of deception and deliberate lying. Nine percent of the cases dealt with discriminatory treatment of patients, unfair resource allocation and inadequate care. Remarkably, twelve percent of the cases revealed students' reluctance to speak up or challenge moral misconduct that they witnessed for fear of retaliation. The study's authors noted that the students included fear of reprisal as justification for their response or lack thereof to the ethical missteps they observed, indicating a need for discussion and practice related to moral courage. This study also underlined the pervasiveness of ethical problems in clinical settings that pivoted on professional virtues and illustrated the benefit of using student-developed cases to guide inquiries. Caldicott and Faber-Langendoen found "The pedagogic process of working through students' own cases transforms ethics from a theoretical ideal into an actual code of professional conduct capable of cultivating moral habits of action" (2005, 872). While the study had

limitations – students were from one medical school and written cases did not represent all clinical experiences – the experiences are telling of students' perceptions.

The use of portfolios as a teaching method has been recommended for its value in encouraging analysis and reflection (Campbell, Chin, and Voo 2007). Although portfolios are often considered a medium to collect evidence of student work, they can also be an effective means to develop professional competencies and can include journals and diaries. A Best Evidence Medical Education (BEME) systematic review of portfolio use in medicine and biological sciences sheds light on their appropriateness as a teaching method in general, rather than as a means for teaching ethics, but the results are applicable here as well (Buckley et al. 2009). The review notes that portfolio uses have become more widespread in medicine, nursing and allied health, likely due to the emphasis on reflection as part of health profession education. The review also suggests that portfolio use that requires active engagement and reflective practice by students may be an effective way to help students translate theory into practice and increase self-awareness and reflection (Buckley et al 2009, 351). While the systematic review did not define reflection, reflection is generally understood to mean critical assessment on experiences that creates new knowledge (Mann, Gordon, and MacLeod 2009). This may lead to an understanding about one's self, skills, or the meaning in a particular situation. In the systematic review, portfolio use was associated with improvements in critical thinking, decision making, communication skills and ability to learn independently. Some students found portfolios helpful in identifying their own learning needs. In regard to attitude and behavioral changes, some articles reported that portfolios were associated with improved self-confidence, professionalism and empathy. Most of the articles in the

BEME review measured self-reported or teacher-reported appraisals of the effectiveness of the portfolio use on learning. Fourteen percent of the articles, however, included the results of direct observation of changes in knowledge, skills, or attitude/ behavior (Buckley et al. 2009, 346). Interestingly, instructors reported that reviewing portfolios enhanced their understanding of the students' needs and prompted changes in teaching as a result. The review found that the major disadvantage of portfolio use is that it is time-consuming as reported by students. It also reported that while portfolios encourage reflection, there are concerns with the quality of the reflections. Some students reflect at a basic level, offering only descriptions of feelings and experiences versus higher level reflection that engages critical analysis, indicating a need for enhanced preparation and guidance on reflection.

The advantages of portfolio use to develop self-awareness make it highly suitable as an educational tool to teach virtues. As a teaching method, portfolios can be employed to enhance the students' understanding of virtue theory as applied in practice. Portfolios are also appropriate in teaching virtues through the engagement of reflective questioning and journaling techniques that encourage moral sensitivity and insight. Jaeger defines moral sensitivity as the ability "to recognize when an act, situation or certain aspects of a situation have moral implications" and coming to understand what one's moral responsibilities are in the situation (2001, 132). The reflective component of portfolio writing has the potential to develop the student's moral perception. When used over a length of time, the portfolio can provide evidence of cultivating professional virtues. In a similar vein, students can participate in regularly scheduled writing assignments (while not a part of a formalized portfolio) that relate to professional competencies and assess

these for their inherent virtue content. By reflecting on clinical experiences, students learn to identify the professional virtues that are required of them in their role and record and measure their own progress in developing these. Ethics educators can also encourage students to write about paradigm cases culled from their professional experiences, thereby engaging students in reflective activities and helping students to track their growth in professional virtues. The authors of the BEME systematic review stress that it is important that the process of portfolios be efficient and integrated into course work (Buckley et al. 2009). The results support that students must also be mentored appropriately on the purpose of reflective writing in order to best achieve the desired educational goals.

Role play is another method that has been recommended to teach ethics, particularly given that this format encourages active, experiential learning and helps students to translate theory into practice (Fox, Arnold, and Brody 1995; Garrett 2010; Miles et al. 1989; Seiler et al. 2011). Role play allows students to take on a given role, often with assigned personalities and emotions. In most role play scenarios, the players have "authorship" of the role and participate by acting a part (Jones 1995, 10). Role play has a long history of use in medicine and nursing and has been demonstrated to successfully develop communication skills and empathy (Brunero, Lamont, and Coates 2010; Chan et al. 2003; Fisher, Taylor, and High 2012; Roter et al. 1995). It has been used to teach "breaking bad news," the responsible conduct of research, and many other activities that require ethical and affective competencies (Chauhan and Long 2000; Seiler et al. 2011). Role play is suited to teaching in the affective domain and can provide students with essential practice in dealing with multiple perspectives, attitudes,

interpersonal conflicts, and their own personal feelings and emotions as well as those of the role they assume (Schoenly 1994). Likewise, role play is an appropriate method for teaching virtues and has advantages over static or non-experiential methods to develop professional attributes, enhance moral reasoning and moral courage, identify values, beliefs and biases, and apply the correct attitudes in particular situations (Brown and Gillespie 1997; Chauhan and Long 2000; Doron 2007; Seiler et al. 2011; Tsai and Harasym 2010). As previously demonstrated, developing and nurturing moral and intellectual virtues requires experience. A learning activity such as role play provides opportunities for practice and rehearsal and aids in developing self-perception, helping the student gain a sense of how he or she might act when confronting actual clinical situations. Tsai and Harasym (2010) acknowledge the difficulty in changing students' attitudes and yet make a strong case for ethics education that incorporates opportunities for practice, feedback and reflection, asserting, "The development of proper attitudes is not instigated by lecturing (i.e. affirming, declaring, claiming, telling or stating), but by educating (i.e. questioning, challenging, inspiring, showing, motivating, problem solving and reflecting)" (871).

Illingworth (2004) suggests that role play or alternatively, live drama, is useful in enhancing students' awareness of ethical issues and developing their ability to consider the views of others. Live drama employs the use of actors who present a scene or interaction, perhaps of a patient or family member and healthcare practitioner. Students observe the drama unfold, much like watching a scene from a film; however, the live action format is appealing and moving. Following the scene, students may question the actors, who respond in character. The use of live drama is similar to Medical Readers'

Theater (Savitt 2002) in which medical and/or nursing students read from scripted plays about healthcare situations to an audience, followed by a discussion on the issues raised by the reading. Savitt (2010), a pioneer of Medical Readers' Theater, shares that this method brings students closer to ethical and sociocultural issues where they can experience the emotive side of healthcare issues and patients' perspectives.

Any of these methods have the benefits of increasing ethical sensitivity, insight, and empathy and enhancing perspectives as well as giving students the chance to apply appropriate moral and intellectual virtues. Stoker (Garrett 2010) uses role play or drama format regularly in a healthcare ethics course with predominantly nursing and allied health students. She notes that even students who have a good grasp of the theoretical concepts of ethics have difficulty applying them in action, pointing out, "Competence in theory doesn't translate to effective moral agency" (Garrett 2010, 10). She finds that this active teaching method helps students move from theory to practice (see Smith 2010 for video interview with Stoker). Participatory and dynamic methods such as role play provide students the opportunity to practice professional virtues and practical reasoning skills, experiment with their approaches to ethical situations and prepare as moral agents. Similarly, Brown and Gillespie (1997) have utilized improvisational theatre in a bioethics class with graduate students in occupational therapy. They highlight the advantage of this format to develop ethics in "complex interactions" that are much like those that students will encounter in clinical learning environments and in their work as practitioners. They view the advantages of practicing ethical competencies over and above a fundamental understanding of ethical principles and problem-solving as a means to support students'

moral courage and moral agency in sessions that act as "rehearsals for 'real' life" (1997, 108).

These various teaching methods, while not forming an exhaustive list, offer the ethics educator many options in reaching the educational goals related to virtue knowledge. Each has advantages and disadvantages that the educator must consider when selecting pedagogical approaches to the teaching of virtue ethics. The use of experiential learning, though, whether through integration of case studies, humanities, or active learning methods such as role play or drama formats provides necessary opportunities for students to explore and express their emotions and feelings that are part of moral reasoning and the exercise of virtue prior to working with patients. "Ethics is about relationships," as Cassell (2007, 21) states, and these active learning methods put ethical problems into context, highlighting the behaviors and skills required of students to anticipate and confront awkward or challenging clinical situations.

The final method that is offered is simulation, which will be shown to have many advantages in providing realistic opportunities for the essential practice and application of virtue knowledge. Chapters Five and Six exclusively address simulation; hence, the description here will be very brief. Simulation is an interactive learning method, which at times has been compared to role play and theater-inspired teaching methods. While some definitions of simulation include role play as the lower end of a continuum of simulation activities, there are meaningful distinctions between the teaching methods and a few bear repeating. First, simulation differs from role play in that it provides a high level of realism in the learning environment. Second, while the participants in a role play attempt to act or "simulate" their roles convincingly, in simulation, the participants do not

simulate their personalities; rather, they take on functional roles and work toward effectively carrying out the competencies of the professional roles. Students in simulation activities attempt to convey the thoughts, attitudes, and behaviors that will best achieve the professional role competencies.

Third, simulation allows learners to apply knowledge in a controlled practice setting and receive feedback from the instructor. Reflection upon the activity, as recommended by many educators (Campbell, Chin, and Voo 2007; Vanlaere and Gastmans 2007) is also an essential component of simulation. This method, therefore, is well-suited to teaching virtues in that it provides the opportunity to work through clinical situations, applying the appropriate virtues and experimenting with new approaches. Teaching methods need to be focused on specific virtues, active to allow practice that is directed toward eliciting the virtuous behavior, freely encourage experimenting with new approaches, reiterative to allow for habituation, and reflective to allow students to raise concerns, gain clarification and gauge the effectiveness of their approaches in patient-practitioner interactions. A better understanding of the ethics dimension inherent to the patient-practitioner or patient-family-practitioner relationship may be developed in students through practice opportunities in "human engagement" (Caldicott and Danis 2009, 285) and carefully assessed to allow for feedback and growth. Simulation-based learning activities can fill the need for the practice of virtue in an interactive manner and accomplish these objectives in a creative, engaging way.

D. The Relevance of Virtues to the Nurse and Physician

Thus far, this chapter has established the relevance of virtues to health care in general and has demonstrated those virtues that are most important to the nurse and physician. Additionally, it has offered various effective methods for teaching virtues in the healthcare professions. As a final point of justification for virtue education, it is important to clarify the relevance of virtues to the nurse and physician. The value of virtue, as Pellegrino and Thomasma (1993) stipulated, is in its contribution to the development of a healthcare professional who successfully meets the goals of the profession. Furthermore, it is important to teach the virtues that will develop the moral agency of the healthcare professional (Caldicott and Danis 2009). The virtues are relevant to the professions as a means of achieving what is right and good – a state of health or well-being for the patient. Moreover, prudence or practical reasoning is a central virtue and inseparable from the moral virtues. Employing the moral and intellectual virtues to develop and nurture the patient-practitioner relationship and to better understand those relationships that are important to the patient helps to counteract the tendency seen in ethics education and in professional practice to reduce ethical decisions to a dichotomous choice between competing values, virtues, or principles (Caldicott and Danis 2009), and in addition, helps the nurse or physician work with the patient in reaching a decision that best achieves well-being, flourishing or good.

Virtue in action promotes good patient outcomes. One must have certain virtues to be sensitive to the patient's feelings and needs, to make prudent decisions (for example, balancing benefits and harms), and to put the needs of the other before oneself. Nurses and physicians also need to develop and display virtues that are effective in relationships. As noted earlier, relationships are integral to ethics, and healthcare

professionals are obliged to develop particular attributes and skills so that they may develop ethical sensitivity, a reflective disposition and successfully engage with patients. Virtue in action, such as respecting the dignity of patients and respecting and appreciating their relationships with others, honoring confidentiality, treating patients with compassion, adopting a caring attitude, being open and sensitive to the patient's feelings, respecting the autonomy and vulnerability of patients, prudently considering the appropriate care options, skillfully negotiating patient-centered care and more, is expected of the physician and nurse. Virtue education can cultivate the dispositions required of nurses and physicians to act as moral agents.

E. The Relationship of a Better Healthcare Professional to Quality of Care

Quality of care is a noble aim of medicine and nursing and has been presented as the fundamental goal of ethics education. The relationship between the attributes and behaviors of the healthcare practitioners and the improvement in quality of care has been well-established in patient satisfaction studies included in Chapter Three. In a patient's terms, a good outcome is humanistic care, being treated with respect, being comfortable, having needs fulfilled, being listened to, and so on. The studies that measure quality of care are imperfect at an institutional level, but individual patients recognize quality care when it is offered.

Undoubtedly, the current healthcare environment presents many ethical challenges that complicate efforts to provide quality care, from the quickly changing technologies and resources to the maze of conflicting values and obligations that confront the practitioner. Furthermore, there is the understanding that the moral dimension of the

patient-practitioner relationship must be considered at all times in an effort to produce what is right and good. These professional goals require virtuous nurses and physicians who are ethically-sensitive, reflective and prudent in order to capably create better outcomes for patients. The virtues that best meet the patient's needs and contribute to quality care have been discussed at length in the previous sections. The effects of the healthcare professional on the patient perspective in terms of more effective interpersonal and clinical care and on the professional perspective in the form of appropriate consideration and application of standards and guidelines illustrate the benefits of exercising virtue to attain positive outcomes for patients.

Some commentators have observed an additional obligation of ethics education that should be noted – the duty to sustain the profession's values. Begley (2006) asserts that nursing programs have a responsibility to sustain the virtues and values of the profession for the protection of the public. Pellegrino and Thomasma concur, maintaining that professional schools enter into a "covenant" with society and have a responsibility to produce virtuous practitioners (1993, 178). Consequently, the professional schools need to assume responsibility for educating for a virtuous professional who is an effective moral agent. They observe that "the essential moral nature of healing compels attempt to instill virtue as well as technical knowledge" (1993, 178). Their arguments noted earlier on the need to mitigate moral malaise illustrate that it takes vigilance on the part of educators to point out morally ambiguous practices and educate for virtue. Begley notes the responsibility of ethics education to sustain the values of the profession. These poignant observations provide support not only for the contribution of virtue ethics education to quality of care but also for its contribution to protecting the public and

sustaining the professions. It is only through vigilance and courage that ethics educators can impress upon medical and nursing students the value of virtues, their obligations to society as a whole and to their professions.

F. Summary

The principal objectives of this review of virtue ethics have been to clarify the value of virtues and virtue education, to justify a renewed emphasis on virtue ethics in medical and baccalaureate nursing education, and to identify a more effective method of teaching virtue ethics that is better suited to the understanding of virtue ethics as practice-based knowledge. The virtues that are vital for nurses and physicians to acquire and exercise are culled from the professional codes of ethics, guidelines and standards of professional organizations and accreditation agencies and informed by expert opinion and an understanding of virtue theory. It has been demonstrated that teaching virtues requires attention to both the theoretical knowledge of virtues and practical knowledge. Keeping in mind that opportunities for practice are "rehearsals" for actual patient contact and that a goal to prevent harm to patients is ever-present, a teaching method that minimizes harm, whether moral, psychological or physical harm, thoughtfully prepares medical and nursing students to better meet the fundamental goal of ethics education – enhancing the quality of patient care. Simulation emerges, therefore, as a teaching method that can fill the need for the practice of virtues. It can be utilized to fulfill the requirements of knowledge, habituation and action essential to virtue education. This teaching method will be extensively analyzed in both Chapters Five and Six. Chapter Five reviews simulation as it is used in many areas of healthcare education, while Chapter Six

demonstrates its current position in teaching virtues and its utility in meeting the goals of ethics education for medical and nursing students.

Chapter Five – Simulation in Healthcare Education

A. Simulation as a Teaching Method Defined

The relevance of simulation as a teaching method in ethics has been introduced in the previous chapters, for the most part found in Chapter Two on the discussion of nontraditional methods in ethics education, but is elaborated upon in this chapter. Simulation, in its broadest sense of teaching using practice experiences that imitate or replicate clinical learning with real patients, has been a part of medical and nursing education since the formalization of their educational programs. Role play, anatomical models and task trainers, for example, have long been used in healthcare education (Nehring and Lashley 2009). Early in medical and nursing education, students learned basic interviewing skills through peer-to-peer role play and developed rudimentary psychomotor skills, such as injection techniques and dressing changes, in practice sessions that simulated the care of actual patients. Since that time, however, there has been a slow and steady progression in the demand for and refinement of technology that would create a more realistic learning experience for clinical education. In the last decade or so, simulation has rapidly advanced to the present state of fully integrated and reactive patient simulators that respond in a convincing, true to reality, manner (Gaba 2004; Nehring 2010), the types of which are described in section D below.

Prior to beginning an analysis of simulation, however, it is necessary to define simulation and identify its primary characteristics. Simulation is understood as a form of experiential learning that holds particular applicability in the education of medical and nursing students whose professions center on complex human interactions. Gredler

(2004), an educational psychologist, has defined simulation and identified the characteristics that set it apart from other experiential teaching methods, such as games and role play. Gredler notes that simulations are "open-ended evolving situations with many interacting variables," further defining simulation as an "evolving case study of a particular social or physical reality in which the participants take on bona fide roles with well-defined responsibilities and constraints" (2004, 571). She identifies four characteristics that are important to simulation experiences.

First, simulations mimic reality, a feature known as fidelity or validity, with the intent to "transport the student to another setting" (Gredler 2004, 572). A simulation with high-fidelity more accurately or more closely imitates reality than does a low-fidelity simulation and is therefore more authentic, allowing the student to suspend disbelief. Fidelity often refers to considerations of the physical environment and equipment, but simulation also requires validity of causal factors and relationships (Gredler 2004). The literature on fidelity of simulation and technology reveals various properties of fidelity that may be considered in a simulation, including physical fidelity, equipment fidelity, psychological or perceptual fidelity, environmental fidelity, functional or task fidelity and more (Allan, Buffardi, and Hays 1991). The common threads in fidelity in simulation, particularly those involving devices or simulators, typically concern physical fidelity (appearance) and function (Allan, Buffardi, and Hays 1991; Rehmann 1985). Gredler also asserts that the data set that is provided to students to work with through the experience as well as the relationships between the participants, and the responses to the participants' actions, must be valid and realistic. Second, the participants' roles in the simulation are to be clearly outlined, genuine and internalized. Gredler's understanding of the role

students adopt in a simulation is very similar to Jones' (1988) conception of the participant's "functional role" that differentiates simulation from role play, which involves improvisation or "play-acting." In a simulation, the student internalizes the role, is actively engaged in the activity and assumes control of the learning exercise (572), making this a very rich learning experience. Third, simulation relies on a set of data that allows the student to control the action. The simulated environment and preparatory materials provide the information or materials needed to navigate the learning exercise. Finally, simulation provides feedback that emerges from the student's action. Theoretically, a simulated learning exercise may progress in many different directions depending on the student's decisions and actions. The participants may receive feedback immediately (for example, successfully or unsuccessfully resuscitating a patient in a mock code) or during a reflection session that follows the simulated activity. Students often experience the consequences of their dispositions, attitudes and affective responses, technical and interpersonal skills, and reasoning abilities immediately, gaining important feedback from simulation activities. Gredler adds that a goal of simulation is to engage the students in solving "ill-defined" problems rather than to manage unambiguous, straightforward problems. Simulation allows the educator to create learning activities that advance the application of knowledge, skills and attributes to solve the more difficult problems that represent those found in the "real world" (2004, 573). Thus, the selection of the problem and case study materials that direct the simulation is critical and central to the learning experience.

Writing from the perspective of medicine, Gaba offers a definition of simulation that is frequently cited, describing it as "a technique, not a technology, to replace or

amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion" (2004, i2). Gaba's definition underscores that the emphasis in simulation is not on the technology, equipment or individuals (patient actors, for example) that are utilized in the educational interaction, but rather on *how* one structures and works with the components of the simulated experience. As with any educational method, the stress is always on the educational goals and outcomes. Although educational technology provides support for the teacher, success in reaching goals and producing desired outcomes is determined by the educator's skillfulness in utilizing the educational materials and technology. Gaba's definition shares similarities with Gredler's characterization of simulation, highlighting the immersion of the student in the learning environment, the need for fidelity of the experience, and the value of active learning. An effective simulated learning environment with high fidelity and validity can create a realistic substitute for the actual clinical experience and allow students to more easily suspend disbelief and go about the issue of problem-solving as if they were acting as clinicians in the actual role.

In nursing education, the National Council of State Board of Nursing (NCSBN) provides a definition of simulation to guide educators, identifying this as "activities that mimic the reality of a clinical environment and are designed to demonstrate procedures, decision making and critical thinking through techniques such as role-playing and the use of devices such as interactive videos and mannequins" (2005, 2). This definition emphasizes the component of fidelity, but more so, it stresses the value of simulation to enhance reasoning skills and problem solving as well as a method to learn psychomotor skills. It should be noted that NCSBN includes role play as a type of simulation.

Following Gredler's defining views of simulation, role play would only be considered a simulation when certain criteria are met: the student takes on a functional role and internalizes the feelings of the role (versus "play acting" a role); the student is highly involved and actively contributes to the learning experience; the experience contains a data base; and the student receives feedback from the activity itself or from the facilitator. The difficulty in labeling experiential learning as simulation is apparent throughout the healthcare literature as well as in other disciplines.

The NCSBN definition also references the use of devices in simulation, which are generally referred to as simulators. Simulators are devices (actual or computerized) that assist in providing realism; however, the mere presence of a simulator or simulation technology does not constitute a genuine simulation. Simulation often is conducted without any technology or device. It is common within the healthcare professions, however, to define activities that involve the use of a simulator as a simulation, Depending on the definition of simulation that one accepts, the use of a simulator (for example, an arm model for practicing intravenous catheterization) could be considered simulation or it may be understood as simply a practice session – another and different type of experiential learning. By adding complexity to the learning problem, (for instance, by placing the arm model alongside an individual who is acting as the patient), the experience progresses from being a technical skill practice to a simulation experience as understood by Gredler. The student must now perform the task while solving a complex problem that reflects the issues encountered in the real world (Kneebone et al. 2002). In the intravenous catheterization example involving both the arm model simulator and an individual, the student is given the opportunity to develop appropriate

interpersonal skills, convey empathy, allay potential anxiety of the patient, and explain the purpose or goals of the intravenous therapy in conjunction with the practice of a technical skill.

The Simulation Innovation Resource Center (SIRC), a program of the National League for Nursing (NLN), defines simulation as "an attempt to mimic essential aspects of a clinical simulation with the goal of understanding and managing the situation better when it occurs in actual clinical practice. A technique that uses a situation or environment created to allow persons to experience a representation of a real event for the purpose of practice, learning, evaluation, testing, or to gain understanding of systems or human actions" (NLN SIRC; Glossary, Simulation). Similar to Gaba's views, this definition stresses the method or technique applied in replicating an experience for students, over and above an emphasis on the technology. Moreover, the SIRC definition is very similar to one proposed by Morton in 1995, as "an attempt to replicate some or nearly all of the essential aspects of a clinical situation so that the situation may be more readily understood and managed when it occurs for real in clinical practice" (66). All of these perspectives emphasize the value of reproducing clinical learning for the benefit of preparing students prior to actually encountering situations in the "real world." Furthermore, implied in all of these definitions is the desire to improve clinical performance in order to improve patient care.

For Gredler, simulation represents an open-ended, evolving case study, which generally involves addressing difficult or complex situations and often resolving ill-defined problems. For Gaba and the NCSBN, simulation may present complex, ill-defined problems for students to consider, yet their common definition implies that

simulation may also be task-oriented or focus on only one particular skill. To further illustrate this distinction, several examples can be offered. Medical or nursing students may prepare for administering injections to patients by first practicing on an injection pad. For some healthcare educators, this is considered a simulation exercise, albeit with low-fidelity and with no simulated response to the students' actions. The pad does not feel like a patient's tissues and does not respond like tissue to the presence of the injected fluid. On the other hand, students may practice injection administration on a mannequin that is fitted with an embedded injection pad in its arm. This pad also does not respond like tissue but the placement of the pad within the mannequin's arm allows students to practice how to position the patient's arm to receive the needle, obtaining the correct angle for insertion and overall providing more realism for students. If the learning exercise requires the student to interact with the mannequin during the activity, the experience becomes more complex and allows for enhanced fidelity and improved transference of knowledge to the actual clinical setting. When injections are practiced on a patient actor (a volunteer or a standardized patient) in a realistic setting, the experience becomes more open-ended and challenging in that the student now must attend to the patient's responses, placing learning in a realistic context (Kneebone et al. 2002).

The student also better internalizes the role and responses of the clinician in the above situation. This example of experiential learning, therefore, better meets the definition of a simulation according to Gredler's understanding. In another example, anesthesiology students may prepare for the intubation of an actual patient by practicing the activity on a simulated anesthesia model. This anatomical simulator, unlike the arm model in the above example, is more sophisticated and responds to the student's

manipulations, transmitting the "feel" of intubation and providing an immediate response to the student of successfully intubating the patient (or failing to do so) (Issenberg and Scalese 2008, 38). The realism of the experience adds to the student's ability to be submersed in the activity. This situation may not be open-ended or ill-defined. If factors are added to the situation that increase its realism and complexity, the experiential learning activity better represents Gredler's characteristics of simulation and provides the opportunity for teaching and nurturing professional behaviors and dispositions under stress, as well as critical thinking and technical skills.

