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UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science
DOCTOR OF PHILOSOPHY IN NURSING

NURSE PRACTITIONER ADOPTION OF CLINICAL INNOVATIONS

by

Rhoberta Jones Haley

A dissertation presented to the
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In partial fulfillment of the
requirements for the degree
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NURSE PRACTITIONER ADOPTION OF CLINICAL INNOVATIONS

ABSTRACT

Adoption of clinical innovations by Nurse Practitioners (NP) is a complex phenomenon, rooted in personal values and influenced by challenges within health care environments. When clinical innovations are adopted or rejected by NPs, this decision has meaning for patients, NPs, health care agencies, and society. The decision controls the opportunity for patients to access a clinical innovation that could reduce morbidity and mortality, save money, and provide satisfaction related to the health care encounter.

The purpose of the study was to increase knowledge about NP adoption of clinical innovations, particularly emotionally-laden clinical innovations. The lines of inquiry focused on what clinical innovations were thought by NPs to be emotionally-laden, whether the NPs adopted or rejected the emotionally-laden clinical innovation, the reasoning behind their decisions, and an examination of how they were involved in providing information or treatment to patients related to the innovation.

A qualitative approach using grounded theory methodology was chosen. Sixteen nurse practitioner participants, practicing in adult primary care settings, were individually interviewed. Data analysis was accomplished using the constant comparative method, with an audit trail and expert review. Analysis generated a grounded theory.

Philosophy of Care (context) involved the development of an individual philosophy of care and included patient choice, equal treatment, provision of information, and advocacy. Work Environment (conditions) involved aspects of the NP's work environment and included work setting, economics, time, power and role, and co-

workers. Innovation Adoption (process) included the aspects of discovery, evaluation, and actual adoption or rejection of the innovation. *Doing the Right Thing* was a sub theme of the process. The *Adoption Spectrum* showed that innovation adoption could be consistent, intermittent, or conditional. Innovation rejection could be overt or covert.

Values Continuum: Congruence to Dissonance (consequences) involved aspects of being at risk, being ambivalent, and being satisfied. Congruence occurred when NP personal and professional values were in agreement with the perspectives of the patient and agency; dissonance occurred when values were in conflict.

Support of timely and appropriate adoption of clinical knowledge benefits society.

A sophisticated understanding of how new knowledge is incorporated or rejected by NPs is a prerequisite to the intelligent development of nursing research and education.

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CHAPTER 1

Focus of the Inquiry

Nursing has a social mandate to address the health needs of society with individuals and organizations committed to meeting these needs (Donaldson, 1995). Multiple strategies are used in nursing to achieve this goal such as the development of clinical knowledge and the dissemination of this knowledge within nursing and to the greater society. Nursing is a practice discipline. Practice professions have the goal of manipulating phenomena in a purposeful way. With manipulation and change as their purpose, practice disciplines fundamentally differ from basic science disciplines that focus solely on explanation and ordering (Visintainer, 1986). Although nursing has focused on the improvement of health and functioning, while medicine has focused on the curing of disease, a considerable overlap exists in these closely intertwined practice professions. Advanced practice nurses (APNs) frequently perform roles involving complex decision-making using extensive health-related knowledge.

Advanced Practice Nursing and Nurse Practitioners

APNs are a rapidly growing sub-group within the nursing profession. Of approximately 2.9 million registered nurses (RN) in the United States, the subset of APNs number approximately 240,000, or 1 APN for every 12 RNs (HRSA, 2004). APNs are generally comprised of Nurse Practitioners (NPs), clinical nurse specialists, certified nurse midwives, and nurse anesthetists. NPs are the fastest growing group of APNs, with approximately 142,000 practicing in the United States today. NPs fill an advanced practice role that is particularly dependent on the acquisition and adoption of large amounts of biomedical knowledge on a variety of topics from many sources. NPs are

held to the same standard of health care as a physician and regulated by physician-driven evaluative organizations related to the use of this biomedical information in their practice. The majority of NPs practice in primary care settings, making clinical decisions with a high degree of independence and a low degree of clinical review by others. There are few standard-of-practice committees or ethics committees in the primary care world. Clinical decisions are the sole responsibility of the NP.

