

Ethical Applications of Informatics

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OBJECTIVES

1. Recognize ethical dilemmas in nursing informatics.
2. Examine ethical implications of nursing informatics.
3. Evaluate professional responsibilities for the ethical use of healthcare informatics technology.
4. Explore the ethical model for ethical decision making.
5. Analyze practical ways of applying the ethical model for ethical decision making to manage ethical dilemmas in nursing informatics.

Key Terms

Alternatives
Antiprinciplism
Application (app)
Autonomy
Beneficence
Bioethics
Bioinformatics
Care ethics
Casuist approach
Confidentiality
Consequences
Courage
Decision making
Decision support
Duty
Ethical decision making
Ethical dilemma
Ethical, social, and legal implications
Ethicist
Ethics
Eudaemonistic
Fidelity
Good
Google Glass

(*continues*)

Introduction

Those who followed the actual events of Apollo 13, or who were entertained by the movie (Howard, 1995), watched the astronauts strive against all odds to bring their crippled spaceship back to Earth. The speed of their travel was incomprehensible to most viewers, and the task of bringing the spaceship back to Earth seemed nearly impossible. They were experiencing a crisis never imagined by the experts at NASA, and they made up their survival plan moment by moment. What brought them back to Earth safely? Surely, credit must be given to the technology and the spaceship's ability to withstand the trauma it experienced. Most amazing, however, were the traditional nontechnological tools, skills, and supplies that were used in new and different ways to stabilize the spacecraft's environment and keep the astronauts safe while traveling toward their uncertain future.

This sense of constancy in the midst of change serves to stabilize experience in many different life events and contributes to the survival of crisis and change.

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Key Terms (continued)

Harm
Justice
Liberty
Moral dilemmas
Moral rights
Morals
Negligence
Nicomachean
Nonmaleficence
Principlism
Privacy
Rights
Security
Self-control
Smartphones
Social media
Standard
Truth
Uncertainty
Values
Veracity
Virtue
Virtue ethics
Wisdom

This rhythmic process is also vital to the healthcare system's stability and survival in the presence of the rapidly changing events of the Knowledge Age. No one can dispute the fact that the Knowledge Age is changing health care in ways that will not be fully recognized and understood for years. The change is paradigmatic, and every expert who addresses this change reminds healthcare professionals of the need to go with the flow of rapid change or be left behind.

As with any paradigm shift, a new way of viewing the world brings with it some of the enduring values of the previous worldview. As health care journeys into the brave new world of digital communications, it brings some familiar tools and skills recognized in the form of **values**, such as **privacy**, **confidentiality**, autonomy, and nonmaleficence. Although these basic values remain unchanged, the **standards** for living out these values will take on new meaning as health professionals confront new and different moral dilemmas brought on by the adoption of technological tools for information management and knowledge development. Ethical decision-making frameworks will remain constant, but the context for examining these moral issues or ethical dilemmas will become increasingly complex.

This chapter highlights some familiar ethical concepts to consider on the challenging journey into the increasingly complex future of healthcare informatics. Ethics and bioethics are briefly defined, and the evolution of ethical approaches from the Hippocratic ethic era, to principlism, to the current antiprinciplism movement of ethical **decision making** is examined. New and challenging ethical dilemmas are surfacing in the venture into the unfolding era of healthcare informatics. Also presented in this chapter are findings from some of the more recent literature related to these issues. Readers are challenged to think constantly and carefully about ethics as they become involved in healthcare informatics and to stay abreast of new developments in ethical approaches.

Ethics

Ethics is a process of systematically examining varying viewpoints related to moral questions of right and wrong. **Ethicists** have defined the term in a variety of ways, with each reflecting a basic theoretical philosophic perspective.

Beauchamp and Childress (1994) refer to ethics as a generic term for various ways of understanding and examining the moral life. Ethical approaches to this examination may be normative, presenting standards of right or **good** action; descriptive, reporting what people believe and how they act; or explorative, analyzing the concepts and methods of ethics.

Husted and Husted (1995) emphasize a practice-based ethics, stating "ethics examines the ways men and women can exercise their power in order to bring about human benefit—the ways in which one can act in order to bring about the conditions of happiness" (p. 3).

Velasquez, Andre, Shanks, and Myer (1987) posed the question, "What is ethics?", and answered it with the following two-part response: "First, ethics refers to well-based standards of right and wrong that prescribe what humans ought to do, usually in terms

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of **rights**, obligations, benefits to society, fairness, or specific virtues" (para. 10), and "Secondly, ethics refers to the study and development of one's ethical standards" (para. 11).

Regardless of the theoretical definition, common characteristics regarding ethics are its dialectical, goal-oriented approach to answering questions that have the potential for multiple acceptable answers.

Bioethics

Bioethics is defined as the study and formulation of healthcare ethics. Bioethics takes on relevant ethical problems experienced by healthcare providers in the provision of care to individuals and groups. Husted and Husted (1995) state the fundamental background of bioethics that forms its essential nature is:

1. The nature and needs of humans as living, thinking beings
2. The purpose and function of the healthcare system in a human society
3. An increased cultural awareness of human beings' essential moral status (p. 7)

Bioethics emerged in the 1970s as health care began to change its focus from a mechanistic approach of treating disease to a more holistic approach of treating people with illnesses. As technology advanced, recognition and acknowledgment of the rights and the needs of individuals and groups receiving this high-tech care also increased.

In today's technologically savvy healthcare environment, patients are being prescribed **applications** (also known simply as **apps**) for their **smartphones** instead of medications in some clinical practices. Patients' smartphones are being used to interact with them in new ways and to monitor and assess their health in some cases. With apps and add-ons, for example, a provider can see the patient's ECG immediately, or the patient can monitor his or her ECG and send it to the provider as necessary. A sensor attached to the patient's mobile device could monitor blood glucose levels.

We are just beginning to realize the vast potential of these mobile devices—and the threats they sometimes pose. **Google Glass**, for example, can take photos and videos (Stern, 2013) without anyone knowing that this is occurring; in the healthcare environment, such a technological advancement can violate patients' privacy and confidentiality. Add these evolving developments to healthcare providers' engagement in social media use with their patients, and it becomes clear that personal and ethical dilemmas abound for nurses in the new über-connected world.