It is important to note the ways in which Gredler's definition differs from that of many writers in medicine and nursing. Gredler's conceptualization of simulation is general and written so that it can readily be applied to any discipline, yet the defining characteristics move simulation from the simple practice of a skill to the application of knowledge, attributes and skills to solve complex, open-ended problems. The definitions commonly accepted in medicine and nursing do not always reference an underlying problem or case study that is related to a particular patient situation. Simulations in medicine and nursing are often competency- or skill- building exercises but not directed to solving clinical dilemmas or patient-practitioner problems. This is not to say that definitions of simulation used in medicine and nursing that focus on the practice of a behavior on a simulator are short-sighted or incomplete; these definitions are representative of only part of a broad categorization of simulation. Moreover, the distinction in these definitions may not carry weight for many medical and nursing educators. Appreciating the varying dimensions and characteristics of simulation that demarcate it from other experiential learning techniques aids the teacher in appropriately

meeting the goals of ethics education. When medical and nursing ethics education is the central concern as it is in this work, Gredler's definition of simulation particularly stands out as the most appropriate one and best aligned with the goals of this dissertation of those considered. This definition will be applied in Chapter Six to support the use of simulation in ethics education.

Simulation is also characterized by the specific type of activity in which students are engaged. These activities may range from simple to complex and from low fidelity to high fidelity. Decker et al. provide a typology of simulations that includes the following: partial-task trainers (a model or mannequin used to practice simple procedures or skills), peer-to-peer learning (such as practicing a health assessment on a peer), screen-based computer simulations, virtual reality (computer-based; includes tactile, visual and auditory experience), haptic systems (a simulator combining touch and virtual worlds), standardized patients (paid actors, volunteers or individuals that simulate the patient), and full-scale simulations (computerized mannequin that provides a physiologic response in medium to high fidelity) (2008, 75). Gaba (2004) also categorizes simulation by the technologies employed, including the absence of technology, which uses individuals only, but presents a different organizing structure than Decker et al. He places simulation on a continuum ranging from simple to complex in terms of technology: verbal (role play, "what if" situations), standardized patients, part-task trainers (ranging from simple substitutions for reality, such as using fruit for skin, anatomical models, and virtual reality), computer patient (interactive; software-based or virtual reality-based) and electronic patient (fully interactive mannequin or full virtual reality, often with a recreated clinical setting) (Gaba 2004, i4). More recent developments in simulation have

occurred in the use of high-fidelity patient simulators that respond physiologically to the student's action or inaction. Yet, simulations may involve no technology, instead using actors or other individuals to portray patients in reproducing a clinical experience for the student. This type of simulation may involve specially trained individuals, referred to as standardized patients or patient-actors, to portray patients in particular situations. Other times, simulations utilize peers or untrained volunteers to fill the patient role. Nehring (2010) identifies a similar continuum of activities that includes games among the list of simulated activities. While games can be seen as creative and interactive learning exercises to teach critical thinking, by definition they are competitive with the objective to "win" and thus are not open-ended (Gredler 2004). For some educators, by definition, games would not qualify as an educational simulation for medical or nursing students.

The nomenclature used by Gaba and others in healthcare (Decker et al. 2008; Jeffries 2007; Nehring 2010) reveals a continuum ranging in general from role play to high-fidelity human patient simulation. By including role play as simulation, these categorizations differ from Gredler's. However, a review of the literature shows inconsistency regarding role play as simply a form of experiential learning and as a simulation learning experience. Some articles reviewed in preparing this research identify learning exercises as "role play" when they meet the definition of a simulation – the students work with rich data in a simulated environment and adopt and internalize functional roles rather than simply "acting out" a role. Other articles describe an activity as a simulation, when in fact the participants are only "play-acting" and have little opportunity to truly adopt the functional role. Educators are encouraged to carefully

define and describe the learning activity, particularly in the way in which it promotes the internalization of a role.

B. The History of Simulation as an Educational Method in Health Care

The history of the development of simulation as an educational method is extensive and has been well-documented in the literature (Cooper and Taqueti 2004; Gaba 2000; Gredler 2004; Nehring and Lashley 2009; Page 2000; Rosen 2008). Some of the more relevant and interesting aspects in its progression to its current state in healthcare are shared here, most of which originated outside of healthcare in industries that are heavily laden with risk and complexity, such as the military, aviation and space exploration, to name a few. This history will include the development of mannequin-based and computer-based simulators as well as the incorporation of individuals, in particular, standardized patients, in healthcare education.

The use of simulation has a very long history, having emerged in military war strategic planning in the 1600s (Gredler 2004). The use of simulation in the military continued through the 1800s and was seen most notably during the Cold War of the 1950s when it was employed to test possible responses to bomb threats (Gredler 2004, 571). During that time, citizens also participated in simulation exercises. Some readers may recollect the drills that took place regularly in schools and communities during this period for the purpose of training citizens on how to respond in the event of a bomb threat. The cognitive, behavioral and affective responses to these simulated exercises have been imprinted on those who participated in the activities. These exercises foretold of the now common mock disaster training in healthcare and crisis management exercises that represent large-scale, evolving, case study-type simulations.

Developments in the flight industry at the start of the twentieth century and continuing through the space exploration program in the 1960s set in motion the technological advances required for the sophisticated simulators presently used in medicine and nursing education (Cooper and Taqueti 2004). In "A Brief History of Flight Simulation," Page (2000) summarizes the development of training devices created in aviation that were made to replicate the flight experience while reducing or eliminating risks to the pilot. He notes that the advances in aviation paralleled the advancing technology in computers. The earliest flight simulator, the Sanders Teacher, was a crude device consisting of a light aircraft body tethered to a post. The device was dependent on the wind to provide the experience of flying and thus was not efficient, yet in a rudimentary way, the simulator met the objective to train pilots more safely. Other devices were crafted that mimicked the movements of the cockpit, thus simulating the "feel" of the flight. The eventual advances in mock instrumentation, electronics and analogue computers during World War II led to the development of the modern flight simulator (Page 2000). Page reports that the success of the space program was dependent upon realistic, sophisticated simulation that could demonstrate the conditions of an environment never experienced by humans. The impressive developments in the aviation industry are too numerous to detail here, but these advancements paved the way for the sophisticated simulation technology in healthcare (Cooper and Taqueti 2004). Page asserts that the aviation industry contributed not only to simulation technology but, importantly, in establishing standards for flight simulation that ensured consistency in outcomes, an important contribution to simulation training. Moreover, the developments in simulation in the aviation industry focused not only on improving technical

performance, but emphasized the need for behavioral and organization skills (for example, Crew Resources Management) to improve outcomes (Gaba 2000).

The early roots of simulation in healthcare were seen in the mid-sixteenth century, emerging from the field of obstetrics as a response to high infant mortality and complications to infants and mothers in midwife-assisted deliveries (Buck 1991). Buck reports that midwifery licensing laws were enacted to ensure better preparation of midwives. Physicians developed courses that consisted of lectures, along with illustrations, for current or prospective midwives; however, they were unsuccessful in improving outcomes. In time, the Gregoire obstetric simulator was developed to replicate childbirth. This device, known as a phantom, consisted of a female pelvis with which educators could demonstrate childbirth and possible complications (Buck 1991). The simulator was constructed of a basket-type frame, with an oil-skin covering at the pelvis and likely at the genitalia and cloth over the remainder of it. Remarkably, preserved fetuses were used along with this simulator to demonstrate normal and complicated childbirth. Despite this, the device apparently had a low level of realism and concerns surfaced that knowledge learned on the simulator would not likely be transferred to an actual birth (Buck 1991). Evolution in the design of training models to practice obstetric maneuvers continued throughout the seventeenth and eighteenth centuries in an attempt to increase the fidelity of the learning experience, even creating bladders to hold and release amniotic fluid (Buck 1991). By the nineteenth century, medical students in the United States were taught about childbirth using a simulator, given that the prevailing customs made it difficult for them to attend an actual childbirth (Buck 1991; see Buck

1991 and Gardner and Raemer 2008 for a more detailed history of simulation in obstetrics).

Medical and nursing programs introduced simulation in their formal instruction in the early part of the twentieth century as a way to teach clinical skills and improve patient safety. Simulation in medicine and nursing as it is known today had humble beginnings. Nehring (2010) recounts one of the earliest recorded views of simulation-based teaching in nursing, citing Lees who wrote in 1874 that nursing schools should have "a mechanical dummy, models of legs and arms to learn bandaging, a jointed skeleton, a black drawing board, and drawings, books and models" (Lees, 34, in Nehring, 2010, 10). Unfortunately, a "mechanical dummy" for use in nursing education was not available for almost forty years. A precursor of the life-size simulator models used in healthcare today might have had its origin in the development of the mannequin known as "Mrs. Chase," whose development is chronicled by Herrmann (1981, 2008). The cloth, full-size, jointed mannequin was commissioned by A. Lauder Sutherland, principal of the Hartford Hospital Training School for Nurses, to replace "straw-filled dummies" that were used in the nursing school for practice experiences (2008, 53). The concern of the school director was not only obtaining practice experience for the students, but also "sparing patients possible discomfort" (Herrmann 1981,1836). The mannequin was manufactured in 1911 by the M. J. Chase Company, a doll manufacturer, who later produced child and infant versions that were used to teach child care to nursing students and inexperienced mothers. Within three years, Mrs. Chase was updated with arm injection sites and internal reservoirs for students to practice urinary, vaginal and rectal procedures and treatments. It should be pointed out that, similar to today, expenses often precluded schools from

investing in the latest equipment, and many schools could not afford to purchase the mannequin. As a result, a pattern was made available through Columbia University Teacher's College for schools to build their own "proxy patient" (1981,1836). The U.S. Army commissioned a male version of the mannequin in the 1940s to use in the training of medical corpsmen. The mannequins were used extensively in nursing programs across the globe up until the 1970s (Herrmann 2008). Interestingly, Hartford Hospital has an original Mrs. Chase mannequin, now over 100 years old in its archives (Weir 2012).

In addition to the early simulation work in obstetric simulators in midwifery, some of the earliest simulation training in medicine reportedly began in the field of anesthesiology in the 1920s with the efforts of Dr. Lundy at Mayo Clinic, an anesthesiologist who used cadavers to teach anatomy and anesthesiology to surgical residents at Mayo Clinic (Burden 2011). Lundy observed that the residents who practiced on cadavers in the anatomy lab had a better understanding of surgery than those who did not have this experience. Consequently, Lundy produced a simulated operating room suite where surgical residents were able to study anatomy and perform procedures while receiving feedback (Burden 2011). This model of teaching provided a rich experiential learning environment for the residents. The early task trainer for cardiopulmonary resuscitation (CPR), Resusci® Anne, was also the idea of anesthesiologists and created by toy manufacturer, Asmund S. Laerdal, in the 1960s (Cooper and Taqueti 2004; Devita 2009) who had begun to create training kits for wound care (Laerdal Medical). This CPR trainer was designed to allow manipulation of the head and neck, and later, with the addition of springs in the thorax, permitted a more realistic simulated experience of maintaining an open airway, respirations and performing chest compressions. In the mid-

1960s, Sim One, a prototype of the computer-based mannequins used in simulation settings today, was developed to replicate an anesthesia simulator for training and evolved from a machine to a full-body mannequin. The prototype was constructed and used by the developers, but it was never mass-produced (Cooper and Taqueti 2004). Sim One was a digital/analog computer hybrid with life-like, sophisticated features (moving chest, blinking eyes, dilating pupils, moveable jaw), but the cost of production and challenges to its acceptance halted production. Cooper and Taqueti report that not only was Sim One very expensive, but poor marketing limited its perceived usefulness and demand (2004, i12)

By 1968, however, the part-task trainer mannequin, "Harvey," was introduced in medical schools to teach cardiovascular disease assessment. This part-task trainer was quickly adopted in all levels of medical programs and was later used in nursing programs and continuing education programs. Harvey was used for both teaching and assessing cardiovascular skills in students and practitioners. The use of this particular task trainer has been well studied, and its effectiveness has been demonstrated (Cooper and Taqueti 2004). Students who have been taught cardiovascular assessment skills using Harvey are better able to identify similar problems in patient encounters than students who do not use the task trainer (Cooper and Taqueti 2004, i13). Harvey is considered to be the first successful task trainer - its acceptance made way for more portable versions of cardiac simulators (Cooper and Taqueti 2004).

Developments in the 1980s that were directed toward teaching skills and improving patient safety related to anesthesia resulted in two types of simulators that have greatly influenced simulation training as it is known today. Gaba, along with other

Stanford Medical School colleagues, designed an anesthesia training simulator known as CASE (Comprehensive Anesthesia Simulation Environment) that utilized a mannequin with computer-controlled physiological responses, computer software to control data, and an operating room to produce a realistic environment for student training (Cooper and Taqueti 2004). Critical events in anesthesia were recreated and participant responses were analyzed, leading to a major productivity of research in performance assessment. Modifications of this model by the CAE–Link Corporation enabled the mannequin to be manually controlled by a facilitator in response to pharmacological and physiological variables. The airway could be adapted to create realistic intubation challenges, its pulses were palpable, the lungs and heart could be auscultated, and more (Cooper and Taqueti 2004). The ability to demonstrate mannequin responses enhanced the fidelity of the simulation. Interestingly, Cooper and Taqueti note that a similar anesthesia simulator was being developed at the University of Florida at the same time as the CASE system but independent of it. The Gainesville Anesthesia Simulator (GAS) was developed to diagnosis anesthesia-related errors and had a complex system that was capable of recognizing injected drugs as well as demonstrating pre-programmed responses to the drugs, a feature not available in the CASE model. Cooper and Taqueti report that an early study of the effectiveness of GAS training demonstrated that the training increased the rate at which residents learned (2004, i14). The simulator was eventually owned by Medical Education Technologies Inc. (METI), a major manufacturer who renamed it the Human Patient Simulator (HPS). Cooper and Taqueti observe that the early developers of the anesthesia simulators worked independently. It was not until the late 1980s that conferences on simulation were held that allowed for the exchange of work and

dissemination of research (Cooper and Taqueti 2004). Today's high-technology, high-fidelity computerized patient simulators have the capacity to respond to the student's actions, displaying both physiologic and pharmacologic responses (Nehring 2010). A more detailed description of these simulators is included in section D.

Developments in task trainers continued during this period with models created for skill training, particularly in the areas of assessment, anesthesia, surgery, and pharmacology (Cooper and Taqueti 2004). Cooper and Taqueti list over 20 types of task trainers that have been used in medicine alone, many of these to train students and healthcare practitioners in endoscopic skills, vascular access and repair, and surgical techniques. More complex task trainers were designed to meet the needs of surgeons training in minimally invasive surgical techniques. Task trainers can range from the complex (as in the flexible endoscopic models) to simple (as in simulated wounds) and are the most common form of simulation (Nehring 2010). In many nursing programs, task trainers that simulate anatomical organs and body parts as well as life-sized mannequins are used to teach a large array of fundamental as well as complex psychomotor skills, such as urinary catheterization, intravenous catheterization, wound and ostomy care, and airway management, as well as for physical assessment skills, such as ausculating breath, heart, and bowel sounds (Jeffries 2007; Nehring and Lashley 2009). Rosen observes that a confluence of factors contributed to the progress in advanced task trainers, including three-dimensional images of the human body (from the Visual Human Project), simulators that provide haptic - or tactile - feedback, and the growing interest in minimally invasive surgery (2008, 160).

As noted earlier, simulation can be achieved without technology. One early form of simulation that involved the use of individuals to play the roles of the patient or family member – role play – was an interactive, experiential means for educators to teach communication skills and interviewing techniques (Nehring 2010). Often this involved peer-to-peer teaching exercises, while at other times, faculty members or volunteers participated in the learning exercises. In 1963, however, an original and revolutionary (by the standards of the era) form of interactive teaching emerged at the University of Southern California medical program under the leadership of Dr. Howard S. Barrows, a neurologist on the faculty at the university (Wallace 1997). Dr. Barrows sought a more accurate way to both teach and evaluate medical students who were in a neurology clerkship, having been dissatisfied by the subjective, inconsistent or nonexistent evaluation measures that were currently in place. Wallace (1997) provides a detailed portrayal of the beginnings of the era of standardized patients, Barrows' contribution to standardized patient research, and the revolution in medical education that resulted from his initial vision. Her research provides the history that is included here. Despite Barrow's success, Wallace reveals that his work with standardized patients was highly criticized by other medical school programs. The prevalent view at the time was that trained patient actors were deemed unnecessary, expensive and harmful to the image of medical education.

Barrows' referred to the actors as "programmed patients" and, along with Abrahamson, wrote the first article on the use of such "patients" to assess student performance (Barrows and Abrahamson 1964, 803; Wallace 1997). Not only was Barrows avant-garde in his design of a standardized patient scenario; the educational

techniques that he adopted highly influenced medical education and are still in use today. Barrows underscored the need for active and participatory learning, consistency in experiential learning, and immediate feedback (Wallace 1997). Barrows developed a checklist that the standardized patient completed after a student's simulated clinical encounter that provided feedback on the student's performance.

With the success he experienced with students, he designed continuing education workshops in neurology for physicians, incorporating similar techniques using standardized patients. For the workshops, Barrows invited a small number of expert neurologists to serve as tutors for the program and trained these physician-tutors for the possible situations that they might encounter as teachers. He anticipated all possible circumstances. As expected, he prepared the standardized patients to act as patients with neurological problems. Remarkably though, he also trained the actors to simulate the characteristics of workshop participants who often present challenges in continuing education programs – those who disrupt the learning environment with inappropriate questioning, disinterest, or overbearing natures, for example. Not only were the standardized patients prepared to act as patients with neurological conditions, they were trained to act as physician participants. As a result, the tutors could practice and develop effective techniques to better communicate and manage these situations (Wallace 1997, 9). His tremendous attention to detail served him well. Barrows' work stimulated research in education, leading to discoveries in stimulated recall and clinical reasoning, as just one example, furthering work in this area by his colleagues, Lee Shulman and Art Elstein (10). Wallace explains Barrows' teaching philosophy as "the student should be given an opportunity to learn in the same manner as the student is going to practice" (10).

Simulation provides this opportunity for students, as Barrows discovered in his pioneering work with "programmed patients."

Others were influential in simulation, notably Patricia Stillman, director of a pediatric clerkship, whose work with Ray Helfer at Michigan State University involved "programmed mothers" or "simulated mothers," with whom medical students interacted (Wallace 1997). Stillman worked to standardize a rating scale for standardized patients to use when evaluating a student's performance, developing the Arizona Clinical Interview Rating Scale ("Arizona Scale"). Importantly, Stillman conceived the idea of "patient instructors" – standardized patients who not only assessed the student's performance, but who were trained to teach the student how to correctly perform a technique (Wallace 1997). Wallace reports that while the "patient instructors" were not experts in medicine or physical assessment, they were competent in using their own bodies to teach the process of physical assessment. Stillman considered standardized patients as "co-educators" (Wallace 1997, 14).

Further advancement in the use of patient instructors or patient educators by physicians such as Kretzschmar, who incorporated the use of the patient educators for teaching communication skills along with gynecological examinations, have assisted in the evolution of standardized patients as they are understood today (Wallace 1997). The evolution in the role of standardized patients changed to meet the educational needs of the curriculum, with the inclusion of standardized patients who have known chronic conditions in addition to healthy actors. The contributions of Barrows, Stillman, Kretzschmar, Abrahamson and others, in conjunction with the perceived need for curricular reforms established a permanent place for the incorporation of standardized

patients into medical school curricula. By 1984, requirements for medical students to pass directly observed clinical performance exams prior to graduation were being discussed (16). In effect, this set the foundation for the adoption of the now standard clinical competency examination of the National Licensing Examination Board, the Step 2 Clinical Skills exam (see USMLE -http://www.usmle.org/step-2-cs/), which relies on standardized patients and is required for all graduates of United States and foreign medical students (Wallace 1997, 25).

Standardized patients are used frequently today in medical and nursing programs for teaching and evaluation, in continuing education programs, in credentialing for professional groups and in remediation for healthcare students and professionals. While the integration of standardized patient simulation is not as extensive in nursing, their use in nursing programs has increased since the mid 1990s, particularly in graduate nursing programs and to a lesser extent in undergraduate nursing education (Nehring 2010). In a ten-year review of the literature from 1996-2005 on standardized patients in health care education, the majority of articles were from medicine, with only 15% of the articles from nursing (May, Park, and Lee 2009, 489). No detailed history of the inclusion of standardized patients in nursing was found in preparation of this dissertation. Nonetheless, hundreds of articles have been written on the use of standardized patients in nursing in the past decade, and its incorporation into nursing education is likely to increase.

The final forms of simulation in healthcare to emerge are computer-based and initially included computer-assisted instruction (CAI) that appeared in the late 1970s, which was used to teach physiology, pharmacology, health assessment, skills, and

decision making (Maran and Glavin 2003; Nehring 2010). What began as novel computer-aided instruction, often using CD-ROM, has progressed to three-dimensional computer imaging, virtual worlds, and ultimately to computer-based learning that is accompanied by touch, known as haptics. Some of the early CD-ROMS programs used in healthcare ethics were mentioned in Chapter Two. The evolution of this form of simulation in healthcare mirrors the developments in technology and education and has benefited simulation by enhancing the fidelity, level of student interaction and quality of feedback. Computer-aided instruction can be enhanced by combining it with a task-trainer, allowing surgeons to practice techniques such as endoscopy and laparoscopy (Maran and Glavin 2003). When the system allows the operator to "feel" the activity through haptics (touch technology), the experience becomes very life-like (Maran and Glavin 2003; Rosen 2008). This allows the teaching of "complex procedures that are too dangerous to practise on live patients" (McGaghie et al. 2010, 56-57). One of the latest forms of computer-based instruction consists of two-dimensional images of life-size virtual patients that are projected onto a wall (Nehring 2010). The technology allows evaluators to track the students eye movements during the interactions with the virtual patient to view where the student is looking.

As this synopsis of the history of simulation suggests, medicine has generally taken the lead in establishing some of the forms of simulation, in particular, high-fidelity patient simulators, complex task trainers, and standardized patient simulations, with nursing tending to follow the progress set in medicine. This is likely a result of the difference in structure between the professional programs. While both professions emerge from the apprenticeship model, medical students have less direct supervision

when on the clinical units and spend shorter times with the physician supervisors during their clerkships than baccalaureate nursing students. Physicians find themselves supervising medical students while simultaneously managing their caseload. Undergraduate nursing students, on the other hand, typically have clinical experiences under the direct supervision of a nursing instructor and spend on average a half semester or more with one particular instructor. It might also be the case that the different forms of prelicensure education (baccalaureate, associate degree, hospital-based programs, accelerated BSN programs) with different curricula and program lengths ranging from one to four years make early adoption of new technologies more challenging. It is also likely that the expenses of the new technologies have played a large part in the nursing profession's restrained approach to adopting these. As will be discussed in the challenges of simulation, for some programs the costs have been prohibitive, particularly when first introduced, but the technologies often become more affordable with time and wider-spread adoption. Although its application as a teaching method is "nontraditional," the incorporation of simulation in medical and nursing programs has increased significantly over the past decades. Medical and nursing programs are making significant investments in simulation, developing simulation learning centers and purchasing equipment. It is very likely that today's student will expect simulation activities to contribute significantly in their curricula.

C. Factors Influencing the Development of Simulation as an Educational Method in Healthcare Education

The modern era of simulation arose from the confluence of several factors: the need to find a more effective means to evaluate medical students' clinical competencies

and the dynamic changes in the healthcare system that ultimately had a transformative effect on the education of medical and nursing students. As noted earlier, almost fifty years ago in his seminal work on standardized patients, Barrows (Barrows 1964; Wallace 1997) outlined the difficulties that faculty members had in assessing the clinical preparedness of medical students. Faculty members were challenged not only to consistently find appropriate patients, but also to find sufficient time to observe medical students during their clerkships and to note their clinical performances with adequate detail. When a faculty member had the opportunity to directly observe a student's interaction with a patient, however, the faculty member's presence affected the dynamics of the student-patient relationship (Barrows 1964, 802). In addition, the lack of a reliable clinical competency examination troubled educators. The examinations were written or oral, but they depended upon assigned patients, a process that was unpredictable. As well, there was no system in place to compare performances among students (Barrow 1964, 803). The need for a more reliable evaluation method prompted the development of an innovative form of simulation, the standardized patient, which has had lasting success.

The development of simulation has also been highly influenced by the changes in the health care climate over the last several decades, which have had a profound effect upon the education of medical and nursing students. Changes in healthcare delivery, the rapid expansion of knowledge, research and technology, the emphasis on safety and quality, and a greater emphasis on the ethical considerations in patient care contributed to transformations in the way in which medical and nursing students are educated, particularly in the way in which simulation has been developed, accepted and integrated into medical and nursing programs (Kneebone 2010; Nehring 2010; Satava 2009).

The implementation of managed care in the United States, for example, has reduced the average length of patient stay, subsequently decreasing the opportunities for sustained student-patient interactions (Kneebone 2010; Okuda et al. 2009). Patients who are admitted to acute care facilities tend to be more acutely ill and complex, limiting the opportunity for medical and nursing students to work independently (Kneebone 2010; Okuda et al. 2009). Advances in health care, research and technology have produced a considerable growth in information, creating pressure on medical and nursing programs to expand the curricula to accommodate this growth (Okuda et al. 2009). This expansion in healthcare information occurred in an educational climate during which medical programs were shortened programs and medical residency hours were reduced, placing additional constraints in learning opportunities (Kneebone 2010). In nursing, faculty shortages, fewer clinical sites and clinical expenses have limited the ability of some schools to provide clinically supervised education (Nehring 2010). Clinical learning was also affected by patients who were no longer as willing to have students "practicing" on them. These factors contributed to "a disconnect between the classroom and clinical environment" (Okuda et al. 2009, 330). Educators in both medical and nursing programs faced the problem of developing creative approaches to best meet the educational needs of students in this changing landscape, which lent support to simulation as a technique to enhance clinical learning.

Another major influence that favored the development of simulation has been the renewed emphasis on quality and safety that followed the Institute of Medicine's (IOM) influential report, *To Err is Human: Building a Safer Health System* (Durham and Alden 2008; Kohn, Corrigan, and Donaldson 2000; Nehring 2010; Okuda et al. 2009). The

report acknowledged the importance of learning environments that seek to improve communications, establish a more effective work culture, report errors, and develop feedback mechanisms to ensure that learning results from mistakes (Kohn, Corrigan, and Donaldson 2000, 178). Significantly, the report advocated that academic and health care institutions "use simulations whenever possible," specifying that "health care organizations and teaching institutions should participate in the development and use of simulation for training novice practitioners, problem solving, and crisis management, especially when new and potentially hazardous procedures and equipment are introduced" (Kohn, Corrigan, and Donaldson 2000, 179). This influential report summarized much of what is known about errors in healthcare today, advising that healthcare professionals should "anticipate the unexpected" (174). Moreover, it submits "that *ALL* technology introduces new errors, even when its sole purpose is to prevent errors" (175). As a result of these findings, simulation has emerged as a valuable method to train healthcare professionals on new technologies, to improve skills related to tasks and crisis management, and consequently, to reduce error and harm (175). Later IOM reports also called for reform in the preparation of healthcare professionals to address the continuing safety issues in health care today (Nehring 2010). An Agency for Healthcare Research and Quality report on patient safety (Hughes 2008) also endorsed simulation in nursing education as a means to reduce medication errors. The report considers simulation essential to enhance critical thinking, decision making skills, communication skills and team work, thereby improving safety in health care and patient outcomes (Durham and Alden 2008). Durham and Alden explain that simulation exercises can teach the psychomotor skills needed for safe medication administration, but more so,

simulation can provide practice opportunities for handling the clinical decision making that surrounds medication administration.