Clinical Decision-Making

Research related to clinical decision-making by health care providers, including nurses and NPs, has often focused on the ethical aspects of care. One of these areas of ethical concern is *acting faithfully*; a topic that includes covenantal relationships, fidelity, personal integrity, moral strength, sincerity, and honesty (Cody, 2003; Cooper, 1988; Milton, 2002; Mitchell, 2000; Pilkington, 2004). Another area is *truth-telling* between patients, providers, agencies, and communities; this topical area includes informed consent, cultural differences in the concept of truth-telling versus provision of hope, and information versus knowledge (Banja, 2001; Begley & Blackwood, 2000; Berger, 2003; Carter, 2002; Crow, Matheson, & Steed, 2000; Hébert, Hoffmaster, Glass, & Singer, 1997; Johns, 1999; Joni, 2004; Kasman, 2004; Rosenbaum, Bradley, Holmboe, Farrell, & Krumholz, 2004; Sullivan, Menapace, & White, 2001; Surbone, 1997; Tuckett, 2004).

The concept of *power* and power differentials (Ball & Cox, 2004; Gilbert, 1998; Goodyear-Smith & Beutow, 2001; Wright, 2004) speaks to relational conflicts between providers and patients. *Divided loyalties*, including nursing in situations involving correctional facilities, psychiatric facilities, military care, and sports medicine are discussed in the literature (Brodie, 2001; Murray, 1986; Wong, 2004). *Plural traditions*

of moral reasoning, conflicts between personal values and professional obligations, and dissonance created by moral pluralism speak to the different value systems and cultural norms of patients and providers (Godfrey, 2002; Lazarus, 1997; Turner, 1998).

Conscience clauses are legal *opt-out* mechanisms for providers to avoid providing care that is at odds with their personal values without legal repercussion and without a patient's knowledge of the omission (Childress, 1997; Place, 2003; Tanne, 2004; White, 1999). Honoring patient's choices, non-judgmental care, avoiding paternalism, difficulty of witnessing outcomes of a difficult choice, the idea of practice as a presentation of self, avoidance of ethnocentrism, and the imposition of one's values onto others all speak to the primacy of patient's interests (Bournes, 2000; Koh, 1999; Quill & Brody, 1996).

Finally, several studies have looked at provider ethical dilemmas in practice using narratives to discover the breadth and depth of the issues (Rosenbaum et al., 2004). Several groups have worked to develop ethics programs to guide providers in the delivery of ethical care (Case Western Reserve University, 2003; Povar et al., 2004).

In reviewing many publications, various authors have balanced the rights of patients, providers, agencies, and communities in different ways while all acknowledge that the relationship between patient and provider is fragile and important. While not specifically focused on the adoption or rejection of clinical innovations, the content of these articles is cogent to the purpose of this study as NPs practice within the larger context of health care, service agencies, communities, and society where dilemmas occur.

Emotionally-laden Clinical Innovations

The way in which NPs learn about clinical innovations, form opinions about those innovations, and decide to incorporate innovations into their clinical practice is largely

unknown. Even less is known about the adoption of emotionally-laden clinical innovations. The perceptions of these innovations might carry emotional weight related to the NP's personal value system, religious training, the community's values and social mores, society's values and mores, the health provider community standards of care and usual practices, the costs and risk/benefit ratio, their connection with the NP's past experiences (i.e., personal, professional), or a complex blending of multiple factors. At the core of the decision-making process there may be a moral dilemma, a desire to avoid stigma, a values conflict, or the pressure of a social system mandate. The adoption or rejection of emotionally-laden clinical innovations may be a well-thought out process of weighing all of the factors or it may be a subconscious aversion to or avoidance of the innovation. In cases of innovation rejection, the NP may be transparent with patients about the decision or this information might be withheld from the patient leading to a knowledge deficit or a loss of choice for the patient as the innovation is withheld without the patient's knowledge and consent. There may be partial disclosure and bias in the presentation of information about the innovation that will unduly influence the patient's decision to adopt or reject the innovation in a manner consistent with the wishes of the NP. The ramifications of these decisions about information dissemination on patient education and treatment could range from slight to devastating, from the patient's perspective. The patient could be a collaborative partner or an unwitting victim in the process of an NP's decision to remove or include innovations from the decision menu (Haley, 2000, 2004).