Ethical Issues and Social Media

As connectivity has improved owing to emerging technologies, a rapid explosion in the phenomenon known as **social media** has occurred. Social media are defined as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the creation and exchange of user-generated content" (Spector & Kappel, 2012, p. 1). Just as the electronic health record serves as a real-time event in recording patient–provider contact, so the use of social media represents an instantaneous form of communication. Healthcare providers—particularly

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nurses—can enhance the patient care delivery system, promote professional collegiality, and provide timely communication and education regarding health-related matters by using this forum ("White paper," 2011, p. 1). In all cases, however, nurses must exercise judicious use of social media to protect patients' rights. Nurses must understand their obligation to their chosen profession, particularly as it relates to personal behavior and the perceptions of their image as portrayed through social media. Above all, nurses must be mindful that once communication is written and posted on the Internet, there is no way to retract what was written; it is a permanent record that can be tracked, even if the post is deleted (Englund, Chappy, Jambunathan, & Gohdes, 2012, p. 242).

Social media platforms include such electronic communication outlets as Facebook, Twitter, LinkedIn, and YouTube. Other widely used means of instantaneous communications include wikis, blogs, tweeting, Skype, and the "hangout" on Google+. Even as recently as 5 years ago, some of these means of exchanging information were unknown (Spector & Kappel, 2012, p. 1).

Use of social networking has increased dramatically among all age groups, including a 78% increase in use among the 50- to 64-year-old age group, and a 42% increase in use among persons older than 65 years over a time frame of a little more than 3 years. Facebook reported in June 2012 that it had 955 million active monthly users. Twitter's influence on health care is suggested by the fact that more than 100 million pieces of healthcare information have been tweeted, with as many as 140 million tweets being recorded in a day's time (Prasad, 2013, p. 492). Moreover, people spend more than 700 billion minutes per month actively engaged with the Facebook site (Miller, 2011, p. 307).

The rapid growth of social media has found many healthcare professionals unprepared to face the new challenges or to exploit the opportunities that exist with these forums. The need to maintain confidentiality presents a major obstacle to the healthcare industry's widespread adoption of such technology; thus social networking has not yet been fully embraced by many health professionals (Anderson, 2012, p. 1). Englund and colleagues (2012) note that undergraduate nursing students may face ambiguous and understudied professional and ethical implications when using social networking venues.

Another confounding factor is the increased use of mobile devices by health professionals as well as the public (Swartz, 2011, p. 345). The mobile device known as the smartphone has the capability to take still pictures as well as make live recordings; it has found its way into treatment rooms around the globe.

As a consequence of more stringent confidentiality laws and more widespread availability and use of social and mobile media, numerous ethical and legal dilemmas have been posed to nurses. What are not well defined are the expectations of healthcare providers regarding this technology. In some cases, nurses employed in the emergency department (ED) setting have been subjected to video and audio recordings by patients and families when they perform procedures and give care during the ED visit. Nurses would be wise to inquire—before an incident occurs—about the hospital policy regarding audio/video recording by patients and families, as well as the state laws governing two-party consent laws. Such laws require consent of all parties to any recording or eavesdropping activity (Lyons & Reinisch, 2013, p. 54).

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Sometimes the enthusiasm for patient care and learning can lead to ethics violations. In one case, an inadvertent violation of privacy laws occurred when a nurse in a small town blogged about a child in her care whom she referred to as her "little handicapper." The post also noted the child's age and the fact that the child used a wheelchair. A complaint about this breach of confidentiality was reported to the Board of Nursing. A warning was issued to the nurse blogging this information, although a more stringent disciplinary action could have been taken (Spector & Kappel, 2012, p. 2).

In another case cited by Spector and Kappel (2012), a student nurse cared for a 3-year-old leukemia patient whom she wanted to remember after finishing her pediatric clinical experience. She took the child's picture, and in the background of the photo the patient's room number was clearly displayed. The child's picture was posted on the student nurse's Facebook page, along with her statement of how much she cared about this child and how proud she was to be a student nurse. Someone forwarded the picture to the nurse supervisor of the children's hospital. Not only was the student expelled from the program, but the clinical site offer made by the children's hospital to the nursing school was rescinded. In addition, the hospital faced citations for violations of the Health Insurance Portability and Accountability Act (HIPAA) owing to the student nurse's transgression (p. 3).

A white paper published by the National Council of State Boards of Nursing (NCSBN; White paper, 2011) provides a thorough discussion of the issues associated with nurses' use of social media.

Ethical Dilemmas and Morals

Ethical dilemmas arise when moral issues raise questions that cannot be answered with a simple, clearly defined rule, fact, or authoritative view. **Morals** refer to social convention about right and wrong human conduct that is so widely shared that it forms a stable (although usually incomplete) communal consensus (Beauchamp & Childress, 1994). **Moral dilemmas** arise with uncertainty, as is the case when some evidence a person is confronted with indicates an action is morally right and other evidence indicates that this action is morally wrong. **Uncertainty** is stressful and, in the face of inconclusive evidence on both sides of the dilemma, causes the person to question what he or she should do. Sometimes the individual concludes that based on his or her moral beliefs, he or she cannot act. Uncertainty also arises from unanticipated effects or unforeseeable behavioral responses to actions or the lack of action. Adding uncertainty to the situational factors and personal beliefs that must be considered creates a need for an ethical decision-making model to help one choose the best action.

Ethical Decision Making

Ethical decision making refers to the process of making informed choices about ethical dilemmas based on a set of standards differentiating right from wrong. This type of decision making reflects an understanding of the principles and standards of ethical decision making, as well as the philosophic approaches to ethical decision making, and it requires a systematic framework for addressing the complex and often controversial moral questions.

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Research Brief

Using an online survey of 1,227 randomly selected respondents, Bodkin and Miaoulis (2007) sought to describe the characteristics of information seekers on e-health websites, the types of information they seek, and their perceptions of the quality and ethics of the websites. Of the respondents, 74% had sought health information on the Web, with women accounting for 55.8% of the health information seekers. A total of 50% of the seekers were between 35 and 54 years of age. Nearly two thirds of the users began their searches using a general search engine rather than a health-specific site, unless they were seeking information related to symptoms or diseases. Top reasons for seeking information were related to diseases or symptoms of medical conditions, medication information, health news, health insurance, locating a doctor, and Medicare or Medicaid information. The level of education of information seekers was related to the ratings of website quality, in that more educated seekers found health information websites more understandable, but were more likely to perceive bias in the website information. The researchers also found that the ethical codes for e-health websites seem to be increasing consumers' trust in the safety and quality of information found on the Web, but that most consumers are not comfortable purchasing health products or services online.