A deepened understanding and appreciation of the ethical issues in health care has had a considerable influence on the development and utilization of simulation in healthcare education. Ziv et al. establish that there is an "ethical imperative" to provide carefully designed simulated learning experiences whenever feasible (2006, 252). The authors address the enduring conflict that positions the need for students to work directly with patients against the goal of providing optimal, safe care for patients. Simulation is presented as useful for "mitigating these ethical tensions and practical dilemmas" (Ziv et al. 2006, 252). The authors also suggest that simulation exercises can be designed to enhance humanistic training. While Ziv et al. review this ethical obligation from the position of medicine, their position is equally relevant to nursing and other health-related professions. While agreeing that it is essential that students interact and perform their clinical activities with actual patients, the authors argue for the integration of simulation into the curriculum. Four themes are examined in their analysis: best standards (to include patient care, education, and skills evaluation), error management and patient safety, patient autonomy, and social justice and resource allocation (252), which are examined below.

First, the perspective of best standards claims that the patient's wellbeing is the primary consideration, despite the need for student training. Harm that occurs from inexperienced care providers or that arises from a learning experience is justified "only after maximizing approaches that do not put patients at risk" (Ziv et al. 2006, 253). Students should have adequate skills-training sessions in simulated experiences, thereby

improving their competencies when working with actual patients. Fundamental to this concept is the message that "patients are to be protected whenever possible and they are not commodities to be used as conveniences of training" (253). In addition, best standards practices in education maintain that teachers have a moral obligation to provide optimal learning experiences for students. Simulation has a valuable role in providing essential learning experiences when there are inconsistent or absent opportunities in actual clinical settings. The authors suggest that with simulation-based learning "the process and structure of medical education then becomes a series of progressive choices by educators rather than a response to ad hoc clinical availabilities" (253). As a result, educators move closer to attaining the best standards for education. Furthermore, Ziv et al. acknowledge the best standards practice of using simulation-based testing to assess clinical competency. The Objective Standardized Clinical Examinations (OSCE), for example, uses standardized patients in simulated clinical experiences to assess a medical student's competency level in clinical skills.

Second, Ziv et al. (2006) illustrate the value of simulation in error management and improving patient safety in high-risk professions, such as medicine. Despite the efforts of educators and students, errors occur in clinical settings. In situations with actual patients, errors are either avoided by the educator's oversight or stopped in progress (Ziv et al. 2006). Simulation exercises, however, permit errors to arise in safe settings, allowing students to see the results of their actions. Errors are reviewed in simulation settings as part of the debriefing period, prompting students to learn from mistakes. In addition to individual simulation exercises, simulations can also be developed that illustrate patient safety and error management at a systems level (254).

Third, the ethical imperative considers the issue of patient autonomy. The authors observe that despite the patient's right to refuse treatment and the right to refuse to be cared for by a student, in customary practice, the process for informing the patient is automatic and not individualized, so much so that patients may not fully understand their rights. Moreover, patients may not be aware a student is treating them. In such circumstances, the pressure to provide learning experiences may compromise the patient's right to a truly informed consent. Ziv et al. offer that simulation can protect the right to autonomy by providing alternative learning opportunities, thereby reducing the need to practice procedures on patients. Simulation exercises can also assist in teaching how best to obtain informed consent to help ensure the quality of the informed consent process and to respect patient autonomy (Ziv et al. 2006).

Lastly, the argument for an ethical imperative speaks to the issues of social justice and resource allocation. Ziv et al. observe that patients in academic hospitals have a disproportionate burden in terms of the risks associated with "novice training" (2006, 254). Furthermore, the patient population in academic hospitals is comprised of a disproportionate number of poor and disadvantaged individuals. While not mentioned by the authors, it is also likely that poor and disadvantages patients may be less aware of their rights to refuse treatment or may feel obliged to agree to procedures as part of charity care. This issue of distributive justice calls for more simulation-based training to prevent the objectification of patient as commodities for training (Ziv et al. 2006). The authors also point to the benefits of simulation in reducing the need to use live animals for training, noting the availability of sophisticated simulator models.

While the above analysis of influencing factors is not exhaustive, it is evident that these important factors have had either a direct or tangential effect on one another, and together they have propelled simulation to the forefront of medical and nursing education. Other "driving forces" have been identified to integrate simulation more fully into health care that reflect the goals of professional schools, professional societies, healthcare institutions, simulation societies, liability insurers, and the public, among others (Gaba 2004). These include improving patient care and patient safety, improving performance and efficiency, maintaining competency, remaining competitive, and reducing errors and costs (Gaba 2004, i8). Although a major goal of simulation is to improve the student's proficiency in order to reduce the likelihood of error and harm and to improve patient care, it would be unrealistic to expect that students are able to perform optimally in clinical settings following a simulated experience. Simulation as a complement to actual clinical performance, however, alters the "learning curve" for students (Issenberg et al. 2005, 22) and helps to ensure that the first time a student performs a skill with a real patient, the risk for error has been reduced (Durham and Alden 2008; NCSBN 2005).

D. Types of Simulation Activities Employed in Healthcare Education

As noted in section A above, there are many typologies that are used to identify and describe the various forms of simulation. Simulations can be identified by the use of technology, the level of complexity, the level of fidelity, and the use of computer-assistance. Additionally, there are forms of simulation that combine or integrate various simulation components, referred to as hybrids, such as using a task trainer or a standardized patient with virtual reality. Most texts on simulation provide descriptions of

the various types, but there is often overlapping among the categories. Role play is included in some categorizations of simulation (see Alinier et al. 2006; Nehring 2010) although depending upon how it is understood and defined, it may not provide students the opportunity to assume a functional role and instead be merely "play acting." Adding further uncertainty, some reviewers place role play and standardized patients in the same category, although the use of standardized patients provides a high-fidelity simulation experience.

Simulation that uses a device (simulator) is often described by the type of simulator (high-fidelity human patient simulation, for example). The names by which certain types of simulation are known have changed over the years, and it is likely that new forms of simulation will emerge in the future. It is important, however, for educators to have an understanding of the levels of available fidelity and the complexity among the various forms to assist them in planning simulation-based learning exercises. Durham and Alden (2008), Maran and Glavin (2003) and Nehring (2010) provide useful descriptions, which provide much of the support for this section. As Maran and Glavin point out, Penn State University has developed an extensive resource at its simulation website on types of simulators, which is also consulted. The ordering of the types of simulation most commonly used will follow a nomenclature that reflects the general complexity of the technology.

i. Verbal simulation – This is simulation that relies on the participants only. It is typically conducted with no technology. Role play and "what if" discussions comprise this category (Gaba 2004).

ii. Simulated patient and standardized patient – These are individuals, whether paid actors or volunteers, that are "carefully trained to take on the characteristics of a real patient in order to provide an opportunity for a student to learn or be evaluated on skills *firsthand*," creating "veritable" learning experiences (Wallace 1997, 6). Barrows introduced this type of simulation and originally referred to these individuals as "programmed patients" (1964, 803). The term "simulated patient" tends to be used as the generic term. The term "standardized patient" was suggested by Geoffrey Norman, a psychometrician, to "capture one of the technique's strongest features, the fact that the patient challenge to each student remains the same" (Wallace 1997, 6). The concept of standardization in the patient role allows for consistency in the clinical experience, attempting to ensure that each student has a similar experience. Other names that have been seen in the literature include patient instructor and patient educator, denoting the role of the simulated or standardized patient to provide feedback on the assessment and if desired, to guide the student's performance. Additionally, the substitute patient may be called professional patient, surrogate patient, and teaching associate (Wallace 1997, 5). The standardized patient can be a healthy person or selected because of his or her underlying medical conditions. Originally designed to evaluate the medical student's clinical skills and patient management, standardized patient simulations are used in teaching and assessing physical assessment skills, communication skills and professionalism (including breaking bad news), ethics, interviewing skills, diagnosis, patient management, patient counseling and patient education (Decker et al. 2008; May, Park, and Lee 2009; Wallace 1997). They are also used for learning "sensitive" tasks, such as pelvic examination and male genito-rectal examination, and domestic violence

training (Issenberg and Scalese 2008; May, Park, and Lee 2009). While more extensively used in medical programs, the use of standardized patients is growing in nursing programs, more so in graduate programs (Decker et al. 2008).

iii. Task trainer – This simulator is also called a part-task trainer or skill trainer and reproduces part of a task, skill, or an environment rather than a complete, integrated experience (Durham and Alden 2008; Gaba 2004; Maran and Glavin 2003). The fidelity of the task-trainer can vary from low to high and complexity can range from simple to complex. In general, they represent body parts or are full-body models or training versions of equipment, such as endoscopes. Task trainers usually teach one particular psychomotor skill or an aspect of a technique and are "static," in that they do not elicit a response from the learner. They are popular because they are usually portable and affordable. Well-known examples of a task-trainer are Harvey, the cardiovascular assessment simulator, and Resusci® Anne, used for training in cardiopulmonary resuscitation. Other examples include anatomical models of body parts, such as a pelvis to perform urinary catheterization or a pelvic examination and an arm to perform intravenous cannulation. Task trainers can be combined with simulated patients to enhance the realism and provide opportunities to engage interpersonal and communication skills (Kneebone 2002).

iv. Patient Simulator or human patient simulator (HPS) – Also known as "integrated systems," this advanced method integrates the computer with a mannequin, computer screen, or virtual reality system to represent a patient (Maran and Glavin 2003; Penn State, What's Available). The systems range from simple to complex and from low to high fidelity. The patient simulators can be used for individual or team-based teaching.

Mannequin-based patient simulators are used with more frequency in medical and nursing programs. The patient simulators are either model-driven, in which the mannequin responds automatically to the learner's interventions (or lack of action) or instructor-driven, in which the simulator response as directed by the facilitator. The complexity and fidelity of the system is reflected in the mannequin cost. Mid-range or intermediate systems have speech availability, chest movement, heart, lung and bowel sounds, pulses, blood pressure, and have computer screens to display vital signs. Higher level systems add more physiologic function, movement and realism. The highest systems are quite complex and are capable of providing physiologic and pharmacologic responses to interventions and administered medications through a computer identification system. With the addition of environmental fidelity, these systems create a realistic clinical situation (Maran and Glavin 2003).

v. Computer-based patient simulators – The interactive software or web-based programs allow students to work independently, thereby accommodating their own pace of learning and learning needs (Decker et al. 2008). Multiple students at a time can work independently through the simulation or as groups. Computer-based simulations are often used to teach concepts, critical thinking, and decision making skills, and less often to teach psychomotor skills (Penn State, What's Available). They provide immediate feedback to the student and also compile statistics for the instructor (Decker et al. 2008; Maran and Glavin 2003). Examples of computer-based simulation include SimHosp and Second Life (Nehring 2010). Many examples of computer-based simulations are available online (Penn State, What's Available) and include programs on cardiac

auscultation, cardiac arrest, and obstetric emergencies. The cost for this type of simulation is generally reasonable.

vi. Virtual reality-based patient simulators – This form of simulation employs a computer-generated patient and environment that creates a high-fidelity experience, using sensory stimuli and at times three-dimensional imaging. Although the contemporary versions of virtual reality are sophisticated and are designed to immerse the student in the experience, it had its beginnings as early as the1950s (Rosen 2008). Virtual reality systems may also integrate task trainers to enhance the authenticity of the experience (Maran and Glavin 2003). The use of haptic feedback introduces the sense of touch, allowing the learner to experience the "feel" of the task or skill (Penn State, What's Available). Virtual reality is available in various forms, which affect the way in which the student experiences the simulation. Immersive virtual reality "integrates the user into the world of the computer," while pseudo virtual reality permits the student to observe the environment but limits how much he or she can affect it (Vozenilek et al. 2004, 1151). Desktop or screen-based virtual reality confines the experience to the computer itself and is limiting (Gaba 2004). Augmented reality superimposes virtual images onto real images by using head-mounted displays or screens (Vozenilek et al. 2004). Some systems allow the facilitator to track the learner's eye gaze as he or she interacts with the virtual patient. While many systems exist that teach technical skills, virtual reality is also used to teach history-taking, assessment, clinical reasoning, communication and interviewing skills (to include motivational interviewing), ethics, and professionalism (Cook, Erwin, and Triola 2010; Deladisma et al. 2007; Fleetwood et al. 2000; McEvoy, Butler, and MacCarrick 2012). Well known virtual reality-based simulations include Pulse!! The Virtual Clinical

Learning Lab, which pulls together students from different healthcare professions, Second Life, SimHosp, and SimClinic (Campbell 2007; Nehring 2010). Virtual reality is often used for procedural instruction that trains the learner in intravenous catheter insertion, gastrointestinal endoscopy or minimally invasive surgery (Passiment, Sacks and Huang 2011). Virtual reality has been used more often in medicine than in undergraduate nursing, likely due to the cost (Nehring and Lashley 2009). There are some programs available for undergraduate nurses, however, such as an intravenous catheter insertion program that includes haptic feedback, which was developed as early as 1996 (Merril and Barker 1996; Nehring and Lashley 2009).

vii. Hybrid forms – As simulation has matured and educators have become more comfortable with the technique, different variations have emerged that integrate two or more types of simulation. This increases the authenticity of the experience, but more so, it broadens its usefulness in reaching the educational goals, engaging the learner's cognitive, psychomotor and behavioral skills. For instance, computer-based models are often combined with task trainers to increase the authenticity of the simulated experience (Maran and Glavin 2003). Standardized patients may be used with mannequin–based human patient simulators to support the development of communication skills and professional attributes in addition to technical skills. In these scenarios, the standardized patient may have the role of a family member, while the human patient simulator functions as the patient (Bowyer et al. 2010). Standardized patients are also used in conjunction with task-trainers to allow students to practice communication skills while performing a skill (Kneebone 2010). Doing so adds context and complexity to the situation. Kneebone cautions that selecting the type of simulation in terms of its

complexity is significant, particularly when students are learning specific technical skills. Students typically focus on mastering the technical aspects of a task prior to managing the same task in the context of a patient-centered scenario where interpersonal and communication skills are required. Simulations need to best meet the level of the learner; those that are deemed too simple may be undervalued and those that are considered too complex may cause unnecessary frustration and a lack of confidence (Kneebone 2010). Hybrid forms of simulation, however, offer a rich learning environment that develops context and an ease of transfer of learning to the actual clinical setting.

E. Theories That Support the Use of Simulation in Healthcare Education

Many theories have been put forward to support the use of simulation in medicine and nursing. In general, adult learning theories are applied in the professions to describe and understand the relationships between individuals, situated experiences, social interactions, and knowledge (Fenwick 2001). Many of the educational approaches emerge from the experiential learning theories of Dewey (1933), Schön (1983) and Kolb (1984). Experiential learning theories are grounded in "constructivism," which is understood as reflecting on experience "to construct new knowledge" (Fenwick 2001, Constructivism, 9). Dewey, Schön and Kolb emphasize the role of reflection in learning. The model of Dreyfus and Dreyfus (1980, 1986, 2009), which has been adapted by Benner (2001), also supports simulation as an educational approach based on its theory of competency and the process of skill acquisition. In addition, the concept of a signature pedagogy proposed by Shulman (2005a, 2005b) as a model of professional practice is relevant to simulation. Other theories are also evident in the simulation literature. For instance, Ericsson (2004) has been cited by many in medicine and nursing for his work in

deliberate practice (Kneebone 2005; McGaghie et al. 2009; NCSBN 2005). The literature also reveals the use of the transformative learning theory of Mezirow (1991), the adult learning theory or "andragogy" of Knowles (1970) and situated cognition theories (Fenwick 2001; Paige and Daley 2009). This dissertation will demonstrate the relevance of the theories and models of Dewey, Schön, Dreyfus and Dreyfus, Benner and Shulman, each of which is particularly applicable to simulation.

As part of its structure, simulation creates the opportunity for students to reflect on their actions, attitudes and feelings that arise as a result of a simulated clinical experience. By its design, simulation includes a period for reflection that follows the implementation phase, during which the student or a group of students review their approach to solving a problem or their practice performance. This particular design characteristic sets about to accomplish that which Dewey (1933) stipulated as essential to education – a reflective practice. For Dewey, reflective thought is "the active, persistent and careful consideration of any belief or form of knowledge in light of the grounds that support it and the conclusions to which it tends" (9). As understood by Dewey, reflective thinking orders thoughts in such a manner that they link together so that previous outcomes influence the next in a "sustained movement to a common end" (5).

Reflective thinking is purposeful and consists of two phases: "a state of doubt, hesitation, perplexity, mental difficulty, in which thinking originates, and …an act of searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity" (Dewey 1933, 12). This description aptly fits the complexities and problem solving that surface as students work through a simulated clinical experience and also reflects the mental processes that arise as students are engaged in the teaching

and learning experience. Dewey suggests that experiencing a problem moves the learner to search past knowledge and experiences for possible solutions. In the absence of relevant experience, the student will grasp at a quick answer and "jump" to a conclusion, but Dewey notes, "when one is willing to endure suspense and to undergo the trouble of searching" reflective thought arises (16). Thus, as Dewey observes, reflective thought frees the individual from routine action, directs deliberate thought, preparation and planning, and "enriches things with meaning" (19). The goals of reflective thought, therefore, aid the medical and nursing student in critical reasoning, problem solving and forming well-considered outcomes.

Dewey also felt strongly about the type of projects that educators plan and what features make certain activities valuable or "educative" (217). He contended that educational activities needed to meet four conditions. They must elicit and hold the interest of the individual, have intrinsic value "beyond immediate pleasure," arouse a new curiosity and desire for new information, and involve sufficient time for achievement of its aim (218-19). Dewey's description of worthwhile learning activities guides the educator in planning simulated learning experiences that will assist students in developing and applying new knowledge.

Working from the tradition of Dewey and other experiential learning theorists, Schön (1987b) provides a hypothesis that focuses on the learner's experience as well as on the notion of a reflective practicum. Schön submits that the epistemology of traditional education centers on the vestiges of Technical Rationality, which is distinguished by its reliance on science and research (1983). Schön argues that Technical Rationality minimizes the place of "artistry" in practice. He explains artistry as learning something

new "when you cannot in principle know what it is you're supposed to be learning and yet you must learn it" (1987b, 10). Professional practice is challenged by real-world problems, the "indeterminate zones of practice- uncertainty, uniqueness and value conflicts" that "escape technical rationality" (Schön 1987a, 6). A reflective practicum is designed to provide learning experiences that enhance the artistry required to learn in this "messiness" (1987b, 6). For Schön, the art of learning also includes applying knowledge to concrete situations. The basis for this form of reflective practicum is learning by "doing"; therefore, educators are encouraged to create learning environments in which students learn through experience. The educator's role also involves assisting students to merge these skills with applied science. As Schön observes, applied science "has a special zone of relevance which depends on our ability to do these other things, on the one hand to set problems in ways that the categories of applied science can fix and fit and, on the other hand, to fill with art the gap between theory and technique and concrete action" (1987b, 7). Experiential learning can fill this gap by creating opportunities for a reflective practicum that includes "virtual" or simulated environments in which students learn by "doing" in a safe environment that is supported by an educator in the role of a "coach" (Schön 1987b, 7). Students, in effect, "try to educate themselves before they know what it is they're trying to learn" (Schön 1987b, 10). This process of discovery helps students to bridge the gap between theory and practice. The teacher in the role of a coach interprets the student's actions and shares these observations.

Central to the reflective practicum as defined by Schön are the concepts of "reflection-in-action" and "reflection-on-action." Schön explains reflection-in-action as "tacit and spontaneous" understanding in the midst of doing (1987b, 3). Reflection-in-

action often is generated as one's performance produces unexpected results (either positive or negative), leading to a natural reflection on the event as it transpires. This involves "thinking on one's feet" to create experiments and testing them out to solve problems on the spot. Episodic reflection-in-action aids in professional development and expertise and is central to professional practice (Schön 1983). Reflection-on-action, on the other hand, emerges after an event and contributes to understanding and knowledge-building. It occurs as the person examines his or her actions, feelings, and the possibilities of alternative courses (Fenwick 2001). Simulation serves as a reflective practicum that provides opportunities for students to reflect-in-action as they work through a situation and, in addition, provides time for reflection-on-action following the event.

Simulation is often selected as a teaching method because of its role in developing critical reasoning and technical skills through practice opportunities. The educational model of Dreyfus and Dreyfus provides an understanding of skill acquisition and the relationship between theory and practice that is central to simulation. The Dreyfuses' model is a five-stage model of skill acquisition that was developed as a result of their work with airline pilots, chess players and automobile drivers (Dreyfus and Dreyfus 2009, 8). The authors maintain that although formal rules assist in skill formation, experience is necessary to progress to skill proficiency (1980, 5; 1986, 19-20). The original formulation of this model in a manuscript on skill learning with pilots reveals the learner's passage through the stages of novice, competency, proficient, expert and mastery (Dreyfus and Dreyfus 1980). The original stages have been modified slightly; in a 1981 manuscript by Stuart Dreyfus, the five stages are identified as novice, advanced

beginner, competence, proficient and expert. These revised stages appear to have been consistently used in the later writings of Dreyfus and Dreyfus and are used in Benner's adaptation of this model and used in this description as well.

Dreyfus and Dreyfus observe that progression through these stages is marked by four mental functions (1980, 1981). First is the learner's ability to relate elements of a situation to previous experience (situational learning) as the learner moves from the novice stage of unsituated learning. Next is the capacity for salience recognition, that is, knowing what elements of a situation are important, which improves with experience (1981, 25). Novice learners struggle to identify the important elements or information in a situation and instead give equal attention to all elements. A learner's progress is also distinguished by the ability to analyze holistically rather than analytically. Finally, progress is also marked by a move from rational to intuitive decision making (1981, 25).

In 1984, Benner applied the Dreyfuses' model in a field study to examine the experiential learning of nurses and engaged narratives to examine nursing knowledge (2001, 293). Benner illustrates the way in which nursing students and nurses progress in moving toward expertise in practice through their defined stages of novice, advanced beginner, competent, proficient and expert. Benner explains that the model reflects the movement from a performer's early use of abstract knowledge to using "past concrete experience" (13). As performers progress through the stages, they move from a preoccupation with the many pieces of a clinical situation to an ability to view the situation holistically. Benner observes that the passage from novice to expert is characterized by a movement away from "*detached* observer to *involved* performer" (13).

Another noted difference between the novice and the expert practitioner is the way in which rules are followed and principles are applied.

From the time of Benner's influential study, the works of Benner and Dreyfus and Dreyfus have been closely associated. The researchers publish together, and the Dreyfuses have applied their theory to nursing practice as well. Dreyfus and Dreyfus contend, "Nursing … is at the same time a paradigm case of applied theory and an outstanding example of a practice that is in principle beyond the reach of theory and analytical reason" (2009, 19), thus acknowledging the importance of both theoretical knowledge and practice to achieve expertise. They argue that complex practice professions such as nursing and medicine require experiential learning in addition to theory. In light of the similarities in the proposed theories of these researchers, they are examined together to establish their relevance to simulation in medicine and nursing.

The skill acquisition theory observes that the novice learner is dependent upon both rules and principles and focuses on the task only, having no prior situated knowledge to assist in learning new skills. The educator must, therefore, consider the level of the learner when designing a simulated learning exercise so as to not overwhelm the novice learner with extraneous details and to allow the learner to focus on the task at hand. In order to assist the novice, therefore, the educator should reduce distraction and place learning in noncontextual situations (Dreyfus and Dreyfus 2009, 10). Applying this theory, a student who is learning to insert a urinary catheter would first learn the principles involved (sterile technique, for instance) and practice the technical skills isolated from context and distraction. Once there is a level of skillfulness with the basic task, the educator can place the learning in context and introduce patient variables. With

the addition of clinical practice and opportunities to work on real problems, the student will eventually progress to the advanced beginner stage (Dreyfus and Dreyfus 2009). As the learner moves from non-situational learning to recognizing similarities in situations, the learner develops the ability to discriminate meaningful from trivial data (Dreyfus and Dreyfus 1980).

This model underscores that the simulated learning experience should be aligned with the level of the learner to avoid overwhelming the novice or depriving the advanced learner of challenges. Importantly, however, Benner cautions, "What one cannot do is be beyond experience, or be responsible for what has not yet been encountered in practice" (2001, x). With experience, students progress from the novice stage through the remaining stages, with the possibility of reaching the expert stage as practitioners. Expertise is marked by intuitive performance that does not rely upon rules or principles, but a know-how and discretionary judgment that comes only from experience (Benner 2001, xxiii). Dreyfus and Dreyfus and Benner argue strongly for experiential learning. While simulation is not a substitute for actual clinical experiences with patients, simulation can provide learning experiences for students to practice clinical reasoning and technical skills, thereby learning how to recognize what is important in a situation, set priorities, apply theoretical knowledge, and learn to view the whole picture.

In his work with the Carnegie Foundation for the Advancement of Teaching, Shulman guided the comparative studies of the professions tasked with identifying the characteristics that distinguish what he refers to as the "signature pedagogies" of profession education (2005a, 52). The Carnegie Foundation recently published the results of the investigations of nursing in 2009 and medicine in 2010

(http://www.carnegiefoundation.org/publications_archive). While not a learning theory per say but rather an exposition on professional education, the thesis of a signature pedagogy holds relevance to simulation as a teaching method in medicine and nursing. Signature pedagogies, Shulman explains, are the unique features that characterize teaching and learning in a profession - the fundamental components that teach professionals "to *think*, to *perform* and to *act with integrity*" (2005a, 52). Shulman describes professional education as having intellectual, technical and moral elements that are reflected in the three apprenticeships of the professions:

> a cognitive apprenticeship wherein one learns to think like a professional, a practical apprenticeship where one learns to perform like a professional, and a moral apprenticeship where one learns to think and act in a responsible and ethical manner that integrates across all three domains (Shulman, 2005b, n.p.)