The decision process can be significantly affected by the potential inequities of power, gender, control, access to resources, and the level of education between NP and

patient. These inequities can lead to an abuse of power by NPs towards patients leading to the antithesis of core nursing values that call for advocacy, fairness, the championing of the underdog in the acquisition of knowledge, the process of truly informed consent, participatory health care decision-making, and the just provision of health care.

A vital portion of these practice foci involves the adoption or rejection of clinical innovations into practice. The process of how and why NPs adopt a clinical innovation into practice is largely unknown. The broad focus of this study is to increase understanding about the process of adopting a clinical innovation into NP practice. More specifically, the focus is to explore the adoption process when the innovation has emotional significance to the NP.

Purpose of the Study

The primary purpose of this study was to increase knowledge about the adoption of emotionally-laden clinical innovations by NPs. This study explored the process of deciding to adopt or reject an emotionally-laden clinical innovation by NP participants. The lines of inquiry focused on what clinical innovations were thought by NPs to be emotionally-laden, an inquiry into whether the NPs adopted or rejected the emotionally-laden clinical innovation, a discovery into the reasoning behind their decision to adopt or reject the innovation, and an examination of how they were involved with providing information or treatment to patients related to the emotionally-laden innovation.

Method

A qualitative approach using grounded theory methodology was chosen to accomplish the aims of this study. Grounded theory is a social theory developed out of sociology and psychology through the tradition of Symbolic Interactionism. Grounded

theory was designed to study complex social processes; it is a theoretical model and a methodology that is accessible, has worldwide recognition, has established credibility, and is ideally suited to look at the process that is the focus of this study (Schreiber & Stern, 2001).

Philosophical Underpinnings

Symbolic Interactionism is a theoretical perspective developed from a foundation of sociology and psychology theoretical writings. Symbolic interactionists believe that behavior arises from the individual's perception of the meaning of events. It stresses the relationship between behavior and experiences, especially interpersonal encounters. The meaning of events develops and changes over time from personal experiences and from social interactions with other members of society. As individuals experience life, meanings change and so the study of meanings and behaviors must be a dynamic and on-going process phenomenon that was the focus of this study (Blumer, 1969).

This theory provides a philosophical basis for the approach to participant interviews (Charon, 1998). It is a sensitizing concept set related to the idea that adoption of emotionally-laden clinical innovations will be influenced by NP perceptions and interpersonal communications with other NPs. It is the underpinning of the grounded theory methodology that will provide the basis of data analysis through the use of the constant comparative method of analysis and the development of a grounded theory related to this process. Symbolic Interactionism is the skeleton on which this study will flesh out its search for meaning.

There are a number of assumptions basic to the understanding of Symbolic Interactionism, hence the use of grounded theory methods of inquiry. Schroeder (1981)

discussed five interrelated assumptions. These assumptions include the following: individuals live in a symbolic environment and learn symbols through communication with each other; individuals use symbols to stimulate others in new ways and this acting behavior is sometimes identified as impression management; through communication of symbols, individuals learn an enormous number of meanings, values, and ways of acting in society. In addition, symbols often occur in clusters leading to behavior complexity, individuals learn scripts and role expectations, and thinking is a process of making choices related to a cost/benefit ratio, driving the process of problem solving based on the individual's perceived values.