Source: The full article appears in Bodkin, C., & Miaoulis, G. (2007). eHealth information quality and ethics issues: An exploratory study of consumer perceptions. *International Journal of Pharmaceutical and Healthcare Marketing, 1*(1), 27–42. Retrieved from ABI/INFORM Global (Document ID: 1515583081).

As the high-speed era of digital communications evolves, the rights and the needs of individuals and groups will be of the utmost concern to all healthcare professionals. The changing meaning of communication, for example, will bring with it new concerns among healthcare professionals about protecting patients' rights of confidentiality, privacy, and autonomy. Systematic and flexible ethical decision-making abilities will be essential for all healthcare professionals.

Notably, the concept of nonmaleficence ("do no **harm**") will be broadened to include those individuals and groups whom one may never see in person, but with whom one will enter into a professional relationship of trust and care. Mack (2000) has discussed the popularity of individuals seeking information online instead of directly from their healthcare providers and the effects this behavior has on patient–provider relationships. He is emphatic in his reminder that "organizations and individuals that provide health information on the Internet have obligations to be trustworthy, provide high-quality content, protect users' privacy, and adhere to standards of best practices for online commerce and online professional services in healthcare" (p. 41).

Makus (2001) suggests that both autonomy and justice are enhanced with universal access to information, but that tensions may be created in patient–provider relationships as a result of this access to outside information. Healthcare workers need to realize that they are no longer the sole providers and gatekeepers of health-related information; ideally, they should embrace information empowerment and suggest websites to patients that contain reliable, accurate, and relevant information (Resnick, 2001).

It is clear that patients' increasing use of the Internet for healthcare information may prompt entirely new types of ethical issues, such as who is responsible if a patient is harmed as a result of following online health advice. Derse and Miller (2008) discuss this issue extensively and conclude that a clear line separates information and practice. Practice occurs when there is direct or personal communication between the provider and the patient, when the advice is tailored to the patient's specific health issue, and when there is a reasonable expectation that the patient will act in reliance on the information.

A summit sponsored by the Internet Healthcare Coalition (www.ihealthcoalition.org) in 2000 developed the E-Health Code of Ethics (eHealth code, n.d.), which includes eight standards for the ethical development of health-related Internet sites: (1) candor,

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(2) honesty, (3) quality, (4) informed consent, (5) privacy, (6) professionalism, (7) responsible partnering, and (8) accountability. For more information about each of these standards, access the full discussion of the E-Health Code of Ethics (http://www.ihealthcoalition.org/ehealth-code/).

It is important to realize that the standards for ethical development of health-related Internet sites are voluntary; there is no overseer perusing these sites and issuing safety alerts for users. Although some sites carry a specific symbol indicating that they have been reviewed and are trustworthy (HONcode and Trust-e), the healthcare provider cannot control which information patients access or how they perceive and act related to the health information they find online. The research brief on the previous page describes one study of consumer perceptions of health information on the Web.

Theoretical Approaches to Healthcare Ethics

Theoretical approaches to healthcare ethics have evolved in response to societal changes. In a 30-year retrospective article for the *Journal of the American Medical Association*, Pellegrino (1993) traced the evolution of healthcare ethics from the Hippocratic ethic, to principlism, to the current antiprinciplism movement.

The Hippocratic tradition emerged from relatively homogenous societies where beliefs were similar and most societal members shared common values. The emphasis was on **duty**, virtue, and gentlemanly conduct.

Principlism arose as societies became more heterogeneous and members began experiencing a diversity of incompatible beliefs and values; it emerged as a foundation for ethical decision making. Principles were expansive enough to be shared by all rational individuals, regardless of their background and individual beliefs. This approach continued into the 1900s and was popularized by two bioethicists, Beauchamp and Childress (1977, 1994), in the last quarter of the 20th century. Principles are considered broad guidelines that provide guidance or direction but leave substantial room for case-specific judgment. From principles, one can develop more detailed rules and policies.

Beauchamp and Childress (1994) proposed four guiding principles: (1) respect for autonomy, (2) nonmaleficence, (3) beneficence, and (4) justice.

- **Autonomy** refers to the individual's freedom from controlling interferences by others and from personal limitations that prevent meaningful choices, such as adequate understanding. Two conditions are essential for autonomy: **liberty**, meaning the independence from controlling influences, and the individual's capacity for intentional action.
- **Nonmaleficence** asserts an obligation not to inflict harm intentionally and forms the framework for the standard of due care to be met by any professional. Obligations of nonmaleficence are obligations of not inflicting harm and not imposing risks of harm. **Negligence**—a departure from the standard of due care toward others—includes intentionally imposing risks that are unreasonable and unintentionally but carelessly imposing risks.

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- **Beneficence** refers to actions performed that contribute to the welfare of others. Two principles underlie beneficence: Positive beneficence requires the provision of benefits, and utility requires that benefits and drawbacks be balanced. One must avoid negative beneficence, which occurs when constraints are placed on activities that, even though they might not be unjust, could in some situations cause detriment or harm to others.
- **Justice** refers to fair, equitable, and appropriate treatment in light of what is due or owed to a person. Distributive justice refers to fair, equitable, and appropriate distribution in society determined by justified norms that structure the terms of social cooperation.

Beauchamp and Childress also suggest three types of rules for guiding actions: substantive, authority, and procedural. (Rules are more restrictive in scope than principles and are more specific in content.) Substantive rules are rules of **truth** telling, confidentiality, privacy, and **fidelity**, and those pertaining to the allocation and rationing of health care, omitting treatment, physician-assisted suicide, and informed consent. Authority rules indicate who may and should perform actions. Procedural rules establish procedures to be followed.

The principlism advocated by Beauchamp and Childress has since given way to the **antiprinciplism** movement, which emerged in the 21st century with the expansive technological changes and the tremendous rise in ethical dilemmas accompanying these changes. Opponents of principlism include those who claim that its principles do not represent a theoretical approach as well as those who claim that its principles are too far removed from the concrete particularities of everyday human existence; are too conceptual, intangible, or abstract; or disregard or do not take into account a person's psychological factors, personality, life history, sexual orientation, or religious, ethnic, and cultural background. Different approaches to making ethical decisions are next briefly explored, providing the reader with an understanding of the varied methods professionals may use to arrive at an ethical decision.