As examples of the characteristic forms of signature pedagogies, he offers clinical rounds in medicine, case dialogue in law and design studios in engineering (2005b). The significance of the signature pedagogies, Shulman argues, is their influence "in shaping the character of future practice and in symbolizing the values and hopes of the professions" (2005a, 53). These fundamental characteristics form the "habits of the mind, habits of the heart, and habits of the hand" (2005a, 59). The signature pedagogies, therefore, direct the formation and socialization of professionals as well as their instruction (Shulman 2005b; Benner 2009).

Findings of the Carnegie studies demonstrate that the professions give unequal attention to the intellectual, technical and moral dimensions of education, which may indicate the priorities of the professions (Shulman 2005a, 52). The signature pedagogy of

medicine, for example, reveals more attention is given to clinical performance with less attention to forming professional attributes (2005a, 52). In nursing, the signature pedagogy reveals more emphasis on professional identity and ethical comportment and less attention to the instruction in the sciences that are essential to nursing (Benner et al. 2009). Shulman submits that the professions have a responsibility to give equal attention to all three dimensions that encompass not only the instruction of students, but their socialization into the profession as well (2005a).

The signature pedagogies are categorized as pedagogies of uncertainty, engagement and formation (Shulman 2005b). Uncertainty arises from the nature of the instruction, the interactions of the students and educators in classes and in clinical settings, the interactions of peers, and from the curriculum itself (57). The uncertainty brings with it an opportunity for students to experience unstructured professional practice – the "messiness," value conflict and uniqueness of problems inherent to professional practice to which Schön (1983) referred – and learn to manage this ambiguity which is necessary for professional growth. Shulman observes that in these times of changing "curriculum materials," educators have to creatively adapt the signature pedagogy to the lack of consistent opportunities with patients (2005b, n.p.) Patients are not as readily available to students in inpatient settings and those that are admitted are often in facilities for shorter periods, directly affecting learning opportunities. The signature pedagogy also works to bridge the perceived "gap" between theory and practice that many educators observe; it has the potential to "connect thought and action" (2005b, n.p.).

The signature pedagogy of a profession has far-reaching effects, affecting how students and educators define expertise, the structure of authority and even the design of

the classroom (Shulman 2005a); therefore, it should be carefully considered and implemented. It is distinguished both by what it is and "by what it is *not*," the approaches that are emphasized and what is minimally included. He observes that "a choice necessarily highlights and supports certain outcomes while, usually unintentionally, failing to address other important characteristics of professional performance" (2005a, 55). Presently, the pedagogical approaches in medicine include case studies, web-based instruction, small group instruction, standardized patients and simulation, clinical rounds and patient presentations (Shulman 2005b; Swanwick 2010). In nursing these include simulation, case studies, web-based instruction, pre- and post-clinical conferences, role modeling, and coaching (Benner et al. 2010). Simulation, which is used in both medicine and nursing, is a choice that can create an engaging, interactive and formative learning environment. Simulation is a well-suited methodology to enable the development of the cognitive, practical and moral apprenticeship of nursing and medical students, providing opportunities for educators to place emphasis on the knowledge, skills and attitudes necessary for the development of the artistry of professional practice.

F. The Structure and Components of Simulation in Healthcare Education

Simulation has well-recognized components that provide its structure and contribute to its success as a teaching method. Hertel and Millis observe that the structure of simulation conforms to a model plan for higher education, "the application of knowledge, interaction with ideas and people, experience, feedback, and reflection" (2002, 11). While different models for simulation have been suggested to guide the educator (see Jeffries 2007; Nehring and Lashley 2010), there are basic elements that are

essential to any simulation framework. The composition of a simulation typically reveals four phases: preparation, implementation of the case study or scenario, debriefing and reflection, and evaluation. There are many specific details involved in simulation, particularly when initially employed by an education program; however, a review of all aspects of the teaching methodology is beyond the reach of this dissertation. For more specific details and directions in designing and implementing the various types of simulation, an educator would benefit from consulting the work of simulation consultants, professional organizational websites, and texts that provide templates for scenario development, guidelines for establishing simulation centers, and also address typical budgetary matters (see Campbell 2008; Hertel and Millis 2002; Jeffries 2007, Jones 1995; Ker and Bradley 2010; Nehring and Lashley 2010; NLN SIRC). The following elements are essential to simulation and are culled from both the simulation literature and personal experiences in designing and using simulations.

i. Preparation

Effective simulation requires careful preparation, and consistent with this philosophy, the preparation phase of simulation requires particular attention to planning and details. When considering simulation as a teaching pedagogy, the educator must determine, first of all, if simulation is an appropriate teaching method for achieving particular learning objectives and clearly establish its purpose. The following questions may guide the educator in selecting simulation and focusing the purpose of the simulation: Is an interactive, learner-centered experiential method preferred because of the benefits of the immersive experience in stimulating the cognitive, behavioral or affective domains? Is simulation appropriate because clinical opportunities to work with

actual patients are scarce or have the potential for harm? Is simulation selected because observing students in the clinical environment is not dependable or convenient and does not provide opportunities to compare student performances? (or because of difficulties finding appropriate clinical experiences?) Is the purpose to provide opportunities for deliberate practice or practice until reaching competency? Is the purpose to allow directed teaching during a student's performance in a "time in-time out" style as Barrows introduced, or is it selected to allow students to find a safe place to make errors and learn from their mistakes? Will the simulation be utilized primarily for learning and assessment or is the primary purpose for formative or summative evaluation? Will individualized or group feedback and the opportunity for reflection on the performance help to move the educational objectives forward?

Importantly, the selection of simulation, as with all teaching methods, is driven by the learning objectives. Simulation can be understood as an evolving case study that introduces a problem to be solved (Gredler 2004). The preparation of the simulation includes the development of the case study, known as a scenario, which must be appropriate to the learner's level and meet the objectives of the course. Importantly, it is the case study, and not the equipment, environment or technology employed, which serves as the simulation's foundation. The case study may be designed by the teacher, adapted from an available case, or purchased. Templates for scenario development are available to guide the educator (Childs, Sepples, and Chambers 2007; Issenberg and Scalese 2008). Different from case studies that students read and analyze by "looking at an event from the outside," learning with a simulation pulls students into the case study, allowing them to work with the "power and authority of professionals who are trying to

cope with a developing situation" (Jones 1995, 12-13). The learning objectives should be formulated to take advantage of this immersive experience, which may be designed to meet cognitive, affective and psychomotor skills. As with all other teaching methods, the educator needs to consider the learners' abilities with regard to knowledge and skill level, their familiarity with the teaching mode (whether standardized patients, mannequin-based patient simulators or virtual reality), and the type of preparation the students and faculty will need to more successfully achieve the learning outcomes.

The scenario serves as the teaching-learning template. It provides the case study or problem, the participant roles, the role of the facilitator, the design of the simulated patient, the set up of the simulated environment, and the equipment and materials needed for the scenario (Dubose, Sellinger-Karmel, and Scoloveno 2010). It lays out the progression of the simulation, identifies the cues that students receive to help them progress through the case, determines the immediate feedback to the students' actions (or inaction) and identifies those features that determine the resolution of the problem-solving exercise. During the design of the scenario, the educator can manipulate the events of a case study to best meet the learners' needs. Prompts or cues can be embedded in the case documents (the medical record, assessment data and shift report, for instance) and within the scenario at an appropriate level that conforms to the students' learning ability (Larew et al. 2006). The level of difficulty of the scenario can be adapted for the students' ability by using a series of "escalating prompts" that range from subtle baseline cues to more specific cues (Larew et al. 2006, 17). This strategy attempts to "provide positive learning experiences that challenge students at their current level of functioning," avoiding undo frustration and anxiety (17). More experienced students may progress

through a scenario with fewer and more subtle cues, while inexperienced students may require more prompting, consistent with Benner's theory (2001) in which learners progress from novice to expert. The educator can also compress or accelerate the time in which normal events should transpire, modify the learning experience to make it simpler or more complex, and conveniently " 'design out' negative learning experiences that often occur in actual practice" (Hertel and Millis 2002, 5). The preparation of the scenario is a highly creative process, but the educator must be careful to ensure the accuracy of the data, concepts, and events using reference texts as needed (Dubose, Sellinger-Karmel, and Scoloveno 2010). It is important as well to make certain that the relationships between participants and the relationships between processes and concepts are valid to maintain the credibility of the simulation for the students (Gredler 2004).

The fidelity and complexity of the simulation must also be determined. This decision is affected by the learning objectives and also by the resources available to the educator. While many educators aim to replicate reality as much as possible to assist students in suspending disbelief, this is not always necessary (Hertel and Millis 2002). Hertel and Millis assert that environments that are too complex or too real may interfere with a student's ability to achieve the objectives. Simulation, rather, should aim for "reality of function," a concept advanced by Jones (1985, in Hertel and Millis, 25-26) that ensures an environment which enables students to perform their roles well. Kneebone offers a metaphor for simulation that is useful to planning as he compares simulation to the artist's canvas, suggesting, "simulation is less like a photograph of clinical care than a painting of it – a process that requires selection and interpretation" (2010, i47). He advises that simulation should recreate the critical aspects of an

experience but does not need to replicate all facets of it. Most educators attend to the need to provide a close representation of physical and environmental fidelity, attempting to replicate the physical appearance of the patient, body part or environment. Educators also address functional fidelity, attempting to imitate the task, the patient's actions or the response to the student's interventions as well as psychological fidelity, which addresses the student's perception of the simulation (Allen, Buffardi, and Hays 1991; Gredler 2004). Gredler adds that it is important to provide for fidelity of the relationships among the participant roles and the causal factors, striving for logical, credible relationships among people, things and ideas. The simulator and environment are prepared in advance of running the scenario and reset between groups of students.

High-fidelity simulation may be desired for most simulations, but it is not essential, and its use depends on the complexity of the skills to be learned. A fine motor task may require a high-fidelity task trainer that produces haptic feedback (touch) to provide more accuracy (Maran and Glavin 2003). The fidelity of this experience can be enhanced by the use of a standardized patient, alongside the task trainer, as Kneebone et al. (2002) suggest, allowing for the development of interpersonal and communication skills. The beginning learner, however, may become frustrated by a high-fidelity experience while learning a task and might benefit from a lower-fidelity trainer to initially learn a technical skill. As the student develops confidence with the procedural skills, the simulation can progress to a higher-fidelity experience with more complexity, perhaps with the addition of a contextually-based situation, which would allow the student to develop the necessary professional attributes and communication skills

essential in clinical interactions without experiencing undo frustration (Dubose, Sellinger-Karmel, and Scoloveno 2010; Kneebone et al. 2002).

Effective preparation also considers the roles of students and facilitators, which must be delineated and explained to the participants prior to beginning the simulation. In addition, simulations that use a simulated or standardized patient require preparation or coaching of the actor, who must be carefully trained to portray the characteristics of a patient or family member. The use of high-fidelity human patient simulators often requires the preparation of the technical staff to assist in managing the scenario.

Importantly, students should understand the purpose of the simulation and how it has been designed to achieve particular educational outcomes and recognize the expectations of the learner in terms of preparation (Dubose, Sellinger-Karmel, and Scoloveno 2010, 197; Wilt and King 2012). They must understand their responsibilities in assuming their assigned roles and, in addition, recognize their responsibilities as learners to genuinely engage in the activity. Students should recognize that a primary goal of simulation is to nurture, develop and socialize the student into a professional role. The assigned role will often require them to perform behaviors for which as students they are not legally permitted; therefore, students may need specific preparation in these areas (Dubose, Sellinger-Karmel, and Scoloveno 2010). In a simulation for undergraduate nursing students, for example, a simulation might require the student to contact a physician for orders; in a simulation for medical students, a medical student might lead a cardiac arrest team, giving orders, "calling" the end of the code, and conveying the news to the family.

To benefit from simulation, the students should be adequately prepared to interact with the simulated patient and environment. They should have practice time in an orientation session to experiment with the mannequin and any equipment that is used to increase their familiarity and confidence and to plan for the simulation (Wilt and King 2012). Some schools produce a video orientation to their particular simulation equipment and environment and make this available for students to view independently in preparation (Wilt and King 2012). Students also need to understand the level of fidelity and what information is and is not available to them. In preparation for simulation-based education, students are typically required to complete pre-simulation assignments that fill any conceptual gaps and review applicable coursework that supports the scenario (communication guidelines, such as "SBAR" – Situation-Background-Assessment-Recommendation). In addition, students should have adequate time to plan care for the patient and establish priorities.

The preparation details may be moderate or quite extensive depending on the complexity of the scenario and the students' experience with simulation, yet all simulations require consideration of these factors. Some educators estimate that it takes approximately the same amount of time to develop a scenario as it does to prepare a complex lecture; therefore, educators should allow adequate time for development (Rauen 2001). Experienced educators in simulation (Issenberg and Scalese 2008; Jeffries 2007; Nehring and Lashley 2010) address the full spectrum of elements that must be considered when preparing for simulation-based learning, including the equipment and props, available technology, space and scheduling considerations, available time to schedule the simulation and debriefing sessions, faculty development, and expenses.

ii. Implementation

The primary interactive element of simulation is the engagement of students in the scenario as they work to solve a problem. If appropriate to the simulation, the scenario may begin with an audiotaped or verbal patient report. Students are encouraged to review the patient's chart if this is part of the case study and prioritize their approach to the patient. During the scenario, the educator adopts the facilitator role. Dubose, Sellinger-Karmel and Scoloveno (2010) describe the facilitator's involvement in a simulation on a continuum from completely instructor-led to completely student-driven. The facilitator can offer prompts or cues to guide the students in the right direction, an approach that is used more often with students who have had little exposure to simulation. The authors report that the students respond positively to this assistance. As students gain more experience, they are capable of following through the case study without guidance, thereby taking responsibility for their learning.

During the implementation phase, the activity becomes student-centered and student-directed. Peer-to-peer teaching occurs and students work to problem-solve together, mirroring real world decision making (Hertel and Millis 2002). Hertel and Millis, therefore, recommend allowing the simulation to progress without the facilitator's assistance, urging the facilitator to refrain from intervening; however, the decision on facilitator involvement will likely be determined by the students' experience and the complexity of the scenario. Some questions by the students may need immediate clarification, such as concerns about the equipment that would affect the progress of the scenario. Hertel and Millis suggest that students be gently guided to consider their role, clarify their concerns, or seek out additional information (53).

The facilitator's role is also influenced by whether the simulation is designed for teaching and learning or if it is meant for evaluation (Jeffries 2005). If students are being evaluated on their performance, the facilitator will generally let the scenario unfold without offering cues or direction. In simulations that are used for teaching and learning, the facilitator may opt to provide additional prompts, allow for a "time-out," or let the activity progress unaided.

During this phase of the simulation, the participants receive feedback from their engagement in the activity. The feedback may be positive or negative in response to their actions or failure to act. A mechanism for feedback may be built into the simulation itself. Pre-programmed integrated simulators, for instance, are capable of responding immediately to the learner's action, while others require a facilitator or operator to manually make changes in the patient (Childs, Sepples, and Chambers 2007). For example, in a simulation using a high-fidelity patient simulator, a student may observe that the patient is having respiratory difficulty and immediately raise the head of the bed, apply a pulse oximeter to measure oxygen saturation, and replace the patient's nasal cannula to correct the patient's hypoxemia. As a result of the correct actions, the patient's breathing pattern and oxygen saturation level will return to normal, providing positive feedback to the student. In the same scenario, the student who fails to note the patient's respiratory distress or observes the condition but does not take action will experience a deterioration of the patient's condition unless the facilitator provides additional cues to alert or direct the student's actions. In scenarios using standardized patients, the script indicates the type of feedback in the form of patient response that students receive from their interactions.

Although reflection is an essential part of the activities that follow the implementation phase, students are also engaged in reflection as they actively participate in the scenario. Simulations are designed to create problems and introduce uncertainty. As both Dewey and Schön posit, reflection arises spontaneously from doubt and perplexity and assists students to creatively search for solutions. Students reflect upon and review their knowledge and past experiences, looking for similarities or patterns that can be adapted to the present setting and move from routine behavior to deliberate thought. As noted in the discussion of experiential learning theories, Schön refers to this process as "reflection-in-action." Reflecting on their knowledge, experiences, and the feedback that results from their actions while in the midst of the simulation assists students in identifying and managing the problems that arise in the case study. This process of discovery builds new knowledge and experiences.

iii. Debriefing, Reflection, and Assessment

Simulation is a reflective practicum, and the reflective and assessment processes that students engage in following the simulated experience help to connect classroom theory to clinical practice. This period of reflection and feedback is known as "debriefing" and is shaped as a "guided discussion" (Hertel and Millis 2002, 62). Many educators and students believe that the debriefing period is an essential component of a simulation, perhaps its most important feature (Jeffries and Rizzolo 2006; Morse 2012; Onori, Pampaloni, and Multak 2012; Shinnick et al. 2011). Morse (2012) observes that empirical evidence examining the debriefing component of simulation tends to show that students value the critical self-reflection and constructive feedback that result from this guided discussion. Lasater observed in a small focus group study that while students

appreciate affirmative feedback, they identified a need for "definitive and straightforward" feedback, one student in particular noting, "I would have benefited from knowing the shortcomings of my choices" (2007, 274).

The debriefing serves several purposes, including time for "settling" of students' emotions, reflection, and assessment of learning (Hertel and Millis 2002, 60). In addition to revealing the learning that occurs during the simulated experience, students are guided in transferring this new knowledge to actual clinical experiences (Kerr and Bradley 2012). The debriefing period reinforces these connections, helping to bridge the theory-practice gap and serving as a place for students to reflect on their decisions, choices and actions. During this time, students engage in discovery about themselves and "the soundness of their own thinking" (Lederman, in Hertel and Millis 2002, 60). These activities capture Schön's notion of reflection-on-action.

In general, the structure of a debriefing session follows a format of facilitated discussion and reflection. Hertel and Millis (2002) provide a useful format for the guided discussion that focuses on three facets of the students – "as people, as the roles they simulated, and as students" (2002, 66). Focusing on the participants as individuals, the facilitator provides time for emotional release, recognizes their feelings and elicits the changes in their feelings that occur during the simulation. Identifying and sharing emotions can reduce stress and allow the discussion to continue. Thus, one of the first questions often asked in the debriefing session is "How do you feel?" Moving forward, the discussion focuses on the students' roles and the motivations, critical thinking and decision making processes that directed the plan of action (Hertel and Millis 2002, 68-69). The discussion reveals the students' thought processes, perceptions of data and cues,

and also weaknesses in the scenario design. Finally, the debriefing focuses on the students as "students." The facilitator's role in directing this phase is to clarify the learning objectives, relate the activity to prior learning and review the way in which this new experience and knowledge can be applied in authentic clinical experiences (Hertel and Millis 2002, 70). During this process, the facilitator guides the students in reviewing their performance to identify strengths as well as gaps in knowledge or skills and reviews key learning points (Durham and Alden 2008). Debriefing is critical in clarifying misconceptions or misinformation to prevent negative transfer of incorrect information to the clinical setting (Hertel and Millis 2002; Morse 2012). Simulations often generate perplexing problems (such as value conflicts) that reflect real world issues, which are not easily resolved. The debriefing session, therefore, serves an important function in allowing students to engage in dialogue about these issues in a supportive setting. Moreover, the guided discussion provides the facilitator with a window into the students' thought processes, identifies patterns of clinical reasoning, and the strengths and weaknesses that need to be addressed.

The simulation literature reveals several guides for structured debriefing to assist the facilitator (Durham and Alden 2008; Hertel and Millis 2002). It is important to note that while students expect and value feedback during the debriefing, feedback should be constructive and warmly delivered (Durham and Alden 2008; Onori, Pampaloni, and Multak 2012). Some variables in debriefing include the use of video-recordings to facilitate the review process. Students can watch the recordings independently and critique their performances prior to gathering for a group debriefing session. Some high-fidelity patient simulators also maintain a log of the events and students' actions, which

may be reviewed during the debriefing (Jeffries 2005). In addition, facilitators may chose to include the use of written reflection in the form of journaling, for instance, to promote insight in critical thinking, transference of learning to the clinical setting and further socialization into the professional role.

At some point in the simulation, often following the debriefing, students can be offered additional time to work through the scenario again with or without the facilitator's presence. Some students will appreciate the opportunity for additional practice to gain more confidence and skill competency as they apply their new learning and insights. Viewing the problems presented in the case study with a fresh point of view allows students a second chance to experiment with new approaches (Hertel and Millis 2002, 6). The additional opportunity may develop the students' confidence and enhance their ability to connect this knowledge to the clinical practice setting. To accommodate this process in an environment with limited simulation technology, this educator sets up a modified version of the simulation for students to replay the scenario independently while the facilitator uses the main simulation environment to conduct simulations with other groups of students. Students have expressed their appreciation for the additional practice opportunities.

Sandars (2009) raises important ethical considerations concerning a reflective practicum. He cautions that some types of reflection, whether group discussions or reflective journals or diaries, expose a student's vulnerability; therefore, the educator must be careful to protect confidentiality. Sharing about events with adverse or negative outcomes or poor performance must be handled sensitively. Reflective practices require that the facilitator create a safe environment for students.

iv. Evaluation

Apart from the formative feedback that students receive in the debriefing session, summative evaluation of the students' performances may be conducted. Simulation that is conducted for formative evaluation places the educator in the role of evaluator rather than facilitator (Jeffries 2005). Students often experience some anxiety with simulation (Lasater 2007). Not surprisingly, therefore, students are more anxious when their performance is formally evaluated (Durham and Alden 2008). In nursing, most simulations are conducted for teaching and learning, and less often, for performance evaluation (Jeffries 2007). In medicine, however, simulations have often been used to evaluate competencies as noted earlier. Feedback that is provided to a student following a summative evaluation for competency testing, however, is provided privately to maintain confidentially (Dreifuerst 2009).

Simulations that include standardized patients are another rich source of personalized feedback for students. Standardized patients offer direct feedback on their perceptions of the students' performance. This formative evaluation is in addition to the feedback that is provided by the facilitator during the debriefing session. The responses from the standardized patients may be verbal and/or written as part of a checklist (Saewart and Rockstraw 2012). The student also completes a self-evaluation of the performance.

In addition, students should be given the opportunity to evaluate all components of the simulation, which acknowledges the importance of their contributions in the student-centered learning activity. This information provides significant feedback for the

facilitator on the students' perceptions of the activity and its ability to meet the learning objectives. In addition to students' perceptions, the evaluation can be structured to assess the specific learning that resulted from the simulation.

G. The Empirical Studies That Illustrate the Use of Simulation in Healthcare Disciplines

The scholarship examining simulation in healthcare education is extensive. The areas of study include its effectiveness as a teaching and learning method, its validity in evaluating competencies, the most beneficial means to apply simulation, the use of theory to support simulation research, comparisons of different types of simulation in achieving learning outcomes and more. For the purposes of this dissertation, the primary focus of the review of the scholarship is on the efficacy of simulation as a teaching method in achieving learning outcomes. Systematic reviews of simulation in medicine and nursing are examined; however, specific research studies that enrich the perspective on simulation in medicine and nursing are also examined.

The simulation scholarship differs somewhat between the disciplines of medical and nursing education. Medical education has a longer history than nursing education of utilizing standardized patients, incorporating high-fidelity simulation, and employing simulation for summative assessment of clinical competencies in the licensure exam process (Sanford 2010). The scholarship in these areas is more extensive, therefore, in medicine than in nursing. Yet, there are similarities in the nature of the research, which has moved from simple assessments of student perceptions of simulation to qualitative and quantitative studies of its effectiveness in achieving learning outcomes (Shinnick,

Woo, and Mentes 2011) Less frequently, simulation research is conducted that measures its effects on patient outcomes.

Systematic reviews may apply the Kirkpatrick model or a variation of this model to assess the outcome measures of a simulation intervention (Issenberg et al. 2005; May, Park, and Lee 2009). Models are used to classify the level of effect produced by the study intervention (written case study, high-fidelity simulation, standardized patient, virtual reality, for example). The Kirkpatrick model, for example, classifies the range of effect as follows, moving from participation to changes that produce patient outcomes: Level 1, participation in educational experiences; Level 2a, change in attitudes; Level 2b, change of knowledge and/or skills; Level 3, behavioral change; Level 4a, change in professional practice; and Level 4b, benefits to patients (Issenberg et al. 2005, 14). Level 1 and 2 changes are much more likely to result from a simulation intervention, whereas Level 4 changes are more difficult to demonstrate. An example of a Level 4 change is illustrated in the study by Andreatta et al. (2011). The researchers demonstrated positive outcomes for patients in an educational intervention that incorporated frequent, randomly scheduled mock code simulations for pediatric medical residents. Although the mock codes involved a multidisciplinary team, the researchers focused on the development of the pediatric medical residents' skills. A variety of scenarios were designed to address areas of difficulty or deficits. The simulations were video recorded and followed by debriefing sessions that were conducted for formative assessment (34). Initially, the educational initiative demonstrated a 30% increase in survival rates associated with cardiopulmonary resuscitation. With further development of the program and an increase in the number of

annual mock code simulations, the pediatric survival rate following cardiopulmonary events rose to 50% (35).

Systematic reviews of simulation often center on a particular type of simulation, rather than examining simulation in general. Reviews of simulation may focus on high-fidelity patient simulators, standardized patients, virtual reality or hybrid approaches. Additionally, the simulation scholarship may examine the components and features of simulation separately, studying debriefing, reflection, evaluation, fidelity and more. For ease of discussion, the studies are presented by discipline. An examination of research studies on the specific use of simulation in *ethics* education in medicine and nursing, however, is included as part of Chapter Six.

i. Medical research

In medicine, systematic reviews, critical reviews and a meta-analysis are available that examine the use of high-fidelity simulation, virtual reality and standardized patients. In addition, best evidence in medical education (BEME) reports on simulation and on the use of the Objective Structured Clinical Examination (OSCE) have been conducted. The BEME report on the OSCE is included, in particular, because of its emphasis on the use of standardized patients. An examination of the reviews and the BEME reports follows.