These assumptions of Symbolic Interactionism gave the broad theoretical view of the role of symbols in communication for individuals in a society. This view encompassed behavior, meanings, values, role expectations, and thinking as a process of problem solving based on perceived values. This theoretical set of assumptions influenced the approach to research, focusing on professional choices and behaviors including the NP behavior to adopt or reject emotionally-laden clinical innovations into practice.

Significance of the Study

On a very basic level for quality of care and patient safety, the discipline of nursing needs to understand what nurses do and why they do it. Nurses are experiencing an explosion of clinical knowledge from many sources and are called upon to make decisions incorporating this new knowledge into their practice.

A sophisticated understanding of how new knowledge is incorporated or rejected by nurses within the practice of the discipline is a prerequisite to the intelligent

development of nursing research and nursing education. Support of timely and appropriate adoption of clinical knowledge benefits nursing and is vital in meeting the social mandate to address the health needs of the public for the betterment of society.

The focus on NPs in practice provided this study with real-world situations from which observations about the process of adoption of emotionally-laden clinical innovations could be made. Knowledge about the adoption of emotionally-laden clinical innovations adds to the body of nursing knowledge related to the timely adoption of appropriate clinical innovations and informs nursing as a discipline.

There is currently no significant literature related to the area of the study. This study attempted to approach the questions at the beginning of the process of building understanding. Appropriate to this approach was the choice of a qualitative methodology. This methodology enabled the researcher to explore the processes surrounding NP adoption of emotionally-laden clinical innovations. Increasing knowledge of these processes expands the state of the science of nursing.

CHAPTER 2

Context of the Inquiry

Innovations are new ideas, inventions, mutations, novelties, permutations, deviations, and new wrinkles in the fabric of society. They arise out of the imagination of humans as they consciously search for new direction or stumble across a serendipitous finding. Innovations can be advantageous, neutral in value, or a step in the wrong direction.

Definitions

Innovation was defined in the *Webster's Third New International Dictionary* (2002) as a singular or plural noun originally from the Late Latin word *innovation*. Its meaning was listed as the act or an instance of innovating, the introduction of something new, something that deviates from established doctrine or practice, something that differs from existing forms, a change or novelty.

Health care was defined by the *Webster's Third New International Dictionary* (2002) as efforts made to maintain or restore health, especially by trained and licensed professionals. Innovations in health care can be new ideas related to research, methods in clinical practice, administration of health care services, health care education of patients or professionals, or particular aspects of health care delivery. These aspects could include drugs, devices, diagnostic procedures, surgery or other treatment procedures, prevention strategies, innovative care delivery practices, and the use of innovative tools like computers to retrieve, store, transmit, or record health care data.

Historical Context of Diffusion of Innovation

Communication theorists and practitioners have had an interest in the way health information was communicated to the public. This interest had taken a wide variety of directions. Early transmission models in the 1940s perceived a linear, one-way flow of information from media to the public. Later models used complex applied research processes, telemedicine and medical informatics models, social marketing, and diffusion research. These communication models had a fascinating foundation worth exploring in order to better understand the assumptions and uses of Diffusion of Innovation (DOI) Theory (Rogers, 1995).

In the late 1890s, Tarde wrote about public opinion as a collective community voice and how this community voice was affected by media messages. By the 1920s, Dewey and Park believed mass media created unity and commonality among community members. These early thinkers and others laid the foundation for the study of community and communication as an inseparable dyad (Bowes, 1997). In the 1940s, transmission models gave way to more complex social processes looking at the reciprocal and circular nature of communication. By the 1960s, there was discussion of social networks, opinion leaders, and nested memberships of individuals in multiple groups within the larger social system.

DOI Theory began in the 1940s and was widely demonstrated in a study that investigated the adoption of hybrid corn seed by Iowa farmers over time. By the 1960s, DOI Theory was increasingly popular in overseas development projects focusing on agricultural and fertility-regulation programs. Since then, DOI Theory continued to be used in a number of disciplines to look at phenomena in many settings, including health

care (Bowes, 1997).