The **casuist approach** to ethical decision making grew out of the call for more concrete methods of examining ethical dilemmas. Casuistry is a case-based ethical reasoning method that analyzes the facts of a case in a sound, logical, and ordered or structured manner. The facts are compared to decisions arising out of consensus in previous paradigmatic or model cases. One casuist proponent, Jonsen (1991), prefers particular and concrete paradigms and analogies over the universal and abstract theories of principlism.

The Husted bioethical decision-making model centers on the healthcare professional's implicit agreement with the patient or client (Husted & Husted, 1995). It is based on six contemporary bioethical standards: (1) autonomy, (2) freedom, (3) veracity, (4) privacy, (5) beneficence, and (6) fidelity.

The **virtue ethics** approach emphasizes the virtuous character of individuals who make the choices. A **virtue** is any characteristic or disposition desired in others or oneself. It is derived from the Greek word *aretai*, meaning "excellence," and refers to what one expects of oneself and others. Virtue ethicists emphasize the ideal situation

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and attempt to identify and define ideals. Virtue ethics dates back to Plato and Socrates. When asked "whether virtue can be taught or whether virtue can be acquired in some other way, Socrates answers that if virtue is knowledge, then it can be taught. Thus, Socrates assumes that whatever can be known can be taught" (Scott, 2002, para. 9). According to this view, the cause of any moral weakness is not a matter of character flaws but rather a matter of ignorance. In other words, a person acts immorally because the individual does not know what is really good for him or her. A person can, for example, be overpowered by immediate pleasures and forget to consider the long-term **consequences**. Plato emphasized that to lead a moral life and not succumb to immediate pleasures and gratification, one must have a moral vision. He identified four cardinal virtues: (1) **wisdom**, (2) **courage**, (3) **self-control**, and (4) justice.

Aristotle's **Nicomachean** principles (Aristotle, 350 BC) also contribute to virtue ethics. According to this philosopher, virtues are connected to will and motive because the intention is what determines if one is or is not acting virtuously. Ethical considerations, according to his **eudaemonistic** principles, address the question, "What is it to be an excellent person?" For Aristotle, this ultimately means acting in a temperate manner according to a rational mean between extreme possibilities.

Virtue ethics has experienced a recent resurgence in popularity (Healthcare Ethics, 2007). Two of the most influential moral and medical authors, Pellegrino and Thomasma (1993), have maintained that virtue theory should be related to other theories within a comprehensive philosophy of the health professions. They argue that moral events are composed of four elements (the agent, the act, the circumstances, and the consequences), and state that a variety of theories must be interrelated to account for different facets of moral judgment.

Care ethics is responsiveness to the needs of others that dictates providing care, preventing harm, and maintaining relationships. This viewpoint has been in existence for some time. Engster (n.d.) states that "Carol Gilligan's *In a Different Voice* (1982) established care ethics as a major new perspective in contemporary moral and political discourse" (p. 2). The relationship between care and virtue is complex, however. Benjamin and Curtis (1992) base their framework on care ethics; they propose that "critical reflection and inquiry in ethics involves the complex interplay of a variety of human faculties, ranging from empathy and moral imagination on the one hand to analytic precision and careful reasoning on the other" (p. 12). Care ethicists are less stringently guided by rules, but rather focus on the needs of others and the individual's responsibility to meet those needs. As opposed to the aforementioned theories that are centered on the individual's rights, an ethic of care emphasizes the personal part of an interdependent relationship that affects how decisions are made. In this theory, the specific situation and context in which the person is embedded become a part of the decision-making process.

The consensus-based approach to bioethics was proposed by Martin (1999), who claims that American bioethics harbors a variety of ethical methods that emphasize different ethical factors, including principles, circumstances, character, interpersonal needs, and personal meaning. Each method reflects an important aspect of ethical

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experience, adds to the others, and enriches the ethical imagination. Thus working with these methods provides the challenge and the opportunity necessary for the perceptive and shrewd bioethicist to transform them into something new with value through the process of building ethical consensus. Diverse ethical insights can be integrated to support a particular bioethical decision, and that decision can be understood as a new, ethical whole.

Applying Ethics to Informatics

With the Knowledge Age has come global closeness, meaning the ability to reach around the globe instantaneously through technology. Language barriers are being broken through technologically based translators that can enhance interaction and exchange of data and information. Informatics practitioners are bridging continents, and international panels, committees, and organizations are beginning to establish standards and rules for the implementation of informatics. This international perspective must be taken into consideration when informatics dilemmas are examined from an ethical standpoint; it promises to influence the development of ethical approaches that begin to accept that healthcare practitioners are working within international networks and must recognize, respect, and regard the diverse political, social, and human factors within informatics ethics.

The various ethical approaches can be used to help healthcare professionals make ethical decisions in all areas of practice. The focus of this text is on informatics. Informatics theory and practice have continued to grow at a rapid rate and are infiltrating every area of professional life. New applications and ways of performing skills are being developed daily. Therefore, education in informatics ethics is extremely important.

Typically, situations are analyzed using past experience and in collaboration with others. Each situation warrants its own deliberation and unique approach, because each individual patient seeking or receiving care has his or her own preferences, quality of life, and healthcare needs in a situational milieu framed by financial, provider, setting, institutional, and social context issues. Clinicians must take into consideration all of these factors when making ethical decisions.

The use of expert systems, **decision support** tools, evidence-based practice, and artificial intelligence in the care of patients creates challenges in terms of who should use these tools, how they are implemented, and how they are tempered with clinical judgment. All clinical situations are not the same, and even though the result of interacting with these systems and tools is enhanced information and knowledge, the clinician must weigh this information in light of each patient's unique clinical circumstances, including that individual's beliefs and wishes. Patients are demanding access to quality care and the information necessary to control their lives. Clinicians need to analyze and synthesize the parameters of each distinctive situation using a specific decision-making framework that helps them make the best decisions. Getting it right the first time has a tremendous impact on expected patient outcomes. The focus should remain on patient outcomes while the informatics tools available are ethically incorporated.

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Facing ethical dilemmas on a daily basis and struggling with unique client situations may cause many clinicians to question their own actions and the actions of their colleagues and patients. One must realize that colleagues and patients may reach very different decisions, but that does not mean anyone is wrong. Instead, all parties reach their ethical decision based on their own review of the situational facts and understanding of ethics. As one deals with diversity among patients, colleagues, and administrators, one must constantly strive to use ethical imagination to reach ethically competent decisions.