In a BEME review that examined the literature from 1969 to 2003 on high-fidelity medical simulations, Issenberg et al. (2005) reported on the aspects and applications of simulation that lead to effective learning. Although this review shared little of the evidence on simulation's effectiveness in achieving learning outcomes, it contributes valuable insight into the best practice features of simulation. The systematic review

included 109 articles that were empirical and predominantly quantitative and comparative in design, which used high-fidelity simulation as an educational intervention (17). This excluded review articles and those that used simulation for assessment only. The majority of the articles appeared in surgical and biomedical engineering journals, followed by anesthesiology, internal medicine and medical education (19). Consistent with this, almost 80% of the articles concerned "practical procedures," followed by management skills, clinical skills and knowledge of basic sciences (19). To be included in the systematic review, the articles also had to produce results in knowledge, skills and attitudes, which were classified using the Kirkpatrick criteria described earlier. The study did not share the results of this classification.

The review process identified ten essential characteristics or features of simulation that educators should consider when planning simulation-based instruction: feedback, repetitive practice, curriculum integration, practicing with increasing levels of difficulty, multiple learning strategies, capturing clinical variation, controlled environment, individualized learning, clearly defined outcomes, and simulator validity (fidelity). Some of these features have already been discussed in this chapter or will be reviewed in the analysis of the advantages of simulation, but a few of the features deserve attention here. Almost half of the study articles (47%) reported that feedback is simulation's most important feature, allowing students time for self-appraisal (Issenberg et al. 2005, 21). The review showed that "the source of the feedback is less important than its presence" (23). The review demonstrated that 39% of the studies stress the value of repetitive (and deliberate) practice, which has been associated with significant improvement in clinical performance (cardiac assessment skills and cardiac life support,

for example) and improves both skill acquisition and maintenance (21). An important finding in 25% of the review articles is the need to integrate simulation-based education into the curriculum. It should not be considered "*extra*-ordinary" but a typical and required part of learning (23). Adapting the range of difficulty level to the student's readiness or stage as a learner is a significant feature and consistent with the Dreyfuses' model of skill acquisition. Issenberg et al. (2005) reinforce the need for educators to set objective criteria against which students are able to "demonstrate performance mastery" (23). Moreover, they add that by increasing the variety of clinical situations to which students are exposed, there is greater likelihood of achieving standardization of curricula, a particular concern in schools with restricted access to certain patient populations (23).

McGaghie et al. (2010) conducted a review of research and scholarship on simulation-based education research published from 2003 to 2009. The review authors compared the results of this systematic review with previous reviews including the BEME published in 2005 (see Issenberg et al. 2005, above) and confirmed that research has improved by comparison (50). With this review, the authors assembled a list of twelve best practices and features of simulation, the first five of which are identical to earlier reviews: feedback, deliberate practice, curriculum integration, outcome measurement, simulation fidelity, skill acquisition and maintenance, mastery learning, transfer to practice, team training, high-stakes testing, instructor training, and education and professional context (52). The characteristic of feedback is well-described in this report, making use of a four-step model by Rudolph et al. that the review maintains is well-supported in evidence: "(i) note salient performance gaps related to predetermined objectives; (ii) provide feedback describing the gap; (iii) investigate the basis for the gap

by exploring the frames and emotions contributing to the current performance level, and (iv) help close the performance gap through discussion or targeted instruction about principles and skills relevant to performance" (Rudolph et al. 2008 in McGaghie et al. 2010, 54).

The review by McGaghie et al. is very useful to educators and researchers, as it identifies the current level of research in the area, yet it also presents the "gaps in understanding," those aspects of simulation-based education that are still unclear or unanswered and warrant investigation (2010, 52). For instance, while the review provides evidence for debriefing and feedback, it also finds gaps in current research about how much feedback is required, calling for additional research in this area. Deliberate practice is shown to be beneficial in developing and maintaining skills, knowledge and affective behaviors (55). Questions remain, however, about the period of time over which practice should occur for the best results (55). Curriculum integration is accepted as necessary as evidenced by the systematic review, yet concerns exist regarding the best means to accomplish this goal. The review acknowledges the difficulty in establishing reliable outcome measurements, calling this "one of the greatest challenges now facing the field" (56). McGaghie et al. affirm, "Reliable data are vital for, firstly, providing accurate feedback to learners about educational progress and, secondly, making arguments for valid research results" (56).

The review also revealed that most simulation was conducted for teaching and learning of technical skills, with much less attention to professional attributes and skills such as communication or cultural sensitivity, for example. Concerns over skill maintenance or "decay" emerged from the review, leading to questions about conditions

that contribute to loss of competency. McGaghie et al. (2010) note that despite the acceptance of mastery learning and recognition that learners vary in the rate in which they achieve mastery, few studies demonstrate this approach to learning. Questions remain on the variables (cognitive aptitude, motor skill, experience) that affect the time it takes a learner to master a competency (53, 57). In their assessment of transfer to practice, the authors recognize the difficulty in designing studies that achieve a positive effect on patient care, and more so, in measuring this effect. The review, however, provides several examples of improvements in patient care and outcomes. Simulation that was conducted for central venous catheter insertion was associated with lower procedural errors and reduced catheter-associated infection rates; mock code sessions led to better compliance with treatment guidelines; and virtual reality training improved surgical skills (58). The best practices for team training were identified and elaborated on in the review, with gaps in understanding concerning maintaining team skills and the interchangeability of team members.

Moreover, McGaghie et al. (2010) shared simulation's usefulness in high-stakes testing, a form of summative evaluation. In addition to simulations with standardized patients (OSCEs) that are used for clinical competency training for medical residents in the United States, simulation is currently used for certification testing in anesthesiology in Israel and in internal medicine in Canada (59). As outcome measurements improve, simulation may be used more frequently for high-stakes testing. Instructor training was evaluated in the review, identifying a gap in understanding of whether educators should be trained specifically for simulation or if general teaching skills are preferred. Lastly, the review examined the educational and professional context, concluding that context

contributes significantly to learning. Educators should strive for authenticity – that is, learning should occur in a context similar to their practice setting (60). This mirrors Barrows' view that students need opportunities "to learn in the same manner as the student is going to practice" (Wallace 1997, 10). McGaghie et al. acknowledge that the compilation of the list of best practices and identification of gaps may be biased by their selection of included research and scholarship and also from their experience as educators. Nevertheless, the extensive and detailed review paints a clear understanding of the state of simulation in medical education and the path to best practices.

In a review of simulation in medical education, Okuda et al. (2009) examined 113 articles on the use of simulation in medical education. The review was limited to simulations that utilized partial task trainers, high-fidelity simulators and computer screen-based simulations and excluded standardized patients. The authors found evidence to support the effectiveness of simulation in increasing knowledge, confidence and comfort levels with procedures. Simulation was also effective in improving performance of skills, teamwork and communication (Okuda et al. 2009). The authors noted that a small number of the studies on simulation showed improvements in clinical outcomes. The authors advocate for more studies aimed at demonstrating a relationship between simulation and improved patient outcomes.

In a compilation of several BEME reviews, an Agency for Healthcare Research and Quality (AHRQ) report and other reviews, McGaghie et al. (2009) assessed the available evidence on simulation and medical education and affirmed the above review findings. They added that success with simulation may be "dose-response" related, such that more exposure to simulation produces better outcomes (65S). In addition, based on

the work of Issenberg (2006), the reviewers pointed out that successful outcomes are a "product of simulation technology (*eg*, devices, standardized patients), teachers prepared to use the technology to maximum educational advantage and curriculum integration" (65S).

A meta-analysis of quantitative research demonstrated that simulation used as deliberate practice is superior to the traditional teaching method of "see one, do one, teach one" (McGaghie et al. 2011, 706). Simulation-based deliberate practice is performed for skill improvement. Some of its characteristics include "focused, repetitive practice," reliable measurements, feedback and monitoring (707). The meta-analysis of 14 studies included residents, medical students and a small number of internal medicine fellows. The results indicated that deliberate practice improved laparoscopic surgery skills, improved performance and application of advanced cardiac life support protocols during actual codes, improvement in cardiac auscultation skills, and improved performance of central venous catheter insertion, hemodialysis catheter insertion and thoracentesis. The authors report that the results are powerful and demonstrate a very high confidence level (95%) (708).

Virtual reality has also been examined in a systematic review by Cook, Erwin and Triola (2010), which included literature to February 16, 2009. The review focused on the effectiveness of virtual reality and its design features that contribute to learning outcomes. The review articles comprised research with medical students, nursing students, residents, nurse practitioner students, physicians and other healthcare professionals. Cook, Erwin and Triola evaluated the effectiveness of virtual reality on knowledge, clinical reasoning and skills in three situations – compared to no intervention,

compared to a non-computer intervention (for example, lecture, standardized patient, or handouts) and compared to a computer intervention (usually another virtual reality). Studies that assessed virtual reality without a comparison intervention demonstrated substantial gains in knowledge, clinical reasoning and skills (1595, 1599). When compared to either non-computer or computer-based interventions, the results were negligible. The authors could not elicit quantitative data on the comparisons with computer interventions but found that learning outcomes improved with enhanced feedback, mastery learning, advance organizers and contrasting cases (1599).

May, Park and Lee (2009) conducted a review of the literature on the use of standardized patients in health care education, which included undergraduate and graduate students as well as practitioners and faculty in medicine, nursing, dentistry, pharmacy, physiotherapy, dietetics, allied health and speech pathology. Research on standardized patients has established this educational method as highly effective in medical education and to a more limited degree in nursing (May, Park, and Lee 2009; McGaghie et al. 2011; Okuda et al 2009). May, Park and Lee (2009) noted that while standardized patients are highly valued in medicine and nursing for teaching and learning and also evaluation, there have been no reviews that provide evidence of their contributions in teaching and learning. Most of the review articles on standardized patients conducted up to this point concerned their use in evaluation (487).

The review comprised English language articles from 1999 to 2005 and was based on sixty-nine studies. Seventy-three percent of the articles were from medicine, fifteen percent were from nursing, and the remaining from other healthcare disciplines (May, Park, and Lee 2009, 489). Sixty-six percent of the total review articles focused on the

application of standardized patients with students; the remainder were with residents (17%), practitioners (12%) and teaching faculty (2%). The results indicate that standardized patients are used most often to teach communication skills (55%), clinical skills (32%) and physical examination skills (17%). In addition, they are used to teach medical ethics, teaching skills, cultural competency, and multidisciplinary cooperation (489). The review noted that in addition to portraying the patient, the standardized patient provided feedback in almost half of the studies. In a smaller number of studies (8.7%), the standardized patients instructed the students (489).

The review authors observed that both subjective (self-reports of satisfaction and benefit) and objective measurements (in the form of OSCEs and cognitive tests) were conducted. The study outcomes were assessed by a model adapted from the Kirkpatrick and Freeth levels (May, Park, and Lee 2009, 489). The majority of the studies (59%) noted self-reported levels of satisfaction and the perceived benefits of using standardized patients for teaching (Level 1 changes). Many of the studies (71%) reported a gain in attitudes (increased confidence, comfort with communications and conducting sensitive procedures) and cognitive and psychomotor skills (Level 2 changes). Five studies (7.3%) showed outcomes that resulted in a sustained change of behavior when assessed months after the teaching-learning intervention (Level 3 changes) (489-490).

The review by May, Park and Lee (2009) demonstrated that standardized patients have been used to teach communication and interpersonal skills in situations of breaking bad news, counseling, domestic violence, depression and patient education. Standardized patients have been engaged in scenarios on clinical bioethics, hospice and palliative care, and working with verbally disabled patients. More traditional uses of standardized

patients include disease management and physical assessment. The review authors observe, however, that the articles show a lack of rigorous design and explicit theoretical base.

Lane and Rollnick (2007) examined the literature on the use of standardized patients and/or role play on the communication skills of healthcare students and practitioners. Twenty-three studies were included that compared the use of standardized patients and/or role play to no intervention, to didactic methods and to interactive techniques. For this analysis, only the results from studies that used standardized patients are discussed. The review found that medical students who participated in training using standardized patients showed statistically significant improvements in breaking bad news, domestic violence training, sexual health counseling, and history-taking skills over the control groups who did not have the intervention (15). Dental students who had standardized patient experiences displayed greater examination and record-keeping skills than students who consulted with actual patients, but there were no significant differences between the groups in communication skills (15). The review authors reported that dental students who voluntarily took a motivational interviewing course on smoking cessation that used standardized patients incorporated more of the techniques in their interactions with patients; patients were also "more actively involved" (15). The review noted that medical residents who participated in smoking cessation training that used standardized patients showed significantly better counseling skills in smoking cessation than those who received only a didactic intervention. Additonally, patient-centered communication training for nurses using standardized patients resulted in increased use of open-ended

questioning, psychosocial questions and "affective talk" than nurses without training (16).

When standardized patient interventions were compared to didactic methods, significant improvements were seen in violence screening skills of medical students and HIV risk assessment and counseling in physicians (Lane and Rollnick 2007). When compared to interactive methods (feedback, group discussions, videotaped reviews), the results are more variable. One study in the review (Kleinman et al. 1996) that assessed students' technical and interpersonal skills with patients undergoing pelvic examination incorporated standardized patients in two ways – one group was taught by a standardized patient who functioned as both patient and teacher, and the other group observed a pelvic examination performed by a teacher on a standardized patient. The study results were measured following the students' rotation and indicated that students who were taught by the standardized patient had greater interpersonal skills (Lane and Rollnick 2007, 17). Other studies in the review that compared the use of standardized patients to interactive techniques showed no significant difference between groups. It should be noted that there were few studies that compared the standardized patient intervention to interactive techniques. Lane and Rollnick mentioned the difficulty in summarizing the findings in these particular studies. While some studies were well-designed, many had methodological weaknesses that made it difficult to establish "concrete conclusions" (16). Overall, the review demonstrated that most of the studies that compared the use of standardized patients to no intervention or didactic methods demonstrated a significant improvement in communication skills (16).

Finally, a BEME report on the use of OSCE in medical education reviewed the literature from 1975 to 2001 (Harden and Harden 2003). This review does not reflect the impact of research resulting from the incorporation of OSCE into the clinical competency exams for medical licensure, which occurred later, in 2004. The BEME report indicates trends, however; thus the results are briefly described here. It is interesting to note that 81% of OSCEs used a "live person" of which 70% were standardized patients (Harden and Harden 2003, 13-14). The remaining OSCEs used actual patients. The OSCEs were used most often to assess history taking and physical examination (54%), followed by communication (39%) and patient management (22%) (15). Rarely was the OSCE used to assess personal development (1%) and "role of the doctor" (0.3%) (15). The authors reported that the OSCE was primarily used to assess clinical competence and less often to evaluate teaching, teaching methods or a feature of the curriculum (12%). The report indicated that the purpose of the OSCE is primarily "to evaluate levels of clinical competence (51% of all recorded purposes), to evaluate some aspect of the curriculum or teaching or a teaching technique (12%), [and] to monitor progress, assess learning and provide feedback (11%)" (16). The BEME results showed that the OSCE was used most often as a pilot and less often for summative evaluation (31%) and formative evaluation (20%) (15). The BEME review also indicated predominantly positive responses to OSCE, citing its validity, reliability, objectivity, and positive acceptance by students, staff, and patients. Some negative responses included concerns with reliability (despite being accepted as highly reliable, there are concerns with consistency in marking the participant's behavior) and that it is time- and labor-intensive and expensive (19-23).

ii. Undergraduate Nursing Research

The compilation of literature reviews on simulation in nursing includes studies that examine how simulation is conceptualized as a teaching paradigm or a learning paradigm (Kaakinen and Arwood 2009), the use of theory to support simulation research (Kaakinen 2009; Rourke, Schmidt, and Garga 2010), the results of qualitative and quantitative studies (Cant and Cooper 2009; Lapkin et al. 2010; Sanford 2009; Shinnick, Woo, and Mentes 2011), simulation design characteristics (Jeffries and Rizzolo 2006; Smith and Roehrs 2009), and educational practices (Jeffries and Rizzolo 2006). The systematic reviews are limited in that they consider studies in English only. The scholarship on standardized patients is limited to the review by May, Park and Lee (2009) who examined the application of standardized patients in both nursing and medicine. A three-year project on simulation in nursing (Jeffries and Rizzolo 2006), a significant venture of the NLN and Laerdal Medical, is reviewed here as well.

A review of nursing literature on simulation from 2000-2007 found that simulation has been applied and studied more often as a teaching paradigm than as a learning paradigm (Kaakinen and Arwood 2009). The review authors found that very few articles mention a learning theory; however, almost eighty percent of the articles referred to simulation as a teaching method (2). Kaakinen and Arwood observe that simulation is most often assessed for its effectiveness in teaching a particular skill rather than in promoting cognitive or affective learning. Consistent with this paradigm, the effectiveness of simulation as a teaching method is assessed by measuring the learner's performance and mastery of skills. Kaakinen and Arwood propose that simulation should also be designed for student-centered learning that cultivates the cognitive processes and conceptual learning essential for critical thinking and problem solving (17). With this

shift to a learning paradigm, a simulation would be guided by learning theories and would reflect this in its measurement of assessment. The authors analyzed the following learning theories for their suitability in learning-centered simulation: Bandura's social learning theory, Kolb's experiential learning theory, Knowles' adult learning theory, Lewin's social change theory, Dewey's social construct theory, cognitive styles theory, Schön's reflective practice, and Benner's performance-based model (12-16). Features such as reflection, student-determined learning goals and feedback might hold more importance in the learning paradigm, depending on the theoretical framework.

Rourke, Schmidt and Garga (2010) examined the use of theory-based research in high-fidelity simulation for the period of 1989 to 2009. The review authors evaluated the theoretical frameworks for twenty studies that met their inclusion criteria and found that only ten percent of the studies adequately engaged theory-based research (6). The remaining studies reflected either a minimal use of theory (45%) or no theory at all (45%). Rourke, Schmidt and Garga explain that although educators and nursing students are "fervent about the efficacy" of simulation, research has not been able to support its perceived value (2). The authors argue for developed, consistent application of theory to bring external validity to this area of study.

A three-year, multi-site research study on simulation in nursing by the National League of Nursing and Laerdal Medical was directed toward expanding the scholarship in simulation and developing simulation materials for educators (Jeffries and Rizzolo 2006). The project evaluated the following aspects of simulation: design features, educational practices (active learning, collaboration, diverse ways of learning, high expectations), cognitive gains and self-reported measurements of satisfaction, self-

confidence and judgment. The simulation design features assessed in the study included objectives/information, support, problem solving, feedback, and fidelity. The study compared teaching post-operative care to small groups of nursing students using a paper/pencil case study simulation, static mannequin-based simulation, or high-fidelity mannequin-based simulation with a guided reflection activity. The project was conducted in four phases, generating student outcome data for Phase III and Phase IV. The results of the final phase of the study are shared here.

In the final phase (Phase IV) of the study, each student participated in two of the three forms of simulation and compared the experiences. Overall, those in high-fidelity patient simulation rated their satisfaction with the learning activity and their confidence significantly higher than the paper/pencil case study group and reported active learning, affirming its importance. The high-fidelity simulation group rated fidelity, feedback, support and objectives significantly higher than the paper/pencil case study group. The students who worked with high-fidelity simulation also indicated that fidelity and feedback were the most important features.

Those who participated in the paper/pencil case study rated collaboration higher and also reported higher expectations to perform well compared to those in the high-fidelity simulation. The group identified less problem solving opportunities but rated their judgment performance higher than those working in high-fidelity simulation. Jeffries and Rizzolo (2006) suggested that this finding might be related to the format for case study, which has information included within it compared to the discovery that is required in active learning methods, such as high-fidelity simulation.

The study also noted that the student's assigned role in the simulation did not result in a significant difference on knowledge gain, satisfaction or confidence; however, those who assumed the observer role rated collaboration lower than the other students. Jeffries and Rizzolo (2006) advised that educators construct activities to allow those in the observer role to better collaborate in the simulation. Consistent with the views of most educators, the project also indicated that debriefing and feedback are the most important design features. Students rated the active learning feature of simulation as the most important aspect. The authors submitted that the features of simulation, such as active learning, reflection and feedback, develop students' self-confidence and enhance learning. Based on the research findings, educators are advised to carefully address educational practices, such as active learning, collaboration, diverse ways of learning, and high expectations when choosing simulation and to incorporate the features of simulation when developing simulation experiences.

Cant and Cooper (2009) conducted a systematic review of the literature on the effectiveness of medium to high-fidelity simulation in nursing compared to other educational methods. The original unrestricted search of studies on simulation in nursing and health care published between 1999 and January 2009 yielded over 2000 articles, indicating extensive literature on the subject. When exclusion criteria were applied, twelve quantitative studies on medium to high-fidelity mannequin-based simulation were identified for the review. The review evaluated the effectiveness of simulation, form of simulation, validity of the measurement assessment, and timing of the assessment. Cant and Cooper reported that although each study in the systematic review compared mannequin-based simulation to another teaching method, three-fourths of the studies

compared simulation with the 'usual' teaching methods, which were identified as either lecture, student group interaction, case studies, clinical debriefing, tests or self-learning packets. In two cases the methods were not defined (6). More than half of the studies employed a validated assessment measure; however, the remaining studies did not clearly indicate the reliability of the assessment instrument. The review articles assessed simulation's effectiveness on the following: knowledge, clinical skills, critical thinking, satisfaction or self-confidence.

Cant and Cooper shared that all studies in the review report showed statistical improvements in knowledge, skills, critical thinking and confidence, demonstrating simulation's value as a teaching-learning method; however, when compared with other methods, statistically significant gains "over and above" the other methods were variable (2009, 8). Fifty percent of the studies reported additional statistically significant gains in knowledge, critical thinking, satisfaction or confidence when compared to the control groups (11). More than half of the studies compared high-fidelity simulation (HFS) to other interactive learning techniques, such as skill stations, videotaped simulations, group discussions, case study presentations, virtual education, and clinical seminars that share features of HFS, which perhaps weakened the expected effect of this method and likely "reduced the comparative effect" (11). When simulation was compared to traditional lecture, it demonstrated a statistically significant improvement in knowledge (11; see Brannan, White, and Brezanson 2008). The review also reported that student's assigned role does not appear to affect learning outcomes, noting that it is likely the exposure to simulation that contributes to learning (12). Based on the evidence in their review, Cant and Cooper concluded that simulation is an effective teaching method when applied in

the right context and when used with best practice guidelines that are aligned with teaching goals (13).

Lapkin et al. (2010) conducted a systematic review of published and unpublished studies from 1999 to 2009 to investigate the efficacy of high-fidelity human patient simulation mannequins (HPSM) on clinical reasoning skills. The review uncovered 1600 articles that reference simulation and clinical reasoning skills; however, the review criteria of randomized and quasi-randomized control trials with undergraduate nursing students reduced the potential pool to 21 articles. Further inclusion criteria (the use of high-fidelity patient simulation with undergraduate nursing students) reduced the number to 8 articles. No studies were designed exclusively to study clinical reasoning, thus the attributes of clinical reasoning and outcomes that are associated with HPSM (confidence, judgment, satisfaction) were examined. As a result, the outcomes measurements included critical thinking, clinical skill performance, knowledge acquisition, self-reported confidence levels, and student satisfaction with simulation (e209). Three studies examined the effect of HPSM on critical thinking and noted varying effects. Two of the three studies found significant improvement in critical thinking (Howard 2007; Schumacher 2004), and one showed no difference from the control (Ravert 2008). Two studies demonstrated a statistically significant improvement on clinical skill performance (Alinier et al 2004; Radhakrishnan, Roche, and Cunningham 2007). All four studies that evaluated the effect of HPSM on knowledge acquisition reported significant gains (Brannon, White, and Bezanson 2008; Hoffmann, O'Donnell and Kim 2007; Howard 2007; Jeffries and Rizzolo 2006). One of these studies (Jeffries and Rizzolo 2006)

reported knowledge gains in all three groups - HPSM, static patient simulation, and paper/pencil case study (the summary of this study is included above).

The review by Lapkin et al. (2010) identified three studies that assessed self-confidence levels and found inconsistent results. One study reported higher levels of self-confidence in students using HPSM (Jeffries and Rizzolo 2006), whereas the other studies reported no statistically significant differences between the HPSM and control groups (Alinier et al. 2004; Brannan, White, and Bezanson 2008). Finally, two studies in the review examined student satisfaction with simulation (Howard 2007; Jeffries and Rizzolo 2006). Both studies reported "overwhelming" student satisfaction when asked to assign value to simulation or rate their satisfaction with the learning activity (Lapkin et al. 2010, e220). Lapkin et al. share that while the results are inconclusive regarding HPSM's effect on improving clinical reasoning, HPSM is associated with a statistically significant improvement in critical thinking, clinical skill performance and knowledge levels.

Shinnick, Woo and Mentes (2011) conducted a literature review on mannequin-based Human Patient Simulation (HPS) to examine its effect on knowledge gains and transferability, skill attainment, critical thinking, and self-efficacy (measured as confidence). Inclusion criteria were a quantitative design and a sample size of at least ten prelicensure nursing students, which yielded eight quantitative studies. The review authors noted a short, ten-year history of HPS research in nursing (66). The majority of the initial studies culled in the search were descriptive or qualitative, which reported subjective data that examined participants' attitudes and perceptions of satisfaction, confidence levels, and transferability of knowledge to the clinical setting. Other articles

included research on the development of evaluation instruments and issues related to the technology and procedural aspects of simulation (66). The authors' assessment of the simulation literature in nursing revealed that debriefing is the most valued component of simulation, that students experience increased self-efficacy with simulation, and that simulation is perceived by students as valuable, beneficial, enjoyable, and realistic (66-70). While one study found no statistical difference in students' perceptions of the transferability of knowledge to the clinical setting, several studies revealed that students found simulation to be of value for future clinical experiences. The authors also noted the variability in HPS's effect on critical thinking and knowledge gain in the small number of quantitative studies. The following effects of simulation were found: Simulation improved clinical skills and competence (Alinier et al. 2006) and improved cognitive skills (Brannan, White and Bezanson 2008), whereas no significant difference was observed in knowledge gains among different learning activities (Griggs 2002; Jeffries and Rizzolo 2006), and no significant difference was demonstrated in critical thinking (Ravert 2004). Brown and Chronister (2009) demonstrated improvement in critical thinking in one group only (second semester seniors).