In the contemporary period, diffusion models focused on decisions made by individuals or communities to adopt an innovation or practice (Rogers, 1995). This temporal, process-oriented model tracked first awareness to eventual rejection or confirmation of an innovation as an adoption process involving individuals and occurring over time. Diffusion concepts had many applications to community health and to adoption of biomedical information by individuals and communities. Examples of these studies included the use of seatbelts, antibiotics, student education materials in public schools to fight tobacco and drug usage, and CT and MRI technology in hospitals. Related studies used diffusion concepts to look more narrowly at information gaps in networks. In addition, studies looked at the contexts in which health information was considered by analyzing an individual's multiple societal memberships. All of these models and their applications were concerned with the concepts of process, social networks, reciprocity, temporality, and context (Bowes, 1997; Rogers & Scott, 1997).

Roger's Diffusion of Innovation Theory

The literature on the adoption of innovations cited one main theory repeatedly through many disciplines, cultures, and subjects. Attributed to Rogers (1995), variations on his theory have not strayed far from his original ideas. The following offers a detailed introduction to the origins and development of this theory, its uses, and its usefulness.

DOI Theory was developed by Rogers, a professor of Communication at the University of New Mexico. The field of communication has been a derivative field that borrowed concepts widely from many fields for incorporation into its own theories and inventions (Bowes, 1997). As a social theory used by many disciplines for over 30 years

worldwide, DOI Theory has looked at diffusion of new ideas into social systems. Some of these ideas involved aspects of health care technology and delivery. DOI Theory has focused on special types of communication used to spread messages about ideas that were perceived as new to a social system. It looked at the characteristics of the innovation and at the interpersonal channels of influence that affect the speed and ease of new idea adoption within the system.

Diffusion was the process by which an innovation was communicated through certain channels over time among the members of a social system. Diffusion was a special type of communication concerned with the spread of messages that were perceived as new ideas. The four elements in the diffusion of new ideas were the innovation, communication channels, time, and the social system (Rogers & Scott, 1997).

Each innovation was a practice, behavior, idea, or object perceived as new by an individual, group, or other unit of adoption. The innovation had characteristics that could be described and studied. These characteristics determined the rate and speed of adoption. Innovation characteristics included relative advantage, compatibility, complexity, trialability, and observability (Rogers & Scott, 1997).

Relative advantage was the perception that one idea was better than the previous idea and the incremental improvement of that idea (e.g., relative to economics, social status, convenience, pleasure). This perception did not have to be based in an objective reality. The more advantageous the innovation was perceived to be, the faster it was adopted. *Compatibility* was the perception of how consistent the innovation was with existing needs, values, or experiences of the adopters. Innovations requiring a radical change in values or mores would be more slowly adopted. *Complexity* was the degree of

understandability and ease of use. The necessity of complex learning and new skills would slow adoption. *Trialability* was related to the ability to try the new idea on a limited basis; small steps, incremental trials, and a way to reverse acceptance increased adoption. *Observability* was the extent to which the new idea was observable by others. If the results were seen easily, adopters were more interested in accepting the innovation. Visibility invited peer interest and the exchange of information about the adoption. For adoption to occur easily and rapidly, the characteristics of relative advantage, compatibility, trialability, and observability needed to be high. The characteristic of complexity needed to be as low as possible to achieve adoption easily (Rogers & Scott, 1997).

Communication Channels was another theoretical concept of importance. Communication was the exchange of information to reach mutual understanding. Mass media channels moved large amounts of information quickly to many individuals and groups, whereas interpersonal channels had greater influence over attitude formation, attitude change, and the eventual adoption or rejection of the innovation. These interpersonal communications were said to occur between near-peers (Rogers & Scott, 1997).

Time was an additional theoretical concept. Time involved the internal process used by the individual to acquire the knowledge and form an initial opinion about the innovation. Time was also involved relative to the innovativeness of the individual. Time was a factor in the rate of adoption within a certain period as influenced by the characteristics of the innovation as previously described (Rogers & Scott, 1997).