Balancing the needs of society, his or her employer, and patients could cause the clinician to face ethical challenges on an everyday basis. Society expects judicious use of finite healthcare resources. Employers have their own policies, standards, and practices that can sometimes inhibit the practice of the clinician. Each patient is unique and has life experiences that affect his or her healthcare perspective, choices, motivation, and adherence. Combine all of these factors with the challenges posed by informatics, and it is clear that the evolving healthcare arena calls for an informatics-competent, politically active, consumer-oriented, business-savvy, ethical clinician to rule this ever-changing landscape known as health care.

The goal of any ethical system should be that a rational, justifiable decision is reached. Ethics is always there to help the practitioner decide what is right. Indeed, the measure of an adequate ethical system or theory or approach is, in part, its ability to be useful in novel contexts. A comprehensive, robust theory of ethics should be up to the task of addressing a broad variety of new applications and challenges at the intersection of informatics and health care.

The information concerning an ethical dilemma must be viewed in the context of the dilemma to be useful. **Bioinformatics** could gather, manipulate, classify, analyze, synthesize, retrieve, and maintain databases related to ethical cases, the effective reasoning applied to various ethical dilemmas, and the resulting ethical decisions. This input would certainly be potent—but the resolution of dilemmas cannot be achieved simply by examining relevant cases from a database. Instead, clinicians must assess each situational context and the patient's specific situation and needs and make their ethical decisions based on all of the information they have at hand.

Ethics is exciting, and competent clinicians need to know about ethical dilemmas and solutions in their professions. Ethicists have often been thought of as experts in the arbitrary, ambiguous, and ungrounded judgments of other people. They know that they make the best decisions they can based on the situation and stakeholders at hand. Just as clinicians try to make the best healthcare decisions with and for their patients, ethically driven practitioners must do the same. Each healthcare provider must critically think through the situation to arrive at the best decision.

To make ethical decisions about informatics technologies and patients' intimate healthcare data and information, the healthcare provider must be competent in informatics. To the extent that information technology is reshaping healthcare practices or promises to improve patient care, healthcare professionals must be trained and competent in the use of these tools. This competency needs to be evaluated through

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instruments developed by professional groups or societies; such assessment will help with consistency and quality. For the healthcare professional to be an effective patient advocate, he or she must understand how information technology affects the patient and the subsequent delivery of care. Information science and its effects on health care are both interesting and important. It follows that information technology and its **ethical, social, and legal implications** should be incorporated into all levels of professional education.

The need for confidentiality was perhaps first articulated by Hippocrates; thus, if anything is different in today's environment, it is simply the ways in which confidentiality can be violated. Perhaps the use of computers for clinical decision support and data mining in research will raise new ethical issues. Ethical dilemmas associated with the integration of informatics must be examined to provide an ethical framework that considers all of the stakeholders. Patients' rights must be protected in the face of a healthcare provider's duty to his or her employer and society at large when initiating care and assigning finite healthcare resources. An ethical framework is necessary to help guide healthcare providers in reference to the ethical treatment of electronic data and information during all stages of collection, storage, manipulation, and dissemination. These new approaches and means come with their own ethical dilemmas. Often they are dilemmas not yet faced owing to the cutting-edge nature of these technologies.

Just as processes and models are used to diagnose and treat patients in practice, so a model in the analysis and synthesis of ethical dilemmas or cases can also be applied. An ethical model for ethical decision making (Box 5-1) facilitates the ability to analyze the dilemma and synthesize the information into a plan of action (McGonigle, 2000). The model presented here is based on the letters in the word *ethical*. Each letter guides and prompts the healthcare provider to think critically (think and rethink) through the situation presented. The model is a tool because, in the final analysis, it allows the nurse objectively to ascertain the essence of the dilemma and develop a plan of action.

BOX 5-1 ETHICAL MODEL FOR ETHICAL DECISION MAKING

- **E**xamine the ethical dilemma (conflicting values exist).
- **T**horoughly comprehend the possible alternatives available.
- **H**ypothesize ethical arguments.
- **I**nvestigate, compare, and evaluate the arguments for each alternative.
- **C**hoose the alternative you would recommend.
- **A**ct on your chosen alternative.
- **L**ook at the ethical dilemma and examine the outcomes while reflecting on the ethical decision.

APPLYING THE ETHICAL MODEL

Examine the ethical dilemma:

- Use your problem-solving, decision-making, and critical-thinking skills.
- What is the dilemma you are analyzing? Collect as much information about the dilemma as you can, making sure to gather the relevant facts that clearly identify the dilemma. You should be able to describe the dilemma you are analyzing in detail.

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BOX 5-1 (Continued)

- Ascertain exactly what must be decided.
- Who should be involved in the decision-making process for this specific case?
- Who are the interested players or stakeholders?
- Reflect on the viewpoints of these key players and their value systems.
- What do you think each of these stakeholders would like you to decide as a plan of action for this dilemma?
- How can you generate the greatest good?

Thoroughly comprehend the possible alternatives available:

- Use your problem-solving, decision-making, and critical-thinking skills.
- Create a list of the possible alternatives. Be creative when developing your alternatives. Be open minded; there is more than one way to reach a goal. Compel yourself to discern at least three alternatives.
- Clarify the alternatives available and predict the associated consequences—good and bad—of each potential alternative or intervention.
- For each alternative, ask the following questions:
  - ☐ Do any of the principles or rules, such as legal, professional, or organizational, automatically nullify this alternative?
  - ☐ If this alternative is chosen, what do you predict as the best-case and worst-case scenarios?
  - ☐ Do the best-case outcomes outweigh the worst-case outcomes?
  - ☐ Could you live with the worst-case scenario?
  - ☐ Will anyone be harmed? If so, how will they be harmed?
  - ☐ Does the benefit obtained from this alternative overcome the risk of potential harm that it could cause to anyone?

Hypothesize ethical arguments:

- Use your problem-solving, decision-making, and critical-thinking skills.
- Determine which of the five approaches apply to this dilemma.
- Identify the moral principles that can be brought into play to support a conclusion as to what ought to be done ethically in this case or similar cases.
- Ascertain whether the approaches generate converging or diverging conclusions about what ought to be done.