Sanford (2010) examined the literature on high-fidelity simulation in nursing education for qualitative and quantitative research findings. Although Sanford does not indicate the inclusive dates for the literature review, the study lends support to trends in this area. Sanford reports that most studies are opinion-based, with few rigorous research or evidence-based studies to indicate positive learning outcomes on simulation in nursing education. One study by Smith and Roehrs (2009) noted the significance of a simulation's design characteristics to its effectiveness in achieving outcomes. The study

outcomes were self-reported and included self-confidence and student satisfaction. The results indicated that the problem solving features in a simulation had a strong association with self-confidence, while problem solving features and objectives considered together significantly affected both self-confidence and satisfaction (Smith and Roehrs 2009, 77). The authors indicate the importance of carefully developing a simulation's features.

iii. Summary of research

The review of the research demonstrates that simulation in medical and nursing education is an effective approach for teaching and learning. There is evidence that simulation is associated with improvement in specific competencies and is valued by students. Simulation has been successfully employed to teach not only psychomotor or technical or procedural skills, but to develop cognitive and affective skills. The literature in medical education is far more extensive and illustrates the benefits of simulation with gains or improvements in the following areas: skill training for proficiency, knowledge and cognitive skills, critical thinking, communication skills, interpersonal skills, interviewing, clinical skills (history taking and physical examination), counseling, domestic violence screening, team performance, confidence, satisfaction, and comfort in performing sensitive procedures. The nursing literature has a briefer history, but the research reveals that simulation is beneficial and leads to improvements in knowledge, cognitive skills, critical thinking, clinical skills and competence, self-confidence, and satisfaction.

The literature shows that the features of simulation are relevant to its success; in particular, debriefing and feedback are considered the most important features of

simulation, valued by students and faculty alike. Deliberate practice is effective in developing and maintaining skills. Interestingly, a learner's role in a simulation does not affect the learning outcomes.

There is still a need for continued research and scholarship on simulation in medical and nursing education. The reviews illustrate that simulation has primarily resulted in changes (improvements or gains) for students, yet there is evidence that simulation can produce positive changes in patient care and outcomes. Several reviewers call for simulation design and measurement to capture this effect. The literature also identifies "gaps in understanding" that point to areas for future research (McGaghie et al. 2010, 52).

The ability to directly compare and interpret research findings is hampered by the amount of diversity in experimental design and interventions as well (Cant and Cooper 2009, 11). Many studies in nursing compared high-fidelity simulation (HFS) to other interactive learning techniques, such as skill stations, videotaped simulations and clinical seminars that share features of HFS, which perhaps weakened the expected effect of this highly interactive method and likely "reduced the comparative effect" (Cant and Cooper 2009, 11). Moreover, although research is ongoing in developing reliable outcome measurements, according to McGaghie et al., this is "one of the greatest challenges now facing the field" (2010, 56). As simulation is used more often for summative assessment and high-stakes testing, assurance is needed of the reliability and validity of measurement instruments and procedures.

H. Advantages and Challenges of Simulation in Healthcare Education

The analysis of simulation thus far has alluded to many of the advantages and challenges associated with this unique teaching method. Simulation provides for a holistic education that encompasses a range of learning goals – transmitting knowledge, improving reasoning and skills, while at the same time promoting affective behaviors and attitudes. It also offers a holistic approach to teaching and assessment of learning where a learner's performance can be assessed for a constellation of factors – knowledge, clinical reasoning, professional virtues, and skills. Simulations that place patient problems in context, revealing the complexities of healthcare, offer much more to students than written case studies and group discussions. When compared to other forms of teaching, simulation presents a rich tapestry for student learning and assessment of teaching effectiveness.

Simulation offers benefits to educators and students and ultimately, to patients. Some of the advantages to educators arise from the structure and instructional design characteristics of simulation and its ability to support educators in meeting educational goals. Simulation fulfills the purpose of creating explicit learning opportunities to aid in the transfer of learning to the clinical practice setting. The benefits of simulation have often been described as allowing for predictable, consistent, reliable, standardized and safe experiences (Okuda et al. 2009). According to Okuda et al., from the patient's view, simulation "increases the likelihood of a minimum competency level" (2009, 339). Simulations can be developed to ensure that all students are prepared at a basic level to care for frequently occurring clinical situations (history taking, physical examination and technical skills, for example). Educators can also use simulation to expose every student to critical patient situations that are difficult to find in the clinical area, thus expanding

the breadth of their education (Issenberg and Scalese, 2009; Lasater 2007). Simulation has the advantage of enabling educators to eliminate extraneous details that confound learning with real patients and compress time to facilitate directed attention on specific teaching and learning objectives.

The advantages of repetitive, deliberate practice are well-recognized and unique to simulation. Practice opportunities have been demonstrated to enhance skill performance and goal attainment. Simulation provides the unique opportunity for educators to observe students in action and witness clinical skill performance, professional attributes, and identify strengths and weaknesses. In this way, simulation offers advantages in assessing the effectiveness of teaching to meet educational goals (Barrows 1964). Debriefing and reflection sessions that follow allow educators to hone in on critical thinking and decision making processes, reinforce learning and clarify misconceptions.

Simulation has advantages for students, as well. Its primary advantage to learners is the opportunity to improve their performance in a safe environment and to make mistakes and learn from them (Hovancsek 2007). In many situations, it surpasses learning by traditional methods with gains in knowledge, clinical skills, communication skills, affective learning, critical thinking, collaboration, team performance, and confidence. Many types of simulation offer the advantage of being individualized to the learner's needs and providing personalized feedback (Hertel and Millis 2002). Students experience firsthand the outcome of their responses, attitudes, decisions and actions, often immediately, allowing them to experiment with different approaches. Students submit that the debriefing and feedback following a simulation is essential to learning. The

guided discussion provides opportunities for reflection and self-critique, which is essential for building connections from theory to practice in the clinical setting and for assessment of thought processes. Simulation also makes clear for the student any gaps in learning (Durham and Alden 2008). As a student-centered teaching method, simulation is highly interactive and has the advantage of placing the responsibility of learning with students, giving students control and aiding motivation to learn (Hertel and Millis 2002). Moreover, students value simulation, and for many, it is an enjoyable way to learn. Although some students report anxiety with simulation (Durham and Alden 2008; Rauen 2001), simulation may ultimately reduce anxiety by increasing confidence (Campbell 2008; Durham and Alden 2008). Many of the present generation of learners are comfortable with technology (Durham and Alden 2008) and expect that available simulation technologies be integrated into their education.

Furthermore, simulation is advantageous for patients. The ultimate goal of educating students is to improve the quality of patient care and outcomes. Providing simulated experiences prior to the clinical setting can contribute to patient safety by reducing risk and harm. In their argument on the ethical imperative to use simulation, Ziv et al. share that simulation offers "best standards of care and training, error management and patient safety, patient autonomy, and social justice and resource allocation" (2006, 253). The process of educating medical and nursing students creates ethical dilemmas for educators, which simulation can help to minimize or avoid (Ziv et al. 2006). Care delivered by inexperienced or incompetent students may cause harm to patients, generally conceptualized as physical harm, but patients are also at risk for psychological, sociocultural, and moral harm. Educators are therefore ethically obliged to provide

learning opportunities for students to reduce these risks and promote optimal care for patients. With simulation, educators can observe firsthand any deficits in competencies that could contribute to poor care. Simulation has been recommended by the Institute of Medicine to reduce medical error, which should translate to lowered healthcare costs (Gaba 2004; Kohn, Corrigan, and Donaldson 2000). Although research that demonstrates direct benefits to patients is limited, there is evidence of improved student performance, knowledge, critical thinking and more. Furthermore, deliberate practice has been shown to significantly improve skill performance and teamwork, leading to improved patient care and outcomes (Andreatta et al. 2005).

While simulation has many benefits as a teaching method, it has distinct challenges and difficulties that may limit the extent of its implementation. The major challenges include the factors of time and expense. Simulation is a time and labor-intensive process, requiring substantial effort for preparation and implementation. Implementation generally involves repeating scenarios with several groups of students; therefore, scheduling multiple groups requires a substantial investment in time. If simulations involve patient actors (whether professional standardized patients or volunteers), additional time is required to prepare the actors.

Simulation can be associated with considerable expenses, which vary depending on the type of simulation that is selected, the level of sophistication, and the available resources of the institution. Standardized patient simulations have expenses associated with hiring and training actors, the use of video recording equipment, support staff, and space. The use of volunteers, staff or student actors as patients can reduce the costs. The expenses associated with simulators, haptic systems and virtual reality vary significantly,

from affordable (task trainers and low to medium-fidelity patient simulators) to very expensive (immersive high-fidelity systems in fully equipped rooms). The costs are higher when simulation is first integrated into a program, as expenses are generated for the purchase of simulator equipment, associated technology, and space to store and use the equipment (Issenberg and Scalese 2009). Continuing costs occur for maintenance and upkeep of the simulators and technological equipment. Issenberg and Scalese (2009) point also to the personnel expenses associated with simulations – faculty to develop and conduct simulations, training of additional faculty to assist in facilitation, and personnel to maintain the equipment and facility.

Some limitations of simulation are related to the equipment itself. Although task trainers and low to medium-fidelity simulators are portable, more sophisticated simulators are fragile and cumbersome to transport, making their use outside of dedicated simulation space difficult in some cases. (Issenberg and Scalese 2009). With care, however, many high-fidelity mannequins can be moved to different places. Finding portable tables to move pieces from one space to another is helpful. Issenberg and Scalese (2009) also note that technical equipment often has set uses and may not be suited for a wide range of learning.

Simulation equipment and technology also have intrinsic limitations that affect student learning. In mannequin-based simulation, students note the limitations presented by a simulator's inability to convey nonverbal communication (Lasater 2007). In addition, although the simulator may use pre-programmed responses or may be voiced by the facilitator, students often are uncomfortable communicating with the mannequin. Many patient simulators are also limited in the ability to display physical changes in

color, edema, and neurovascular reflexes (Lasater 2007). The appearance of a simulator may contribute to some confusion in a scenario. Simulators may be masculine, feminine or gender-neutral, but they are often bulky with large features. Despite efforts to feminize the mannequin with breasts and wigs for simulation involving a female patient, some students have difficulty recalling the patient's gender during the scenario.

Furthermore, standardized patient simulation in medical education has faced criticism for its inability to authentically represent the power dynamics of the patient-physician relationship (Hanna and Fins 2006; Wear and Varley 2008). While the student and faculty may perceive the standardized patient scenario as realistic, Hanna and Fins (argue that simulated experiences alter the "usual power dyamics" in the patient-physician encounter (2006, 265). The standardized patient, they observe, holds the balance of power in the form of knowledge of the problem and the expected competencies of the student and ultimately control's the outcome of the encounter. In many simulations, the standardized patient also evaluates the student's performance. They suggest that a standardized patient may respond differently to the student than would an actual patient, affecting the authenticity of the encounter. Hanna and Fin claim that students focus on impressing their evaluators, disingenuously interacting with standardized patients. The result of simulation-based education, they argue, is learning "to be good physicians from the outside" rather than better physicians "from inside the heart" (2006, 267). Furthermore, they suggest that a standardized patient may respond differently to the student than would an actual patient, which affects the authenticity of the encounter.

Exercises that offer practice opportunities for students outside of the clinical setting represent but do not substitute for reality, and therefore, they are limited by their lack of complete authenticity. While the arguments of Hanna and Fins (2006) raise important concerns regarding the validity of simulation for the evaluation of clinical competency, similar claims can be made toward most nonclinical-based learning. Students who are engaged in classroom dialogues, small group discussions or written case analyses, for example, may also give more weight to how they are perceived and assessed and adjust their performance. Yet, experiential learning that occurs outside of the clinical arena provides opportunities for habituation of professional behaviors. Students have opportunities to "try out" suggested techniques and modify their approaches based on immediate feedback. The shift in power in the patient-practitioner dynamic, however, and its influence in achieving learning outcomes should be identified and addressed to assist students in transferring skills to the clinical setting.

Finally, as the review of empirical research reveals, one of the challenges facing simulation at present is the lack of a substantial body of evidence-based research, presently more so in nursing, but evident in both medicine and nursing. Many research studies have been limited to small convenient samples with limited comparisons. In light of the high costs associated with some forms of simulation, Issenberg and Scalese call for additional research demonstrating "evidence that the investment will yield valuable results" (2009, 34).

Chapter Six – Simulation in Healthcare Ethics Education

A. The Relevance and Appropriateness of Simulation to Healthcare Ethics Education

The last chapter has shown that simulation is an integral component of medical and nursing curricula. Moreover, it is accepted as a sound educational strategy that is relevant to the pedagogies of engagement and formation and is recognized as an effective and valid method for teaching cognitive, technical and behavioral skills. Importantly, simulation as a teaching method is relevant in the development of healthcare professionals. It provides interactive learning opportunities where participants may experience gains in knowledge and confidence and transfer this learning to future clinical situations. Simulation use is also associated with improvements in procedural skill development. Furthermore, and particularly relevant to this thesis, the simulation literature supports the practice of affective and behavior skills, leading to gains in confidence, clinical reasoning, empathy, communication skills, interpersonal skills and professional attributes. Students also express satisfaction when learning with simulation.

The integration of simulation in medical and nursing instruction has been supported by adult and experiential learning theories, which acknowledge the value of its components, such as the opportunities for practice, reflection on learning, and feedback. It has likewise also been shown that simulation holds many advantages over traditional methods of instruction in developing professional competencies. Importantly, the simulation experience promotes the assimilation of knowledge and the synthesis of new learning that can be applied in the clinical setting. Although the simulation literature in medicine and nursing focuses more on its application in technical skill development, this

dissertation thus far has demonstrated its appropriateness in other aspects of professional competence as well. The structural components of simulation extend its appropriateness, for example, to developing the reflective practice, clinical reasoning skills and problem solving in the context of undefined or ambiguous situations. As this chapter will reveal, not only is simulation an excellent method of instruction in the traditional areas of clinical practice, its efficacy can also be appreciated in ethics education.

While the advantages of simulation have been expounded in Chapter Five, a few of its themes and motifs deserve to be highlighted again to illustrate the specific relevance of using simulation to teach ethics to medical and nursing students. Gredler's definition of simulation holds particular significance to ethics education and serves to guide this analysis of simulation (2004, 571). Central to her understanding of simulation is the unfolding case study that reflects the ambiguity and complexity of actual patient-practitioner situations. Gredler's definition is fitting for ethics simulations in light of its well-developed features and the recognition of simulation's role in assisting students to work through open-ended problems for which a solution is not readily known. Ethics in medicine and nursing unfolds in situations that are by their nature uncertain and open-ended. As Schön observed, the real world presents itself with many "indeterminate" areas of professional practice, characterized by "uncertainty, uniqueness and value conflict" (1987a, 6). Caldicott and Danis also remind the educator that teaching and learning experiences should mimic reality, arguing for more "nuanced teaching" rather than presenting ethical problems as "narrow sets of choices between competing values, virtues or principles or laws" (2009, 284). Simulation can be designed to reflect the choices that confront the patient and practitioner, as well as the factors that influence the dynamic

interaction between them and present these in context that stress the need for a nuanced approach to ethics education and practice.

Ethical practice in health care can be complex and challenging for students, particularly as they work to competently apply ethical principles, skills or strategies in the clinical setting. Patients and the ethical decisions that they must contend with need to be considered in the contexts of their particular illness and their specific relationships with others. As Cassell remarked, "Ethics is about relationships" (2007, 21). Ethics educators can use simulation to structure a learning environment that contains those elements of clinical situations that call upon "lived ethics," especially elements which arise within the relationship of the patient and the practitioner (Drane 1998, 15). Relationships are an essential consideration in ethics and include the patient's relationships with various family members, healthcare practitioners and even friends (Cassell 2007, 22). Therefore, it is important that practitioners demonstrate respect for the patient's relationships with others. Cassell observed the integral nature of "context, illness and other people" in the patient's exercise of autonomy, in particular, noting that self-determined individuals are naturally influenced by others (2007, 21). Simulation emerges as an appropriate method for teaching ethics because its structure accents the relational aspects of ethics by placing the novice practitioner in a relationship with the simulated patient. The patient-practitioner interaction is central to simulation; therefore, scenarios can be designed to help students learn the skills to develop trusting relationships with patients, develop empathy and to recognize and respect the contribution of relationships to patients' actions. Scenarios can be created that demonstrate the importance of family in the patient's decision making process, emphasizing for students the need that practitioners

have to understand not just the patient, but the important role that relationships have in the decisions a patient makes (Cassell 2007, 21). Simulation provides practice opportunities for students to learn the skills and the best dispositions to adopt in their future roles as nurses and physicians, and thereby successfully engage with patients.

As Drane remarked, most circumstances that practitioners encounter in their clinical practices require neither rules nor strategies, but a "way of being that fits or is appropriate" (1988, xi). Simulation allows the educator to manipulate the elements being simulated in the teaching for the purpose of reinforcing particular virtues and professional attributes so as to express these ways of "being." For instance, simulation can be designed to promote ethical awareness and sensitivity, to nurture respect of patient dignity and to foster empathy and a caring attitude in a difficult clinical situation. The virtuous practitioner "sees what is morally salient in most situations, and… is predisposed by virtue to act appropriately (Prior 2007, 59). While it may be more difficult to teach virtues than to teach ethical decision making frameworks, some virtues, such as compassion, empathy, respect, trust, honesty, advocacy and courage, align well with this teaching and learning method. Simulation can be used, therefore, to develop and sustain professional virtues and provide situations in which the learner can practice exercising these virtues. Simulations can also be designed to provide practice with prudential reasoning as well as problem-solving skills in a realistic context. It is through this simulated clinical experience that students can practice recognizing and clearly articulating the problem in their minds (Dennis Novack 2011, pers. comm). The learner can experience the process of selecting and applying ethical principles and virtues or

balancing benefits and harms, thus building knowledge, cognitive skills and behavioral skills.

Simulation benefits students by providing safe situations in which they develop self-awareness of their biases, communication strengths and weaknesses, and learn how it is that they make ethical decisions (Novack 2011, pers. comm.). Through simulated patient experiences students learn first-hand about the barriers that are often present in ethical dilemmas involving patients and families. Differences in values and opinions, biases, and frustration or anger can create barriers to effective decision making. The structure of simulation enables learners to reflect-on-action and develop an understanding of their behavior and decision making skills and the justification for their action, i.e., whether they acted on their underlying core values and beliefs, if they acted from a sense of duty and so forth (Novack 2011, pers. comm.).

An advantage of simulation over experiences with actual patients is the opportunity for many students to prepare for a specific learning experience, discuss the unfolding case study and receive immediate feedback. Additionally, scenarios can be adapted to meet the needs of the learner, and problem issues can be repeated and reinforced. Educators can identify frequently occurring problems or issues that are especially troubling to students and develop simulations to assist students in managing these. As Caldicott and Faber-Langendoen found, twelve percent of the ethical conflicts reported by students in one institution involved issues of moral courage (2005, 869). Students reported hesitating to speak up due to their position in the practitioner hierarchy and fear of retaliation. Simulation can be used to assist students to develop confidence, moral courage and effective communication skills to better manage future similar – but

real – situations. Students may feel awkward experimenting within the professional role in initial learning situations, but with repeated exposure, feedback and reflection on ethical competencies, students may become more comfortable adopting and internalizing their role, including the exercise of moral virtues (courage, advocacy, empathy) and prudential reasoning. They experience the results of their attitudes, decisions and actions and, consequently, are able to form habits that are fundamental to their future role as moral agents in clinical encounters.

Furthermore, as a teaching method, simulation offers a holistic educational approach that benefits the student and educator. While this interactive method is known to be effective for teaching a specific skill, it also has the advantage of allowing the educator to teach *across* the different educational domains. Supporting Shulman's (2005b) conceptualization of professional education, simulation can be adapted to meet the educational goals of the cognitive, practical, and moral apprenticeships. For instance, the educator can develop a simulation to reinforce knowledge of ethics principles and theory and improve reasoning skills, while at the same time promote explicit virtues and attitudes, such as moral sensitivity and empathy. Simulation also provides a holistic means to assess learning and evaluate the effectiveness of ethics teaching. The educator can use simulation, for example, to assess not only the level of knowledge acquired and the skills achieved in applying ethical principles but also assess the learner's exercise of professional virtues of character, such as compassion, openness and respect and the use of prudential reasoning skills that are essential in achieving positive patient outcomes.

B. Ethical Reasons for the Application of Simulation to Ethics Education

Although simulation has been shown to be an appropriate teaching method for ethics education based upon its relevance to the development of the healthcare professional and the benefits to teaching and learning that are associated with its pedagogical features, its employment in nursing and medical curricula can be also be ethically justified. The introduction and use of simulation as an educational method can be justified by appealing to certain professional virtues and moral principles, as will be explained in this section. In addition, its incorporation in ethics education is justified by a consideration of the ethical responsibilities of those teaching ethics in nursing and medicine, which will also be examined below. As will be explained in this section, ethics educators in nursing and medicine are also able to fulfill their own professional obligations to provide useful educational and learning experiences to their students by successfully implementing simulations in their ethics teaching.

The primary ethical rationale for the use of simulation is to *nurture and sustain* the moral and intellectual virtues in medical and nursing students to better achieve quality patient care. Consistent with the ultimate goal of ethics education - to improve the quality of patient care - the goal of simulation-based ethics education is to assist students in recognizing and developing the necessary skills and dispositions to lessen and prevent errors and harm, to reduce risks and burdens to patients (reflecting the principles of beneficence and nonmaleficence), to prevent injustices, respect patient autonomy, and effectively engage in ethical decision making.

A proposal by Ziv et al. (2006) calling for an ethical imperative to integrate simulation in medical education is relevant here. As noted in Chapter Five, Ziv et al. based their position on four factors, each of which holds true here as well. The reasons that they provided included best standards for patient care, medical education and skills evaluation; error management and patient safety; patient autonomy; and social justice and resource allocation (252). The ethical imperative arose primarily from the perspective of using simulation in its conventional sense to teach and develop technical and behavioral skills. The authors' analysis considered simulation-based training primarily in regard to communication, management, cooperation, interviewing, history-taking, physical examination and procedural skills (253). The authors also promoted the use of simulation to teach informed consent, citing the goal of nurturing the learner's "ethically sensitive approach" to the process of obtaining informed consent (254). The foundation laid out by Ziv et al. can be extrapolated and taken as a premise in an argument supporting the use of simulation in ethics education and in demonstrating that there is also a moral imperative to use simulation in the ethics education of medical and nursing students. Some of the themes proposed by Ziv et al. are highlighted in this section, which describes the ethical imperative to use simulation to teach virtues, prudential reasoning (or ethical analysis) and ethical decision making.

It is well appreciated that there is an ethical obligation to reduce risk, minimize error, and remove the risk of burden to patients. The principle of nonmaleficence holds that physicians and nurses should "first do no harm," and as Ziv et al. report, this principle underscores patient safety movements (2006, 252). Simulation experiences are developed to provide consistent practice opportunities and skill assessment for healthcare

professionals that ideally lessen or remove the burden or risk of harm to patients and to students. Ziv et al. recognized this ethical obligation and the benefit of simulation to minimize avoidable harm to patients. The authors did not specify the possible types of harm, but they reported on harm that results from medical errors, which is often measured as physical injury. As they noted, patients need to be protected and also deserve to be treated by students who "hone" their skills to an acceptable level of competency prior to working with actual patients (252). Harm to patients, however, can be appreciated in a much broader sense that includes *moral* harm – harm as unfairness, disrespect and to interests – as well as socioeconomic (stigmatization, for example), psychological, and more commonly, physical harm (UNESCO 2008, 24). From this expanded definition it is clear to see the practitioner's responsibility to recognize a more comprehensive range of risks to patients.

The need to avoid moral harm is of particular significance to this discussion of ethics education. Insensitive, unapproachable, or indifferent nurses or physicians can potentially create moral harm. Lack of integrity and compassion and dishonesty also results in harm to patients. While there is limited discussion in the literature of the risks of harm or burdens to patients resulting from ethically insensitive nurses and physicians, it is evident that interactions with such practitioners may result in disrespect, injustice and social stigmatization being directed toward and suffered by a patient. Moreover, insensitive physicians and nurses are at risk for overlooking problems, ethical or otherwise, and providing substandard patient care. Simulation enables educators to place students in explicit learning experiences that require moral sensitivity and moral engagement to develop and nurture the appropriate dispositions and attributes. At the

same time, simulation allows educators to assess the moral comportment of students prior to working with patients. Simulation may also be used to help students achieve the advocacy skills and moral courage needed to manage situations where uncaring or indifferent care providers place patients at risk for harm or substandard care.

Ziv et al. (2006) also observed that simulation in medical education could potentially reduce injustices associated with novice training. They report that a disproportionate number of poor individuals receive care in academic health systems where they are more likely to be treated by novices in training rather than experienced practitioners, which results in an increased burden of risk for this patient population (254). Ziv et al. focus on risks associated with procedural or technical skills. This argument, however, also holds sway in ethics training. Ethics educators should be aware of the risks associated with insufficient clinical ethics skills, such as protecting autonomy, the process for informed consent, and withholding and withdrawing treatment, and their obligation to protect patients and prevent problems of distributive justice within a clinical setting. Simulated experiences in ethics curricula may help to reduce the burden of risk associated with novice training in academic medical institutions and minimize the injustices that are disproportionately experienced by already disadvantaged patients in this population.

Simulation also has the potential to enhance prudential reasoning and ethical problem-solving. As noted in Chapter Four, prudence is a fundamental intellectual virtue, which nurses and physicians must exercise to properly apply the virtues of character, ethical principles and theories. Nurses and physicians who lack prudence are at risk for making hasty or careless determinations in applying virtues and principles and may create

negative outcomes for patients. For example, the virtue of honesty, while critical to the patient-nurse or patient-physician relationship, must be applied with prudence in individual situations. Information shared at the wrong time or in the wrong way can create harm (Pellegrino and Thomasma 1993, 87). Likewise, physicians and nurses who lack prudence may carelessly apply the standards and guidelines of care and fail to consider the individual needs and circumstances of the patient, negatively impacting the quality of care. Learning to skillfully apply virtues, principles and standards to individual patients requires experience. As Benner asserted, "What one cannot do is be beyond experience, or be responsible for what has not yet been encountered in practice" (2001, x). Simulation can be designed to specifically strengthen prudential reasoning skills. It enables students to recognize and clearly articulate ethical issues. Creating practice opportunities to develop moral sensitivity and prudential reasoning skills enhances the practitioner's competency in responding to the individual needs of patients.