Innovativeness was characterized by five adopter categories of members within

the social system: innovators, early adopters, early majority, late majority, and laggards.

Innovators were the first 2.5% to adopt an innovation. They were venturesome, had cosmopolite relationships, financial resources, the ability to understand complex knowledge, and coped well with uncertainty. They were the gatekeepers in the system.

Early adopters were the next 13.5% of the system members to adopt an innovation. This group had the highest amount of opinion leadership in the system. They served as role models for many system members, were held in high esteem within the system, decreased uncertainty within the system about adoption, and were involved in near-peer evaluations of the innovation. *Early majority* were the next 34%. They adopted the innovation just before the average adopter in the system. They provided interconnectedness within the system groups and represented a large group within the system. *Late majority* were the next 34%. They adopted innovations just after the average adopter and were also a large group within the system. Adoption might occur in this group due to increased peer pressure. *Laggards* were the last 16% to adopt innovations. They were cautious, had limited resources, and were suspicious of change (Rogers & Scott, 1997).

Social System was the last of the four main concepts to be discussed related to innovation adoption. This area involved boundaries to innovation, norms, change agents, opinion leaders, and the type of innovation decision-making (e.g., adoption by consensus or authority; decision to adopt made by individual or organization; Rogers & Scott, 1997).

Critical mass was the effect related to all of the above concepts. It described the point at which the adoption of the innovation was self-sustaining. Early adopters were the most important group in achieving this state (Rogers & Scott, 1997).

Diffusion of Innovation Theory in Research

There was significant interest in diffusion research worldwide and the theory was proven to be flexible and useful for applications in an astonishing range of disciplines and projects. Much literature involving DOI Theory was published and found its way into the mainstream of thinking in multiple disciplines. The reasons for the appeal of DOI Theory will be the focus of the following text.

Rogers (1995) believed this appeal could be found in many areas: the theory was a conceptual paradigm with relevance to many disciplines and offered something of value to all the social science disciplines. It had a pragmatic appeal in getting research results utilized and it allowed scholars to take their empirical findings to a new and more generalized theoretical level. The theory allowed greater utility, a greater variety of research trajectories, and better dissemination of findings. The methodology was clear-cut, obtained data using survey methodology, and analyzed data in a straightforward manner. Finally, the method encouraged investigation. The above discussion of appealing qualities obviously had a biased source. Rogers may have had these biases further reinforced by the many applications of his model, that have followed a tradition of quantitative survey data collection and analysis.

DOI Theory had social science and multi-disciplinary appeal because it arose out of basic social science origins. It used language that was acceptable and understandable to all social scientists and was applicable to many social science research projects. The theory had a tradition of being a fundable research methodology, gave structure to often-fuzzy research questions, and generally provided some positive outcomes when used to analyze action projects.

DOI Theory also left itself open to ideas that were not so complimentary. Some of these thoughts did not imply a dichotomy of right and wrong as much as a desire to see multiple realities and approaches that were often missing in diffusion research. Diffusion Theory had a linear emphasis related to communication, action, and evaluation. It was biased towards innovation as desirable, and easily accomplished with the right identification of social system members. It was oriented towards finding fault with individuals within the system rather than the system itself when innovations were slow to be adopted or rejected. It depended on recall by individuals and often this recall was requested long after adoption had occurred (Rogers, 1995). It did not place emphasis on the outcomes of the adoption of the innovation, the inequalities inherent in the lives of individuals in the various adopter categories, or the risk involved in accelerating the adoption process to the early adopters and to the system as a whole. It was biased towards technology and the utilization of technology in rural and underserved populations to achieve uniformity of thought and action within a diverse population, thereby serving the wishes of the system leaders and their bureaucracy. Finally, it was biased towards descriptive survey methods and quantitative analysis. In addition, it was biased in favor of established medical preferences related to study questions and research populations in health care studies.