Investigate, compare, and evaluate the arguments for each alternative:

- Use your problem-solving, decision-making, and critical-thinking skills.
- Appraise the relevant facts and assumptions prudently.
  - ☐ Is there ambiguous information that must be evaluated?
  - ☐ Are there any unjustifiable factual or illogical assumptions or debatable conceptual issues that must be explored?
- Rate the ethical reasoning and arguments for each alternative in terms of their relative significance.
  - ☐ 4 = extreme significance
  - ☐ 3 = major significance
  - ☐ 2 = significant
  - ☐ 1 = minor significance

(*continues*)

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BOX 5-1 ETHICAL MODEL FOR ETHICAL DECISION MAKING (continued)

- Compare and contrast the alternatives available with the values of the key players involved.
- Reflect on these alternatives:
  - Does each alternative consider all of the key players?
  - Does each alternative take into account and reflect an interest in the concerns and welfare of all of the key players?
  - Which alternative will produce the greatest good or the least amount of harm for the greatest number of people?
- Refer to your professional codes of ethical conduct. Do they support your reasoning?

Choose the alternative you would recommend:

- Use your problem-solving, decision-making, and critical-thinking skills.
- Make a decision about the best alternative available.
  - Remember the Golden Rule: Does your decision treat others as you would want to be treated?
  - Does your decision take into account and reflect an interest in the concerns and welfare of all of the key players?
  - Does your decision maximize the benefit and minimize the risk for everyone involved?
- Become your own critic; challenge your decision as you think others might. Use the ethical arguments you predict they would use and defend your decision.
  - Would you be secure enough in your ethical decision-making process to see it aired on national television or sent out globally over the Internet?
  - Are you secure enough with this ethical decision that you could have allowed your loved ones to observe your decision-making process, your decision, and its outcomes?

Act on your chosen alternative:

- Use your problem-solving, decision-making, and critical-thinking skills.
- Formulate an implementation plan delineating the execution of the decision.
  - This plan should be designed to maximize the benefits and minimize the risks.
  - This plan must take into account all of the resources necessary for implementation, including personnel and money.
- Implement the plan.

Look at the ethical dilemma and examine the outcomes while reflecting on your ethical decision:

- Use your problem-solving, decision-making, and critical-thinking skills.
- Monitor the implementation plan and its outcomes. It is extremely important to reflect on specific case decisions and evaluate their outcomes to develop your ethical decision-making ability.
- If new information becomes available, the plan must be reevaluated.
- Monitor and revise the plan as necessary.

Source: The ethical model for ethical decision making was developed by Dr. Dee McGonigle and is the property of Educational Advancement Associates (EAA). The permission for its use in this text has been granted by Mr. Craig R. Goshow, Vice President, EAA.

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Case Analysis Demonstration

The following case study is intended to help readers think through how to apply the ethical model. Review the model and then read through the case. Try to apply the model to this case or follow along as the model is implemented. Readers are challenged to determine their decision in this case and then compare and contrast their response with the decision the authors reached. Several more case studies presented for practice in implementing the ethical model for ethical decision making are available on the companion website for this text (http://nursing.jbpub.com/informatics).

Allison is a charge nurse on a busy medical–surgical unit. She is expecting the clinical instructor from the local university at 2:00 pm to review and discuss potential patient assignments for the nursing students scheduled for the following day. Just as the university professor arrives, one of the patients on the unit develops a crisis requiring Allison's attention. To expedite the student nurse assignments for the following day, Allison gives her electronic medical record access password to the instructor.

Examine the Ethical Dilemma

Allison made a commitment to meet with the university instructor to develop student assignments at 2:00 pm. The patient emergency that developed prevented Allison from living up to that commitment. Allison had an obligation to provide patient care during the emergency and a competing obligation to the professor. She solved the dilemma of competing obligations by providing her electronic medical record access password to the university professor.

By sharing her password, Allison most likely violated hospital policy related to the **security** of healthcare information. She may also have violated the American Nurses Association code of ethics, which states that nurses must judiciously protect information of a confidential nature. Because the university professor was also a nurse and had a legitimate interest in the protected healthcare information, there might not be a code of ethics violation.

Thoroughly Comprehend the Possible Alternatives Available

The possible **alternatives** available include the following: (1) Allison could have asked the professor to wait until the patient crisis was resolved; (2) Allison could have delegated another staff member to assist the university professor; or (3) Allison could have logged on to the system for the professor.

Hypothesize Ethical Arguments

The utilitarian approach applies to this situation. An ethical action is one that provides the greatest good for the greatest number; the underlying principles in this perspective are beneficence and nonmaleficence. The rights to be considered are as follows: right

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of the individual to choose for himself or herself (autonomy); right to truth (**veracity**); right of privacy (the ethical right to privacy avoids conflict and, like all rights, promotes harmony); right not to be injured; and right to what has been promised (fidelity).

Does the action respect the **moral rights** of everyone? The principles to consider are autonomy, veracity, and fidelity.

As for the fairness or justice, how fair is an action? Does it treat everyone in the same way, or does it show favoritism and discrimination? The principles to consider are justice and distributive justice.

Thinking about the common good assumes one's own good is inextricably linked to good of the community; community members are bound by pursuit of common values and goals and ensure that the social policies, social systems, institutions, and environments on which one depends are beneficial to all. Examples of such outcomes are affordable health care, effective public safety, a just legal system, and an unpolluted environment. The principle of distributive justice is considered.

Virtue assumes that one should strive toward certain ideals that provide for the full development of humanity. Virtues are attitudes or character traits that enable one to be and to act in ways that develop the highest potential; examples include honesty, courage, compassion, generosity, fidelity, integrity, fairness, self-control, and prudence. Like habits, virtues become a characteristic of the person. The virtuous person is the ethical person. Ask yourself, what kind of person should I be? What will promote the development of character within myself and my community? The principles considered are fidelity, veracity, beneficence, nonmaleficence, justice, and distributive justice.

In this case, there is a clear violation of an institutional policy designed to protect the privacy and confidentiality of medical records. However, the professor had a legitimate interest in the information and a legitimate right to the information. Allison trusted that the professor would not use the system password to obtain information outside the scope of the legitimate interest. However, Allison cannot be sure that the professor would not access inappropriate information. Further, Allison is responsible for how her access to the electronic system is used. Balancing the rights of everyone—the professor's right to the information, the patients' rights to expect that their information is safeguarded, and the right of the patient in crisis to expect the best possible care—is important and is the crux of the dilemma. Does the patient care obligation outweigh the obligation to the professor? Yes, probably. Allison did the right thing by caring for the patient in crisis. By giving out her system access password, Allison also compromised the rights of the other patients on the unit to expect that their confidentiality and privacy would be safeguarded.