The use of simulation to teach ethics is promoted by the educator's responsibility to embed the ethical principles of beneficence, nonmaleficence, justice and autonomy in students' practice. Educators are morally obligated to ensure that students practice according to the ethical standards of the professions in order to provide quality care for patients. In their covenant with society, educators and academic institutions also have an ethical obligation to sustain the virtues and values of the profession (Begley 2006; Pellegrino and Thomasma 1993). Educators have a responsibility to produce virtuous practitioners, ensuring, for example, that their graduates practice with honesty and integrity. This responsibility is based on society's expectation that academic institutions "will provide some assurance of the characters of their graduates" and with this

expectation comes the obligation to "detect at minimum, the most egregious deficits, and attempt to correct them" (Pellegrino and Thomasma1993, 178). This assessment of a student's disposition and character should occur early in a student's education. Simulation provides opportunities for faculty to detect problems and mitigate them early and is particularly helpful in curricula that offer less supervision and oversight of students in the clinical settings.

Simulation has a valuable place in the ethics education of medical and nursing students in that it can be used to monitor and counter any tendencies for ethical erosion and moral malaise. Scenarios can be constructed, for example, that reproduce conflicts of interest or clinical situations that require empathy in challenging circumstances. Simulation is also useful in clarifying the moral boundaries for practitioners and reinforcing the need for courage in the face of morally ambiguous practices. Pellegrino and Thomasma describe some professional practices at the moral margins, such as refusing to treat certain patient groups or cooperating with policies that require inappropriate early discharge of patients (1993, 145). Simulation can be designed that raises moral awareness of these practices and through reflection demonstrates and reinforces the virtues, such as courage, needed to resist these. Employing simulation allows the educator to not only provide practice situations to develop and sustain virtues, but it also facilitates the assessment of students' performances and alerts the educator to moral failings, such as ethical cynicism, erosion of professional virtues, or exercising self-interest over altruism.

Decker (2007) raises several additional ethical considerations related to using simulation that are relevant to this argument. While her comments are directed to the use

of high-fidelity simulation in nursing education and do not specifically address ethics education, they raise interesting perspectives on the educator's responsibilities when using simulation. Decker questions the exercise of virtues, such as trust and compassion, as they relate to educating nursing students. She considers the issue of trust in the nurse-patient and faculty-student relationship and questions whether failing to offer simulation in nursing education demonstrates a breach of trust and a form of neglect of patients as well as neglect of students' educational needs. Decker also questions whether educators are acting consistent with the virtue of compassion when they permit students to perform procedures on patients without the benefit of simulated experiences. These concerns are also quite relevant in ethics education. Educators should be mindful of their obligation to maintain a culture of trust and compassion in the student-patient relationship. Simulation can be used to prepare students for clinical ethics skills, such as end-of-life care issues or the process of informed consent, thus preventing neglect of patients and students and sustaining trust and compassion in student-patient and student-educator relationships.

C. The Empirical Studies That Illustrate the Use of Simulation in Healthcare Ethics Education.

While simulation has a growing presence in medical and baccalaureate nursing curricula overall, the literature review shows that it is employed to a lesser degree in ethics education. Consistent with the availability of simulation research in medical and nursing education overall, there has been more research on using simulation as a method in ethics curricula in medicine than in nursing. The literature review shows, however, that there has been minimal empirical research using simulation to teach ethics in either discipline. As a result, the articles described in this section are predominately descriptive

in nature and include student and faculty perceptions of the effectiveness of ethics simulation. The research on simulation in ethics education will be presented according to profession. In light of the limited numbers of articles that specifically use simulation to teach ethics to medical students, some articles using simulation with residents are included in this section.

i. Research Using Simulation in Ethics Education in Medicine

A small number of articles have been written that expressly review the use of simulation in the ethics education of medical students. Of these, most examine simulation as a method for assessment or evaluation of students' ethical knowledge and skills, while fewer articles review its use as a teaching method. There is a wider body of literature, however, on using simulation to teach different aspects of professionalism to medical students, which overlaps to some extent with ethics education. The Accreditation Council for Graduate Medical Education defines professionalism as "a commitment to carrying out professional responsibilities and an adherence to ethics principles" (2011, IV.A.5.e). This definition further lists the attributes of professionalism as compassion, integrity, respect for others, respect for privacy and autonomy, altruism, accountability, and sensitivity to diverse population (2011, IV.A.5.e). Traditionally, however, professionalism has been seen as a broader construct that is difficult to define (van de Camp et al. 2004). The characteristics of professionalism mentioned most often in the literature include altruism, accountability, respect and integrity (van de Camp et al. 2004, 697). Professionalism also includes ethical practice, medical-legal compliance and clinical competence among its distinguishing features (McKenna and Rosen 2010). McKenna and Rosen observe the need to include values and the ability to resolve value

conflicts among the professional attributes of physicians. While the professionalism literature often mentions professional virtues among professional attributes, it does not use the same terminology; in fact, it is rare to find "virtue" directly mentioned in articles on professionalism.

Additionally, some of the literature on professionalism focuses on professional conduct and misconduct, while other literature focuses on interpersonal and communication skills. Standardized patient simulations have been used to teach professionalism concepts, such as being sensitive to the patient, relationship-building skills (Hochberg et al. 2010) and breaking bad news (Edinger et al. 1999; see Baer et al. 2008 for simulation experiences that use cancer survivors to teach students skills in breaking bad news). These interactive learning experiences are relevant here in that professionalism and competence in communication skills are essential for ethics competency. It is important to consider, however, that while the literature on professionalism may implicitly reflect ethics and hold relevance to the development of professional attributes, it does not explicitly teach ethics. Furthermore, simulations that are used to primarily teach professionalism may not include reflection as part of the learning experience, an important component of simulation that enriches the students' learning related to transferring and applying professional virtues, knowledge and skills to the clinical setting. A review of relevant articles in simulation and ethics education in medicine follows. Several articles on professionalism that are particularly relevant to ethics education are included in this section.

In an early article on the ethics education of internal medicine residents, Arnold et al. developed an ethics curriculum to raise awareness of the ethical dimensions of clinical

practice, support residents in applying ethical principles in clinical practice, and assist the residents to "communicate sensitively" about ethical concerns (1988, 92). The curriculum incorporated education in medical ethics (such as informed consent, truth telling, confidentiality, resource allocation, end-of-life care) and communication skills. The program used videotaped role play of standardized patient interactions to provide the residents with opportunities to practice the behavioral skills necessary for ethical practice, especially when discussing difficult ethical issues (94). Arnold et al. explained that the residents reviewed their videotapes, although the authors did not describe the reflection process that was implemented. If sufficient opportunities were provided for reflection and feedback, this teaching method, described as "role play," would serve as a fitting example of simulation-based ethics education. The curriculum program used a variety of techniques in addition to the taped sessions with standardized patients; however, the authors did not include the residents' evaluation of each technique. The program was positively viewed by the residents for its contribution to their clinical practice. Moreover, the residents suggested that the learning activities be a required part of the residency program (95).

Gordon and Tolle (1991) used simulation with volunteer simulated patients to train medical residents in advance directives. At the time of this study, the authors reported that the group of medical residents felt unprepared to discuss advance directives with patients or their families. Despite the age of the study and the likelihood that current medical residents might feel better prepared, the results of the educational program are relevant to this dissertation. The simulation's purpose was teaching and improving skills and sharing individual feedback; the authors note that it was not conducted for evaluation

purposes. The educational strategy that Gordon and Tolle implemented contained the important elements of simulation, including practice scenarios, debriefing and evaluation. The authors provided introductory and preparatory work for the residents and reviewed the students' personal goals, their plans for conducting interviews and the areas in which they wanted feedback. Gordon and Tolle described a holistic educational approach to improve knowledge, skills and attitudes about advance directives. The medical residents overwhelmingly rated the experience as positive and found it to be "realistic, relevant, and useful" (567). The residents' self-rated assessments showed improvements in all areas. Of note, one of the participants commented, "Although role-playing is always difficult, it is very useful to actually practice saying things. Thinking about what you would say is different than actually saying it" (568).

In 1991, Edinger et al. (1999) developed an ethics education program for medical students that integrated standardized patient interactions for the express purpose of teaching and learning ethics rather than for evaluation. The authors observed that at this time in medical education many standardized patient sessions were conducted for teaching and evaluation of basic clinical skills, while few programs were using standardized patients for the teaching of ethics. The ethics program included medical students in the pre-clinical and clinical years. Students participated in a series of standardized patient simulations that represented ethical dilemmas in clinical practice. The topics included advance directives, breaking bad news, informed consent, physician-assisted suicide, obtaining "do not resuscitate" status, and patient autonomy in the context of psychiatry. The program also included standardized patient sessions that afforded students the opportunity to practice communication skills with patients in difficult

clinical contexts, such as domestic violence and obtaining a sexual history. Depending on the topic, students either interviewed the standardized patient or observed a classmate. In some situations, the students observed a physician as a role model in the interaction. Discussion sessions followed the standardized patient interactions with an emphasis on reflection on feelings, emotions, behavior, communication skills, relationship-building and the effectiveness of the students' responses. The authors did not report any measurement data, but they observed that "the interactive experience…provides an opportunity for trial and error, understanding and appreciation, and personal and professional growth in the area of ethics, without the reliance on real patients to bear the brunt of a student's ethical education" (4).

Fleetwood et al. (2000) compared the efficacy of computer-based learning with small group discussions in an ethics education course with second-year medical students. The "small group discussion" group received eight bioethics lectures and eight small group discussions. In the "computer-based learning" group, two computer-based scenarios on confidentiality and assisted suicide that featured simulation-based learning were used in place of two small group discussions on the same topics. The computer-based learning program required the medical student to adopt the role of the physician and interact with an "onscreen" patient who responded with text, audio and video (97). The student interacted with the simulated onscreen patient by text and received individualized feedback from a variety of professionals on his or her ethical responses and communication skills. All students were evaluated with a final exam. The authors found that the students who participated in the computer-based learning scored better on test items on confidentiality, while no difference was found between the groups on test

items related to assisted suicide (98-99). All students were also assessed based on their interactions in a standardized patient simulation. Standardized patients evaluated the students' knowledge of confidentiality, communication skills, and also completed a patient satisfaction survey. Students who completed the two computer-based learning sessions scored better on the bioethics content; however, no difference was seen in the communications skills between the groups. The authors report that the small group discussion group scored better in patient satisfaction. Fleetwood et al. found no difference between the two groups in self-reported preparation in managing issues of confidentiality with "actual" patients, including communication skills, but the computer-based learning group reported feeling better prepared to manage the legal aspects of confidentiality (101).

Another initiative to incorporate interactive experiential learning of ethics was designed by Fleetwood, Novack and Templeton (2002), which employed standardized patient simulations to provide practice opportunities for third-year medical students. The authors' goal was to "bridge the gap between classroom instruction and bedside encounters with patients" (1100). In this program students participated in eight OSCEs, four in medical ethics and four in psychiatry. They worked through the scenarios either individually, in pairs, or in groups of three. When in groups of three, two students were observers only. The medical ethics topics included "confidentiality and HIV, informed consent, medical futility, advance care planning, physician-assisted suicide, 'do not resuscitate' orders, disclosure and cultural expectations, and medical students' training dilemmas" (1100). The four psychiatry scenarios included depression, alcoholism, domestic violence, and dementia. Faculty members observed the students through

monitors or 2-way mirrors and later provided individualized feedback (1101). A debriefing session followed the students' interactions and included ethical and legal concepts, communication skills, as well as "personal attitudes and biases that enhance or inhibit effective communication" (1101). Students positively rated the experience (4.3/5) (1101). It should be noted that although the authors referred to the learning experience as an "OSCE", which typically implies a focus on evaluation, the sessions included a 90-minute debriefing session, demonstrating an emphasis on teaching and formative assessment. The OSCE is defined in this article as an objective structured clinical exercise, not examination. Significantly, the faculty developed a guide with case materials and made this available to other medical programs at cost.

The standardized patient simulation experience in ethics reported by Fleetwood, Novack and Templeton (2002) and described above is currently conducted as part of the psychiatry clerkship in Drexel University's medical program and was observed by this writer in November 2011. Although the majority of students participate at Drexel University's main campus in Philadelphia, students at its Pittsburgh campus participate via teleconference with the standardized patients. The simulations are presently facilitated by Dennis Novack, who confirmed that the focus is teaching, learning and formative evaluation (pers. comm.). Dr. Novack notes that faculty watch full cases or parts of the simulations and observe the values, behaviors and communication skills of students. They also are able to observe generic mistakes that challenge most students. Typical communication barriers include managing confrontation, differences in values and opinions and presenting bad news. The sessions lead to discussions on the ethical concepts that arise in clinical situations, as well as norms and decision making. The

faculty members are able to use the simulation sessions to learn whether students act based on their underlying core values and beliefs, are duty-bound and how they justify their actions (Novack, pers. comm.). At the end of the debriefing session, the students evaluate the educational exercise, which continues to be positively received.

As part of a comprehensive assessment of professional competence in second-year medical students, Epstein et al. (2003) developed a 2–week intensive program that consisted of activities that integrated many characteristics of professional competence. Among the activities in this program were eight standardized patient interactions and a team-based simulation. The standardized patient interactions and post-encounter activities were designed to assess the students' competence in applying science knowledge, clinical decision making, ethics and more. The team-based simulation focused on collaboration, clinical reasoning skills, and problem solving. Standardized patient encounters and team-based simulations were videotaped for later review. Students received feedback from the standardized patients on their ability to facilitate patient-centered communications and also reviewed the videotaped interactions individually with faculty. In addition, students were assessed by their peers on interpersonal sensitivity, including demonstrations of respect, compassion, empathy, sensitivity and appropriateness of behavior. The authors note that the program included an "intensive period of reflection and feedback" intended to produce a "strong formative effect" (188). The program produces an individualized learning plan for each medical student that reflects the student's strengths, weaknesses and priorities (189). The program integrated ethics, interpersonal attributes and professionalism with science knowledge and skills over a variety of exercises, thus it is not possible to examine the specific effect of the

standardized patient simulations on the teaching and learning of ethics. It is interesting, however, to note that the students rated the standardized patient experiences as most valuable (4.25/5) of all of the program activities, followed by the individual review of the videotaped session (4.11/5), underscoring the value of simulation exercises and feedback for students (193).

The Ethics Objective Structured Clinical Examination (OSCE) deserves particular mention here as well. As introduced in Chapter Two, the Ethics OSCE has been used to evaluate the clinical ethics skills of medical students, residents and residency candidates (Singer et al. 1993; Singer et al. 1996). Based on the original OSCE model of Harden and Gleeson, the Ethics OSCE uses standardized patients in simulated case studies to assess the participant's ability to respond to clinical ethics problems (Singer et al. 1993). Early studies by Singer et al. (1996) have demonstrated the Ethics OSCE's face and content validity, inter-rater reliability and construct validity. Singer et al. (1996) also conducted a study to further test the reliability of the model (testing inter-station reliability) and at the same time compare the performance of students from different medical programs. Interestingly, the findings revealed differences among the students from the various programs on the mean scores on particular scenarios, allowing the researchers to identify possible weaknesses in the different curricula. The authors share, "Because clinical ethics requires cognitive, behavioral, communication, and professional skills, as well as virtue of character, it is perhaps the most difficult domain of medical practice to evaluate. Our research using the OSCE proves that the behavioral aspects of clinical ethics can be evaluated" (Singer et al. 1996, 498). However, the researchers were unable to demonstrate inter-station reliability and as a result, they could not endorse the Ethics

OSCE as a single method of evaluation (1996, 498). The authors suggest, however, that in light of the available feedback from the standardized patients, OSCEs can be used for teaching ethics to students (1993, 26).

As mentioned earlier, some of the research from the professionalism literature is included in this section because of its pertinence to professional virtues or quality of care. While the focus of the following article is on simulation for evaluation purposes, the results of this study reveal the potential contribution of professional attributes to quality of care. Van Zanten et al. (2005) assessed the reliability of the Objective Structured Clinical Examination (OSCE) to measure the professional attributes of international medical school graduates who applied to graduate medical programs in the United States. The professional attributes of truthfulness, rapport, having a personal manner, and achieving patient satisfaction were assessed in interactions with standardized patient actors. The study found that doctors who had recently graduated from medical programs or were younger scored higher in interviewing, rapport, patient satisfaction and counseling. Female candidates scored higher than males in all interpersonal skills, especially on rapport, which was defined as "ability to be on his or her way to establishing a caring relationship with a patient" (23). Of interest to this dissertation, the study revealed that the professional attributes assessed in the clinical examinations were moderately correlated with the candidate's performance of clinical skills, specifically demonstrating that these professional attributes resulted in enhanced history taking, physical examination and written communication skills (25). Although van Zanten et al. focused on the efficacy of OSCEs to assess professionalism, this finding suggests that professional attributes, such as respect, a caring stance, and truthfulness, can contribute to

improved practitioner performance in clinical skill performance. One can hypothesize, however, that improved clinical performance, which was moderately correlated with professional attributes, can contribute to improved patient care.

Gisondi et al. (2004) conducted a simulation with first, second and third-year emergency medicine residents to evaluate the residents' response to ethical dilemmas and their professionalism in critical care situations. The simulations used a hi-fidelity patient simulator. The simulations were used for evaluation and not as a teaching-learning strategy. This study is relevant here, however, because it demonstrates the way in which ethical issues can be embedded into previously developed high-fidelity simulations. The authors developed ethical cases on informed consent, patient confidentiality, withdrawing care, orders to "do-not-attempt-resuscitation," and performing procedures for practice on the newly deceased which were then incorporated into emergency medicine crisis resource management scenarios (932). When the medical case problem in the scenario was resolved, the facilitators introduced the ethical problem. The authors suggest that the "inconspicuous" addition of the ethical issue allowed for "unrehearsed and genuine" responses from the participants (935). The researchers found that the scenarios highlighted strengths and deficits in the residents' professional responses to the ethical dilemmas. They observed, for example, a high number of residents who conveyed confidential information in the scenario, a finding that was not available through prior professionalism evaluations (936). Not surprisingly, second and third-year residents displayed the "critical action" for the ethical problems more frequently than first-year residents (934). Interestingly, the researchers found that third-year residents displayed professional behaviors in response to certain ethical issues more "reflexively," proposing

that perhaps residency training provided the experiences that they needed. Gisondi et al. raised an interesting and important observation related to the residents' reflexive responses to the ethical issues of informed consent and end-of-life care. The authors questioned whether ethics instruction could be delivered such that learners could learn to react to clinical ethics problems much as they would to other clinical issues. They asked, "If the clinical response to ventricular fibrillation can be taught to occur reflexively, could a similar professional response be taught for commonly encountered ethical dilemmas?" (936). Their question suggests that with structured practice through simulation, residents (and other healthcare practitioners, by extension) could develop improved clinical ethics skills and professionalism to the same level of competence as is expected with medical problems (cardiac dysrhythmias, for instance). Clinical practice through simulation could provide the opportunities to sensitize medical students and residents to routinely and reflexively recognize and respond to these concerns.

Analyzing the experiences in the scholarly literature of simulation in ethics education reveals some trends and successes. The majority of the articles examined in this review identified self-reported improvements in learning. The results also suggested that simulation was relevant, beneficial and provided a valuable means for both students and educators to assess the effectiveness of learning. Not surprisingly, these studies revealed an emphasis on ethical decision making and clinical ethics skills. Consistent with Eckles et al.'s (2005) review which identified a virtue/skill dichotomy in medical ethics education, most ethics curricula are orientated toward teaching ethical decision making skills and less inclined toward teaching professional virtues. The application of simulation in medical ethics education is reminiscent of this finding. The majority of the

studies (Arnold et al 2004; Edinger et al. 1999; Fleetwood et al. 2000; Fleetwood, Novack, and Templeton 2002; Gisondi et al. 2004; Gordon and Tolle 1991) employed simulation to enhance knowledge and improve the cognitive and behavioral skills needed to competently manage ethical problems that the medical students or residents would more often encounter (informed consent, advance directives, withdrawing or withholding treatment), as well as some that occur less frequently (physician-assisted suicide). Although the simulations were conducted for the purpose of skill-building related to ethical problem solving, some authors reported the inclusion of discussion sessions that provided opportunities for the participants to discuss their feelings and emotions, values and value conflicts (Edinger et al. 1999; Fleetwood, Novack, and Templeton 2002). Some authors provided extensive debriefing sessions that emphasized how students make decisions. For example, Fleetwood, Novack and Templeton (2002) included an in-depth debriefing and reflection session that discussed professional values and value conflicts, bias, opinions and underlying belief system and the influence of these on the patient-physician relationship.

Although the simulation scholarship illustrates a trend toward skill development, several authors conducted simulation to teach and assess professional attributes and values. The study articles included assessment of teaching and learning that emphasized professional virtues and attributes, such as respect, compassion, empathy, interpersonal sensitivity (Epstein et al. 2003). Van Zanten et al. (2005) stressed truthfulness, building a caring relationship, and interpersonal skills in a simulation that was used primarily for evaluation.

Ethics educators may incorporate a discussion of professional virtues in ethics simulations, but this is not readily evident in the literature. Whether simulation is conducted with an emphasis on virtues or skills, it is evident from the ethics simulation scholarship that students value and appreciate learning through simulation. Many study authors have reported student satisfaction in their research, which is a positive and encouraging finding.

ii. Research Using Simulation in Ethics Education in Nursing

There are a limited number of research articles that explicitly review the use of simulation in the ethics education of nursing students. Other experiential strategies, such as role play, have been used in nursing to teach related concepts, such as communication skills as discussed in Chapter Four. This review identified one qualitative study by Smith et al. (2012). In light of the small numbers of articles, additional literature employing simulation with nurses (Gropelli 2009) is included in this section.

Perlman (2008) designed simulations to teach skills used in ethics consultation to second-year, preclinical baccalaureate nursing students enrolled in an ethics course. The simulations were integrated into the course to develop the students' critical thinking, anticipate ethical problems and respond appropriately, illustrate the integration of ethical and clinical decision making, help students appreciate the complexity of the health care environment, demonstrate collaboration in problem solving and spur their interest in joining ethics committees (12). Nine case scenarios were written for the simulate ethics consultations that reflected prevalent ethics issues such as confidentiality and privacy, informed consent, capacity determination, and end-of-life care issues, among others. The

nursing students assumed the role of ethics consultants, clinicians, patients, surrogates and family members. The simulations required that participating students prepare up to 2 weeks ahead of time for their roles, an approach that would allow them to better adopt the functional role, consistent with Gredler's definition of simulation. The students serving as ethics consultants reviewed the details of the clinical case and prepared their decision making strategy. The course utilized a "clinical pragmatism framework" to guide the ethical decision making process (10). Certain students who serve as evaluators provide immediate feedback, which is followed by a discussion in the next class session that focuses on the ethical support for the students' decisions (13). The large class size limited the opportunity for all students to assume the ethics consultant role. Perlman suggested a few changes for the simulations, in particular, that standardized patients be used for the patient role. He also suggested that the simulations be video-recorded for improved feedback. Perlman shares that the course evaluations are "uniformly positive" (14).

In an immersive clinical laboratory experience, Vanlaere, Coucke and Gastmans (2010) provided simulated experiences for the purpose of developing or enhancing ethical reflection and empathy in care providers. The simulation included nursing students, nursing assistant students, experienced nurses, and allied health professionals. The learning experience is directed toward the care of older adults, who report that healthcare providers "knowingly or unknowingly contribute to their vulnerability" (2010, 325). Vanlaere, Coucke and Gastmans have described the aspects of "good care' as responding to this vulnerability, being empathic, attentive, and understanding the patient's "situation, perspective, and vulnerability" (325). They maintain that empathy arises from ethical reflection and is an essential part of virtue ethics. To address this

aspect of "good care," Vanlaere, Coucke and Gastmans developed a "care-ethics lab" simulation for care providers for the purpose of encouraging ethical reflection on care practices, developing a caring stance, and promoting empathy (326). The care-ethics lab experience consists of a voluntary two-day simulation activity referred to as an "empathy session," which focuses on empathy and the ethics of caring for others. Participants engage in the experiential learning exercise that includes an overnight stay in the simulation lab, which is designed to model a nursing home or long-term care facility with bedroom facilities and group living spaces for meals and entertainment. Experienced care providers (nurses and allied health workers) assume the role of nursing home residents, and each is provided with a specific client profile, which they may further tailor to direct the care activities they will receive (feeding, transferring assistance, bathing or restraints, for example). The nursing students and nursing assistant students take on the role of the care providers who must plan and administer all care. The authors explain that the emphasis for the students as simulated care providers is on "'practicing' an attitude of involvement and adjusting behavior to this attitude within a 'safe', pedagogical context" (330). This statement reflects the priority of the care-ethics perspective on ethical reflection and empathy over the procedural provision of care and guides the students' learning.

Following the simulation, facilitators conduct a reflection activity with the simulated care providers and care receivers separately and then jointly. The reflection sessions examine the participants' perceptions and the nature of care practices with a particular emphasis on relationships. The authors report that the experienced care providers (nurses and allied health professionals) reflect on their values and feelings and

"gain greater insight into the content of their own moral awareness" (Vanlaere, Coucke, and Gastmans 2010, 333). It is not unusual for nursing programs to place students temporarily in the patient role as a clinical laboratory exercise so that they can experience nursing care from the patient's perspective, such being fed or transferred. The care-ethics lab simulation, however, is a unique immersive experience that places care ethics *central* in the learning exercise, emphasizing empathy and ethical reflection and promoting an increased understanding and awareness of the caring dimension within care practices. Those in the role of nursing home residents record their reflections at different points in the experience, and include their motivation for participating and their expectations (330). The student participants engage in additional follow up reflective activities. A few months after the simulation, the simulated care receivers participate in a group discussion in which they review their current work practice and the elements that either encourage or limit ethical reflection and caring practices. As a result of the simulation, some care providers have formed groups that have implemented measures to improve the quality of care for the nursing home residents (332). Although this article did not include any qualitative or quantitative measurements of the simulation's effects on the participants or on quality of care, this finding suggests that there were some changes in professional behavior as a result of the simulation (Kirkpatrick level 4a) that, consequently, may produce positive outcomes for patients (see Issenberg et al. 2005 regarding the Kirkpatrick criteria for effectiveness of intervention that was discussed in Chapter Five). The authors also propose that the care-ethics lab simulation assists in ethical reflection that aids the care provider in examining the context in which she or he provides care and understanding "how this context can become a habit in establishing good care" (334).