Virtue ethics suggests that individuals use power to bring about human benefit. One must consider the needs of others and the responsibility to meet those needs. Allison must simultaneously provide care, prevent harm, and maintain professional relationships.

Allison may want to effect a long-term change in hospital policy for the common good. It is reasonable to assume that this event was not an isolated incident and that the problem may recur in the future. Can the institutional policy be amended to provide professors with access to the medical records system? As suggested in the HIPAA administrative guidelines, the professor could receive the same staff training regarding appropriate and inappropriate use of access and sign the agreement to safeguard the

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records. If the institution has tracking software, the professor's access could be monitored to watch for inappropriate use.

Identify the moral principles that can be brought into play to support a conclusion as to what ought to be done ethically in this case or similar cases. The International Council of Nurses (2006) code of ethics states that "The nurse holds in confidence personal information and uses judgment in sharing this information" (p. 4). The code also states, "The nurse uses judgment in relation to individual competence when accepting and delegating responsibilities" (p. 5). Both of these statements apply to the current situation.

Ascertain whether the approaches generate converging or diverging conclusions about what ought to be done. From the analysis, it is clear that the best immediate solution is to delegate assisting the professor with assignments to another nurse on the unit.

Investigate, Compare, and Evaluate the Arguments for Each Alternative

Review and think through the items listed in Table 5-1.

TABLE 5-1 DETAILED ANALYSIS OF ALTERNATIVE ACTIONS

Alternative	Good Consequences	Bad Consequences	Do Any Rules Nullify	Expected Outcome	Potential Benefit > Harm
1. Wait until crisis was resolved	No policy violation Patient rights safeguarded	Not the best use of the professor's time	No	Best: Crisis will require a short time Worst: Crisis may take a long time	Patient rights protected Collegial relationship jeopardized Patient rights may take precedence
2. Delegate to another staff member	No policy violated	Other staff may be equally busy or might not be as familiar with all patients	No	Best: Assignments will be completed Worst: May not have benefit of expert advice	Confidentiality of record is assured May compromise student learning Patient rights may take precedence
3. Log on to the system for the professor	Professor can begin making assignments	May still be a violation of policy regarding system access	Rules regarding access to medical record	Best: Assignments can be completed Worst: Abuse of access to information	Potential compromise of records Patient in crisis is cared for

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Choose the Alternative You Would Recommend

The best immediate solution is to delegate another staff member to assist the professor. The best long-term solution is to change the hospital policy to include access for professors, as described previously.

Act on Your Chosen Alternative

Allison should delegate another staff member to assist the professor in making assignments.

Look at the Ethical Dilemma and Examine the Outcomes While Reflecting on the Ethical Decision

As already indicated in the alternative analyses, delegation may not be an ideal solution because the staff nurse who is assigned to assist the professor may not possess the same extensive information about all of the patients as the charge nurse. It is, however, the best immediate solution to the dilemma and is certainly safer than compromising the integrity of the hospital's computer system. As noted previously, Allison may want to pursue a long-term solution to a potentially recurring problem by helping the professor gain legitimate access to the computer system with the professor's own password. The system administrator would then have the ability to track who used the system and which types of information were accessed during use.

This case analysis demonstration provides the authors' perspective on this case and the ethical decision made. If your decision did not match this perspective, what was the basis for the difference of opinion? If you worked through the model, you might have reached a different decision based on your individual background and perspective. This does not make the decision right or wrong. A decision should reflect the best decision one can make given review, reflection, and critical thinking about this specific situation.

Six additional cases are provided in the online learner's manual for review. Apply the model to each case study, and discuss these cases with colleagues or classmates.

New Frontiers in Ethical Issues

The expanding use of new information technologies in health care will bring about new and challenging ethical issues. Consider that patients and healthcare providers no longer have to be in the same place for a quality interaction. How, then, does one deal with licensing issues if the electronic consultation takes place across a state line? Derse and Miller (2008) describe a second-opinion medical consultation on the Internet where the information was provided to the referring physician and not to the patient, thus avoiding the licensing issue.

Consider also the ethical issues created by genomic databases or by sharing of information in a health information exchange to promote population health. Alpert (2008)

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asks, "Is it wise to put genomic sequence data into electronic medical records that are poorly protected, that cannot adhere well to Fair Information Practice Principles for privacy, and that can potentially be seen by tens of thousands of people/entities, when it is clear that we do not understand the functionality of the genome and likely will not for several years?" (p. 382).

Further, how does one really obtain informed consent for such data collection, when how the data will ultimately be used is not known, but clearly that application will be important to health research uses that go beyond the immediate medical care of the patient? Angst (2009) asks whether the public good outweighs individual interests in such a case because the information contained in these databases is important to developing new understandings and creating new knowledge by matching data in aggregated pools: "Thus, science adds meaning and context to data, but to what extent do we agree to make the data available such that this discovery process can take place, and are the impacts of discovery great enough to justify the risks?" (p. 172). Further, if a voluntary system where patients can opt out of such data collection is adopted, then are healthcare disparities related to incomplete electronic health records created?

In an ideal world, healthcare professionals must not be affected by conflicting loyalties; nothing should interfere with judicious, ethical decision making. As the technologically charged waters of health care are navigated, one must hone a solid foundation of ethical decision making and practice it consistently.

Summary

As science and technology advance, and policy makers and healthcare providers continue to shape healthcare practices including information management, it is paramount that ethical decisions are made. Healthcare professionals are typically honest, trustworthy, and ethical, and they understand that they are duty bound to focus on the needs and rights of their patients. At the same time, their day-to-day work is conducted in a world of changing healthcare landscapes populated by new technologies, diverse patients, varied healthcare settings, and changing policies set by their employers, insurance companies, and providers. Healthcare professionals need to juggle all of these balls simultaneously, a task that often results in far too many gray areas or ethical decision-making dilemmas with no clear correct course of action.

Patients rely on the ethical competence of their healthcare providers, believing that their situation is unique and will be respected and evaluated based on their own needs, abilities, and limitations. The healthcare professional cannot allow conflicting loyalties to interfere with judicious, ethical decision making. Just as in the opening example of the Apollo mission, it is uncertain where this technologically heightened information era will lead, but if a solid foundation of ethical decision making is relied upon, duties and rights will be judiciously and ethically fulfilled.