Gropelli (2009) developed a simulation as part of an elective ethics course for graduate nursing students that engaged the students in ethical decision making in the setting of simulated ethics committees. The ethics committee simulations included topics such as "do not resuscitate" orders, advance directives, futile medical care, withholding and withdrawing treatment, palliative care, and the rights of prisoners as patients (6). The nurses acquired the roles of the ethics committee members (physician, nurses, clergy, social worker, attorney and member of the community) and also the roles of the patient, family members, attending physicians. This learning activity was conducted with nurses with at least two years of experience and many with over 15 years of practice; the author noted that the diversity of the collective experiences of the participants enhanced the activity. The student actors' roles as family members and patient were unscripted and unrehearsed, requiring the simulated ethics committee members to adjust and adapt their responses as in real life (6). Students in the role of ethics committee members prepared by reviewing the central issues in the cases and employing an ethical decision making model. Gropelli notes that students were actively engaged and accountable; they were responsible for making all of the arrangements for the mock ethics committee (contacting members, setting up the room, contacting security). The author shared that the students accurately demonstrated their roles, made recommendations by consensus, communicated the recommendations and documented the results (7).

A debriefing session was held following the scenario. This simulation-based activity included preparation, an enacted scenario, feedback and reflection, all recommended components of simulation. Gropelli reported that the participants' discussions in the debriefing session centered on their decision making and

communication skills. During the debriefing session, the students critiqued the simulation and offered feedback to peers. The evaluations of this simulation were positive, and the students reported that the activity supported their use of ethical decision making frameworks and assisted them in developing therapeutic communication skills (2009, 8). Moreover, Gropelli noted that some students shared informally that following this experience they made referrals to ethics committees (8). This outcome reflects an increased sensitivity and awareness of ethical problems and the exercise of professional virtues and attributes to act on the behalf of the patient. Increasing nurses' referrals to ethics committees has the potential to increase the quality of patient care and patient outcomes (Kirkpatrick level 4b, benefits to patients), a significant outcome related to ethics education. Some participants reported that they volunteered to attend ethics committee meetings to observe the proceedings, while another student reported joining an ethics committee. The above anecdotal evidence represents a change in the behavior of some participants (Kirkpatrick level 4a, change in professional practice). Increasing nurses' involvement with ethics committees might also enhance the quality of patient care. The effect of simulated learning activities in ethics on raising interest and involvement in ethics should be studied further in the future.

The results of Gropelli (2009) are similar to the work of Vanlaere, Coucke and Gastmans (2010) in that they demonstrate the potential of simulation to exert a higher level of educational effect as assessed by the Kirkpatrick criteria; thus, they are particularly relevant to this thesis. They support the claim that using simulation to teach ethics can be an effective means to provide interactive practice opportunities that may lead to positive changes in the behavior of the learner and ultimately to improvements in

patient care.

In a qualitative study comparing simulation to in-person case discussion and online computer-based learning, Smith et al. (2012) designed a high-fidelity mannequin-based simulation (HFS) to teach legal and ethical concepts to third-year baccalaureate nursing students. The case study for the simulation focused on advance directives, and the authors' aim was to increase recognition of the ethical and legal issues that surround this concept and increase cultural competence and respect. Nursing students were divided into three groups (HFS group, in-person group, online group), and their responses were compared on three points: knowledge of the ethical and legal issues that emerged in the case study, the ability to integrate and apply other nursing content, and reflection on the learning experience (positive and negative aspects, for example). The study results revealed that all three educational approaches increased knowledge and integrated prior learning. The authors observed that in response to an open-ended reflection question, that students in each group experienced different types of learning, each with its own benefit. The in-person group appreciated the ability to discuss the case and found the format helpful in applying content. The online group found the approach convenient and also valued the opportunity for discussions. The high-fidelity simulation group valued its "interactive, real-life nature" (2012, 394). Although the in-person online groups reported negative feedback, the simulation experience received none, and the authors reported that this experience received the most positive responses. On a 5-point Likert scale, the mean scores of students' perceptions of the learning experiences demonstrated that the high-fidelity simulation was rated most favorably (4.5), followed by the in-person discussion group (4.2) and the online computer-based learning group (3.6). The authors found that

the high-fidelity experience showed a statistically significant higher rating than the other methods ($p < 0.05$) (395). The faculty working with the simulation group concluded that it was a "personal" experience, which was not the case in the other groups. They observed "students embrace, identify with, and assume their assigned roles" (396). They also related that the students in the simulation discussed the whole case in the debriefing and were earnest in their reflections, whereas the other groups engaged in discussion as an ongoing process. This led to a greater release of emotion during the debriefing in the simulation group. The decision making of those in the simulation differed greatly from the other groups. Those in the simulation had to make decisions in a time-sensitive manner, unlike those in the other groups, and experienced decision making in a more realistic context.

Finally, a different perspective of the effects of simulation on the ethics education of nursing students is offered in a study by Haddad (2010) that involved both pharmacy and nursing students. In this simulation, which is part of an ethics course for pharmacy students, nursing students assumed the patient role. Haddad notes that the pharmacy students were unaware that the young female patients with whom they were interacting were in fact nursing students, and they instead operated under the impression that standardized patients were performing the patient role. As Haddad noted, the pharmacy students, therefore, interacted with the standardized patients as laypersons, rather than as fellow health science students (482), an important learning consideration. The ethics simulation centered on a female patient who is taking a teratogenic drug, isotretinoin (Accutane), and suspects that she might be pregnant. The patient has sought out a pharmacist (pharmacy student) for counseling about the drug's side effects. Although

Haddad designed the simulations primarily for the ethics education of the pharmacy students, in this study, she examined the standardized patient role on nursing students, investigating its effect on their learning and self-reflection. Each nursing student repeated the patient role approximately seven times. At the completion of the simulations, the nursing students recorded their reflections on their learning, the emotions experienced in the patient role, their assessment of the pharmacy students' interactions, what they learned about themselves and the effect of this experience on future patient encounters (484). The nursing students observed that their identification with the role grew with each experience and questioned how they would actually feel in this particular situation - responses that indicated an empathic response to the patient's situation. They also reported sensing the pharmacy students' frustration and anger during the simulations. A week later, the nursing students participated in a focus group discussion where they related their feelings and conveyed their learning. The nursing students recounted that from their experience as simulated patients they were sensitive to their interactions with patients and the appropriateness of their communication and teaching, and importantly, the way in which as healthcare professionals their personal values and attitudes influence patient encounters. One nursing student summarized this observation, noting that despite the effort to "put your own beliefs and values aside, it still filters through with just the kind of suggestions you make" (485).

The nursing scholarship on ethics simulation is more recent and small in comparison to that of medicine. While ethics education is integral to nursing, the use of simulation to teach ethics is in the early stages of development. Unlike the ethics simulation scholarship in medicine, there were no articles identified at the time of this

review that engaged standardized patients in the ethics education of nursing students. With the recent introduction of standardized patient simulations in other areas of nursing education, it is likely that this may emerge as a new type of ethics simulation. Nevertheless, the small sample provides interesting findings that suggest implications for ethics educators. Of the simulation exercises included in the review articles, two were conducted to promote ethical decision making and communication skills (Gropelli 2009; Perlman 2008), one was conducted to enhance ethical sensitivity (Vanlaere, Coucke, and Gastmans 2010), another was conducted to assess the effectiveness of simulation to increase knowledge (Smith et al. 2012), and one was used to assess the effect of the student's role as a standardized patient on self-reflection (Haddad 2010). Despite the range of goals for the ethics simulations, four of the simulations implied that the activities enhanced ethical awareness, sensitivity or ethical reflection (Gropelli 2009; Haddad 2010; Perlman 2008; Vanlaere, Coucke, and Gastmans 2010). The language used in the research by Vanlaere, Coucke and Gastmans was more aligned with virtue ethics than most of the ethics simulation articles found in the medical literature. The authors used simulation primarily to develop empathy, attentiveness, ethical reflection, moral awareness, rather than to resolve ethical dilemmas or developing specific clinical ethics skills. Even in a study that was developed to teach clinical ethics skills (to pharmacy students), the outcomes suggested the development of empathy. Haddad's (2010) research with nursing students as standardized patients suggested that as a result of the experience, nursing students developed empathic responses and increased awareness of how values influence clinical encounters with patients.

All of the research articles with regard to ethics simulation in nursing revealed

that the participants positively responded to simulation and provided positive feedback on the simulation activities. In the single empirical study, the students who participated in a ethics simulation rated it higher than those in the other learning methods (Smith et al. 2012). It is reasonable to propose that even in this early phase of ethics simulation, nursing students appreciate and value simulation as a teaching method. Ethics educators should be encouraged by the positive results of their colleagues in using simulation to teach ethics. While simulations involving standardized patients in nursing ethics education have not been documented in the literature thus far, educators can look to the successes in medical ethics education for guidance. It is important, however, for nursing ethics to promote a balance between educational approaches that emphasize professional virtues and those that promote clinical ethics skills. The following section provides suggestions for using simulation to teach ethics to medical students and nursing students. The suggested approaches strive for a balance in the virtue/skill dichotomy and work to reduce the tendency to exclusively teach decision making skills and management of ethical dilemmas with less consideration of the ethical comportment of the healthcare practitioner.

D. Suggestions for the Implementation of Simulation in Healthcare Ethics Education

The dissertation has demonstrated that simulation has value and utility in the ethics education of medical students and baccalaureate nursing students. It has shown that there are strong pedagogical and ethical reasons for its incorporation into ethics curricula. It has also been argued that the ethical imperative proposed by Ziv et al. (2006) is equally applicable here. While there have been few studies that examined its effectiveness in

changing professional behavior, simulation has been reported to enhance the acquisition of professional virtues and attributes and to develop the ethical decision making skills of health care professionals (Edinger et al. 1999; Hochberg et al. 2010). Simulation has also been described as effective in improving the learner's therapeutic communication skills (Gordon and Tolle 1991), relationship-building skills and enhancing empathy (Vanlaere, Coucke and Gastmans 2010). There is evidence of simulation's effectiveness in enhancing ethical sensitivity, ethical awareness and ethical reflection (Vanlaere, Coucke and Gastmans 2010). Importantly, as suggested by some anecdotal reports that were identified in the review of the literature on simulation and ethics education, simulation has in some instances created changes in the participant's professional practice (for example, responding with increased ethical awareness, initiating ethics committee referrals, joining ethics committees and creating quality care initiatives). Furthermore, the anecdotal evidence has also suggested that simulation has the potential to benefit patients directly by increasing the quality of patient care (through an ethics committee referral, for instance).

The reflective component of simulation demonstrates its power in transforming theory into clinical practice. As one student commented in the study by Haddad (2010) included above, simulation provides an opportunity to recognize the effect that bias and personal values have on the information that practitioners provide to patients. This awareness illustrates just how powerful the experiential format of simulation can be. It is possible that this student may have not come to realize just how difficult it is to convey respect and an open, empathic stance when immersed in a situation that challenges one's personal values without having had this firsthand, albeit, simulated experience and the

opportunity to reflect on action. Similarly, despite their considerable professional experience, the nurses and allied health professionals in Vanlaere, Coucke and Gastmans' care ethics lab simulation reported benefiting from the opportunity for genuine reflection on their caring practices and consequently implemented practice level changes as a result.

It is interesting to note that the simulation studies which reported effects other than changes in knowledge and attitude occurred in simulations that were conducted with nurses and other health care professionals rather than with students (Gropelli 2009 and Vanlaere, Coucke, and Gastmans 2010, for example). It might be the case that changes associated with simulation at levels that positively affect professional practice and produce patient benefits are easier to observe or follow in experienced professionals. It would understandably be more difficult to demonstrate the same level of effect in simulations that are conducted with medical and medical students because of the difficulties associated with longitudinal studies and the confounding effects of other influencing factors.

While there are limited studies on the effectiveness of using simulation to teach ethics, educators in both medicine and nursing should be encouraged by the descriptive results and anecdotal reports of faculty and students. The studies share the benefits of simulation to awaken learners' ethical sensitivity and to provide practice experience in both the virtues and skills essential to achieve ethics competency. As with any educational approach, the simulation must be carefully designed to best achieve the learning objectives. There are several ways, however, in which educators can integrate simulation into ethics education.

Simulation can be designed primarily to teach ethics, or ethics can be integrated into scenarios that also address a medical or nursing problem. The first type of simulation typically focuses on the ethical dilemmas that surface in particular clinical situations, and attention is primarily directed to the development of clinical ethics skills. Topics may include informed consent, confidentiality, truth telling, end-of-life care issues (withholding or withdrawing treatment, advance directives, "do-not-resuscitate" orders), and physician-assisted suicide, for example. Fleetwood, Novack and Templeton (2002) provide an example of this type of ethics simulation. Another type of simulation that primarily involves ethics addresses the "everyday" ethical dimensions of patient care. This type of simulation can be used to illustrate how ethics arises from the patient-practitioner interaction and comprises most clinical care decisions or situations. An example of an everyday ethics case is presented by Fry, Veach and Taylor (2011), which brings forth the ethics concerns embedded in the routine decision to turn and reposition a patient who is experiencing pain. The authors present this as a written case study, but a case such as this is easily formatted into a simulation, which provides students the opportunity to develop ethical awareness and sensitivity as they are placed in the role of the nurse.

A second type of simulation incorporates ethics as part of a scenario that initially presents a medically-oriented problem to solve. As the students resolve the medical issue, the simulation continues to evolve as an ethical issue is introduced. Gisondi et al. (2004) used this approach successfully with emergency medicine residents. The authors reported that the natural way in which the ethical issue was incorporated resulted in "unrehearsed" responses from the participants. This method would also be appropriate for nursing

students. Simulations that center on providing nursing care to resolve a problem can evolve with the addition of an ethical issue. The addition of ethical dimensions to medical and nursing scenarios may help to sensitize the learners to ethics and develop students and practitioners who routinely recognize ethical concerns and respond almost automatically (Gisondi et al. 2004). The unexpected introduction of an ethical problem reinforces a holistic care model and "de-compartmentalizes" ethical decision making in students.

There is a wide-range of ethics topics that are suitable for simulation. Some of these have been included in the literature review. As this dissertation has emphasized, it is important, however, that students have opportunities to practice exercising professional virtues and prudential reasoning. Therefore, the topics that are suggested in this section are broad and are applicable to both medical students and nursing students. Rather than a list of typical scenario topics, the following compilation provides a direction for the focus of simulation and includes reflection questions for educators to use to facilitate discussion. This approach not only stresses knowledge and behavioral skills that are important in students' education, but it also develops the moral comportment of students and assists in developing moral insight and moral agency. The suggestions for the focus of ethics simulations include:

1. Developing moral awareness and sensitivity. To accomplish this, students should be placed in simulations that incite moral sensitivity, moral awareness and moral engagement. Students must be challenged to recognize moral issues in clinical situations that do not obviously present an ethical dimension. Simulation scenarios can be designed to nurture the appropriate dispositions and attributes in students.

One example is a scenario that centers on applying fall precautions in a patient who is weak and lightheaded when getting out of bed, but who continues to try to move from bed independently (Fry, Veach, and Taylor 2011). The obvious issues in the case center on the patient's physical safety, yet there are also important considerations on the benefits and harms of the interventions that constrain an individual's independence. An emphasis on teaching and assessing for moral sensitivity should become an integral part of every simulation, without regard to its primary focus. Reflection questions can include: "Does this case have a moral dimension?" "What moral issues are present in this situation?" "Does this situation present any moral harms for the patient?" "What issues were easy for you to recognize?" "What ethical elements surprised you in this case?"

2. Prudence or practical reasoning. Because prudence is a primary virtue that directs the application of the moral virtues in the patient-practitioner relationship, it is critical to the deliberative processes particular to solving ethical problems. It is important, therefore, that all simulations emphasize its value. As Deveterre observes, prudence "clarifies the overall good we are aiming at for our lives, and it manages our feelings, behaviors, and habits in each situation" (2010, 32). It is a goal-oriented virtue that emphasizes *eudaimonia*, understood as well-being, flourishing or "good" and is essential in health care. Properly applied, prudence creates the sense of accomplishing the good for all who have a stake in the decisions. As noted in Chapter Four, prudence or practical wisdom is different from theoretical knowledge and does not follow a prescriptive or deductive approach that relies on principles,

rights and norms (Deveterre 2010). Simulation, therefore, with its complexity and open-ended methodology, becomes an excellent educational approach in which to practice this virtue. Simulations can promote prudential reasoning and the use of an inclusive, expansive framework that is goal-oriented toward achieving good or well-being and emphasize the virtues required to attain this goal. The debriefing and reflection component of simulation reinforces prudential reasoning and helps the learner to recognize which virtues to apply in a particular situation and review the appropriate action to take. Reflection questions can include: "What virtues are essential for the professional in this particular situation?" "What professional attributes are needed to successfully gather information?" "Did you work to convey respect, compassion, openness?" "What makes this particular situation unique and in what way does this affect the decision making process?" "Does the situation require balancing of harms and risks? "Are the standards and guidelines appropriate in this situation?" " "What conflicting values arise here "What mistakes did you make?" "What biases or preconceived ideas influenced your decision making process?" "How did the differences in values that you and the patient hold affect this process?" "What norms guided your decision making?" "What underlying core values influenced your perspective of the situation?" "How would you explain or justify your action?"

3. Respect of person. Students may be challenged to convey a respectful attitude in a simulation scenario in which the patient is a known drug abuser who the student suspects is seeking narcotics. Reflection questions can include: "What

preconceptions did you bring to the situation?" "What bias did you hold, and how did it affect your ability to convey respect for the person?" "How do you see other health care professionals behaving in similar situations?" "Can moral harm result from stigmatization or bias?"

4. Respect for autonomy. Students can be exposed to this fundamental principle through simulations that center on informed consent or decision making regarding care determinations. Reflection questions can include: "Why does patient autonomy play a central role in the delivery of health care?" "What professional virtues are important to express in protecting patient autonomy?" "How can your openness and sensitivity alert you to the other influences that affect the patient's decisions?"

5. Establishing and maintaining trust. This virtue can be taught using any case scenario, whether it focuses primarily on a patient's medical problem or on an ethics issue. Simulations that intend to help students develop trust are especially important with beginning students. Reflection questions can include: "What did you do in this simulation to establish trust?" "What are some signals that trust between the care provider and the patient has been achieved?" "How did your communication help or hinder this?" "Why is trust so vital in the patient-practitioner relationship?"

6. Caring and compassion. Simulations should be practiced with the goal to learn "good care" as described by Vanlaere, Coucke and Gastmans (2010, 325). Reflection questions can include: "How natural is it to care?" "How do you convey a caring

stance to a patient?" "What virtues and attitudes did you exercise to convey "good care?"

7. Empathy. Many simulated clinical situations require empathy on the part of the practitioner, such as end-of-life care situations or patients in physical or emotional pain. Reflection questions can include: "What professional virtues are important in this situation?" "How do you know if you are successfully relating an empathic stance?" "Whose perspective matters here?" "How can you verify that you are empathically conveying concern?"

8. Honesty and truth telling. Simulations can be designed in which the patient's request for information may produce harm. A case scenario concerning a young adult who presents to the emergency department with chest pain can serve as an example. Because cocaine use is a potential cause of chest pain in young patients without a history of cardiac disease, a urine toxicology screening test is routinely ordered. The healthcare professional is aware, however, that if the patient knows the reason for the urine specimen, the patient may refuse care or refuse to provide the specimen, which affects the quality of care. Other options include simulated situations in which the learner is conflicted in truth telling, torn between a sense of duty to the patient and duty to the hierarchy, whether professional or organizational. Reflection questions can include: "How do you know when to disclose information?" "Where is your obligation in a particular situation?" "Would there ever be a situation in which

it would be permissible to fabricate a 'white lie' to tell a patient in order to avoid some harm coming to that patient?'

9. Moral courage. Simulations can be designed that introduce difficult clinical situations in which students can practice effective communication skills and also gain the confidence needed to do the right thing. Specific simulations can be used, for example, where a subordinate witnesses some mistake or medical error on the part of a superior. Reflection questions include: "What support do you need to act with moral courage?" "How much evidence is necessary to blow the whistle on a superior when they might engage in questionable clinical behavior?" "Do you feel better having done the right thing?" "Why is it difficult to do the right thing?" "What barriers did you perceive?"

10. Advocacy. Simulations in which the learner must act on the patient's behalf to protect patient rights, provide benevolent care or prevent harm are appropriate. A simulation might include advocating for particular care options that involves approaching a senior staff member for a referral or plan of care that has been unreasonably dismissed. Reflection questions can include: "What are your obligations in this situation?" "Why are you obligated?" "What principles are at stake?" "What support do you need to be effective in this situation?"

11. Integrity. Students can learn to better understand this virtue through a simulation that requires them to follow through on a commitment to a patient. Reflection questions

can include: “What is integrity and what does it mean to have integrity in a medical setting?” “Did you follow through on your promise?” “What barriers affected your ability to act with integrity?”

12. Relationship-building practices. As Cassell notes, “Ethics is about relationships”; therefore, it is essential that students attend to their relationships skills in all clinical situations. Simulations should routinely include discussion and reflection on the nature of the patient-provider relationship as well as the influence of the patient’s other relationships on his or her decisions. Reflection questions can include: “How can you improve your understanding of the impact that patient relationships have on their care and care determinations?” “Did your communication convey an appreciation for the patient’s relationships with significant individuals?” “Who are the stakeholders in a patient’s decision making?”

13. Everyday ethics. Simulations can be used to illustrate that ethics is an integral part of the patient-practitioner relationship and that all patient situations have an ethical dimension. Ethics teaching, therefore, is not limited to the more visible, dilemma-oriented issues. All simulations, even those designed to teach medical problem solving or procedural skills, have the potential to include ethics teaching and when viewed this way, can enhance the ethical sensitivity of students. The cases by Fry, Veach and Taylor represented earlier demonstrate everyday ethical issues.

14. Conflict of interest – simulation can be used to present concrete conflicts of interest and also actions that are ambiguous (and legal), yet sit at the moral margins. Reflection questions include: "How are issues at the moral margins different from typical conflicts of interests?" "What virtues are necessary to recognize and avoid a conflict of interests?"

E. Final Considerations and Recommendations for Further Research

This chapter has demonstrated how simulation can be engaged in ethics education. Suggestions such as the above expand the possibilities for the ethics educator, moving away from the predominant model of dilemma-oriented and skill-oriented ethics education and toward a more holistic educational approach. Simulations that focus on dynamic ethical dilemmas are also important and as the literature review has illustrated, students value the opportunities to practice learning how to manage specific dilemmas that will arise in their practice. Educators are advised, though, to consider the above areas of focus when teaching about ethical dilemmas, moving from teaching that is skill-focused, to teaching that also emphasizes ethical sensitivity and professional virtues. Depending on the educator's objectives, simulation may be conducted to solely emphasize ethics or ethics can be incorporated into existing medical or nursing cases. Ethics educators are advised to use a holistic approach that supports the cognitive, technical (ethics skills) and moral apprenticeships. Simulation also lends itself to a holistic assessment of the effectiveness of teaching, particularly formative assessment.

This dissertation has sought to examine and defend the value and efficacy of using simulation in the ethics education of medical and nursing education. The results of the analysis have shown that simulation is a relevant and effective means to achieve the goals of ethics education. While simulation presents some difficulties that are not encountered in traditional case analysis, it presents opportunities and benefits that oral or written analysis cannot offer. The benefits of experiential learning through simulation may not be obvious or easy to measure; however, anecdotal evidence suggests that the participant may transform learning into changes in professional behavior following simulated experiences.

As the literature review reveals, medical ethics curricula have included more simulated learning experiences than in nursing, primarily employing the use of standardized patient simulations that center on ethical dilemmas and professionalism. The nursing literature is in the early stages of ethics simulations. It is recommended, therefore, that nursing educators develop ethics curricula that engage ethics simulations in baccalaureate nursing curricula. This will require support for faculty development as well as financial support, not unlike what is currently required for simulation in general. One way to initially begin this process is to identify the ethical dimensions of existing nursing simulations, thus saving time on creating new ethics scenarios at the outset. Through debriefing and reflection activities, facilitators can engage students through the reflection questions to develop an awareness of the ethical dimensions present in many clinical situations and begin a dialogue on the ethical problems that may emerge in similar clinical situations. Another suggestion is for nurse educators to integrate an ethical issue into an existing simulation, much like the approach that Gisondi et al. (2004)

used, in which an ethical problem surfaces after the resolution of the dominant clinical problem. These suggestions allow ethics to be practiced in simulation without the need to create new scenarios. With more time and experience, educators can also create scenarios that focus on particular clinical ethics issues, such as confidentiality or advance directives, which provide practice in applying professional virtues and ethics skills to address specific issues. Resources are available through schools of medicine that have developed specific scenarios (see Fleetwood, Novack, and Templeton 2002). Ethics texts are another source for case scenarios (Fry, Veach, and Taylor 2011, for example). The case studies included in ethics texts can be adapted for simulation case scenarios. Medical programs have used standardized patients for ethics simulations, which contribute a considerable curricular expense. Another option is to involve drama students. Drama students could be included as part of their curriculum work or as a service learning activity that contributes to the professional development of healthcare professionals.

The area of ethics simulation offers rich opportunities for further study, particularly related to ethics simulations that use an approach that emphasizes both professional virtues and skills. As the review of literature has shown, there is limited empirical research that has been conducted with ethics simulation. Recommendations for future study on ethics simulation include assessing its ability to enhance the student's awareness of the moral dimensions in clinical situations and its effectiveness in promoting the display of professional virtues in future simulated or actual clinical situations. Research can also be conducted on the effectiveness of ethics simulation to assist students in role transformation and to withstand the negative effects of the hidden curriculum, for example. As educators employ simulation more frequently to teach ethics,

it is hoped that students will more naturally recognize and respond appropriately to the ethical dimensions of patient care and competently address and resolve ethical problems. The work in this dissertation is a contribution to the attainment of this goal.

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