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THOUGHT-PROVOKING QUESTIONS



1. Identify moral dilemmas in healthcare informatics that would best be approached with the use of an ethical decision-making framework, such as the use of smartphones to interact with patients as well as to monitor and assess patient health.
2. Discuss the evolving healthcare ethics traditions within their social and historical contexts.
3. Differentiate among the theoretical approaches to healthcare ethics as they relate to the theorists' perspectives of individuals and their relationships.
4. Select one of the healthcare ethics theories and support its use in examining ethical issues in healthcare informatics.
5. Select one of the healthcare ethics theories and argue against its use in examining ethical issues in healthcare informatics.

References

Alpert, S. (2008). Privacy issues in clinical genomic medicine, or Marcus Welby, M.D., meets the $1000 genome. *Cambridge Quarterly of Healthcare Ethics*, *17*(4), 373–384. Retrieved from Health Module (Document ID: 1880623501).

Anderson, K. (2012, September). Patient care and social media. *Australian Nursing Journal, 22*. http://go.galegroup.com.silk.library.umass.edu/ps/i.do?id=GALE%CA301964363&v=2.1&u=mlin_w_umassamh&it=r&p+AONE&sw=w

Angst, C. (2009). Protect my privacy or support the common-good? Ethical questions about electronic health information exchanges. *Journal of Business Ethics*, *90*(suppl), 169–178. Retrieved from ABI/INFORM Global (Document ID: 2051417481).

Aristotle. (350 BC). *Nichomachean ethics. Book I.* (W. D. Ross, Trans.). Retrieved from http://www.constitution.org/ari/ethic_00.htm

Beauchamp, T. L., & Childress, J. F. (1977). *Principles of biomedical ethics.* New York, NY: Oxford University Press.

Beauchamp, T. L., & Childress, J. F. (1994). *Principles of biomedical ethics* (4th ed.). New York, NY: Oxford University Press.

Benjamin, M., & Curtis, J. (1992). *Ethics in nursing* (3rd ed.). New York, NY: Oxford University Press.

Derse, A., & Miller, T. (2008). Net effect: Professional and ethical challenges of medicine online. *Cambridge Quarterly of Healthcare Ethics*, *17*(4), 453–464. Retrieved from Health Module (Document ID: 1540615461).

eHealth code. (n.d.). http://www.ihealthcoalition.org/ehealth-code/

Englund, H., Chappy, S., Jambunathan, J., & Gohdes, E. (2012, November/December). Ethical reasoning and online social media. *Nurse Educator*, *37*, 242–247. http://dx.doi.org/10.1097/NNE.0b013e31826f2c04

Engster, D. (n.d.). Can care ethics be institutionalized? Toward a caring natural law theory. https://lmstest.manhattan.edu/pluginfile.php/39833/mod_resource/content/1/Engster%20Care%20and%20Political%20Theory.pdf

Healthcare Ethics. (2007). Virtue ethics. http://www.ascensionhealth.org/ethics/public/issues/virtue.asp

Howard, R. (Director). (1995). *Apollo 13* [Motion picture]. Universal City, CA: MCA Universal Studios.

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Husted, G. L., & Husted, J. H. (1995). *Ethical decision-making in nursing* (2nd ed.). New York, NY: Mosby.

International Council of Nurses (ICN). (2006). The ICN code of ethics for nurses. http://www.icn.ch/icncode.pdf

Jonsen, A. R. (1991). Casuistry as methodology in clinical ethics. *Theoretical Medicine*, *12*, 295–307.

Lyons, R., & Reinisch, C. (2013). The legal and ethical implications of social media in the emergency department. *Advanced Emergency Nursing Journal, 35*(1), 53–56. http://dx.doi.org/10.1097/TME.0b013e31827a4926

Mack, J. (2000). Patient empowerment, not economics, is driving e-health: Privacy and ethics issues need attention too! *Frontiers of Health Services Management, 17*(1), 39–43; discussion 49–51. Retrieved from ABI/INFORM Global (Document ID: 59722384).

Makus, R. (2001). Ethics and Internet healthcare: An ontological reflection. *Cambridge Quarterly of Healthcare Ethics*, *10*(2), 127–136. Retrieved from Health Module (Document ID: 1409693941).

Martin, P. A. (1999). Bioethics and the whole: Pluralism, consensus, and the transmutation of bioethical methods into gold. *Journal of Law, Medicine & Ethics*, *27*(4), 316–327.

McGonigle, D. (2000). The ethical model for ethical decision making. *Inside Case Management*, *7*(8), 1–5.

Miller, L. A. (2011). Social media: Friend and foe. *Journal of Perinatal and Neonatal Nursing*, 307–309. http://dx.doi.org/10.1097/JPN.0b013e31823506e9

Pellegrino, E. D. (1993). The metamorphosis of medical ethics: A thirty-year retrospective. *Journal of the American Medical Association*, *269*, 1158–1162.

Pellegrino, E., & Thomasma, D. (1993). *The virtues in medical practice.* New York, NY: Oxford University Press.

Prasad, B. (2013). Social media, health care, and social networking. *Gastrointestinal Endoscopy*, *77*, 492–495.

Resnik, D. (2001). Patient access to medical information in the computer age: Ethical concerns and issues. *Cambridge Quarterly of Healthcare Ethics, 10*(2), 147–154; discussion 154–156. Retrieved from Health Module (Document ID: 1409693961).

Scott, A. (2002). Plato's Meno. http://www.angelfire.com/md2/timewarp/plato.html

Spector, N., & Kappel, D. M. (2012). Guidelines for using electronic and social media. *Online Journal of Nursing*, *17*. http://www.medscape.com/viewarticle/780050

Stern, J. (2013). Google Glass: What you can and can't do with Google's wearable computer. http://abcnews.go.com/Technology/google-glass-googles-wearable-gadget/story?id=19091948

Swartz, M. K. (2011, November/December). The potential for social media. *Journal of Pediatric Health Care, 25*, 345.

Velasquez, M., Andre, C., Shanks, T., & Myer, M. (for the Markkula Center for Applied Ethics). (1987). What is ethics? http://www.scu.edu/SCU/Centers/Ethics/practicing/decision/whatisethics.shtml

White paper: A nurse's guide to the use of social media. (2011). www.ncsbn.org

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