The above criticism did not prove a lack of theory usefulness to nursing research or a lack of valid results from the research that had utilized this theoretical approach. It pointed to areas where tradition might need to be abandoned in favor of new approaches to diffusion research that were more sensitivity to issues of power, gender, risk, non-linear thought, and acceptance of multiple realities and perceptions. There was a need to

increase the validity of recall and other data collection methods by planning for evaluation before and during projects rather than after the intervention was finished. New approaches using DOI Theory should consider qualitative data collection and analysis as a source of richer and more complete evaluation of the design and outcomes of action research projects, including those involving public health.

Diffusion of Innovation Theory as a Sensitizing Concept

The concepts that were offered within DOI Theory were also consistent with Symbolic Interactionism social theory and with the use of a grounded theory research methodology involving qualitative data analysis. Both Symbolic Interactionism theorizing and grounded theory methodology have been widely used in nursing research. Surprisingly, this theoretical fit between Symbolic Interactionism and DOI Theory has been rarely discussed. Methods used to collect and analyze data in the above-mentioned diffusion research projects were largely quantitative in nature.

DOI Theory was a theoretical perspective that influenced this study design as a sensitizing concept that informed the development of the interview guide. This social theory had been widely used in many fields to look at the diffusion of new ideas through social systems. Diffusion models had been useful in studying the adoption or rejection of health-related innovation over time. From this theory, the concepts of process, social networks, context, interpersonal channels of communication between near-peers, and the effects of norms and values on opinion were all congruent with the perspective of Symbolic Interactionism and provided a synergistic double lens of theoretical perspective for this study.

Research in Nursing and Health Care

This section will discuss Roger's DOI Theory in relation to its use in health care and nursing research. A review of the literature related to the use of DOI Theory included analysis of a coded bibliography (Rogers, 1995) and additional bibliographic information in previous work by Rogers. A computer-assisted general literature review focused primarily on CINAHL, ERIC, MEDLINE, PUBMED, and PsychINFO databases from 1980 to 2006. This review revealed a wealth of English-language publications in a wide variety of disciplines worldwide.

By 1962, approximately 405 publications were identified by Rogers as using DOI Theory. The numbers rose quickly, with 1,500 publications by 1971, 3,085 by 1983, and 4,000 by 1995 (Rogers & Scott, 1997). Before 1962, the sources of these publications were primarily the United States and Europe. After 1962, a greater percentage of publications came from Latin America, Africa, and Asia.

The number of publications made it impossible to discuss individual publications in detail; therefore, a summary of common themes follows. From more than 4,200 publications, 285 were related to medical, nursing, and public health topics. Of these 285 publications, a further thematic breakdown included medical technology (e.g., MRI, CT, computer-assisted technology); education related to health promotion, disease prevention, and violence prevention (e.g., cancer, cardiac disease, addiction, urban youth violence); school and rural health education (e.g., tobacco, alcohol, drugs); physician's use of antibiotics and vaccines; physician's use of computers (e.g., Grateful Med, informatics, records); fertility control projects overseas; dental techniques and fluoride; and nursing topics (Rogers, 1995).

The only nursing publication identified by Rogers was on a DOI survey of coronary precautions (Kirchhoff, 1983). Interestingly, Roger's coding schema used a code for the author's *diffusion tradition*. The diffusion tradition codes were 16 in number and included anthropology, geography, economics, public health and medical sociology, psychology, and early education. The nursing article was listed under the diffusion tradition code, *Others and Unknown* (Rogers, 1995). The reader could be left with the impression that nursing had not been highly involved in publishing about DOI, had not been involved in using Roger's version of DOI Theory in a form recognizable to him, or was not recognized as a research discipline of merit. It was also possible that DOI Theory had informed nursing research but had not been overtly identified in the publication abstracts or titles. Finally, it was possible that nurses had been involved in some of the research published by other disciplines or performed by principle investigators from other disciplines and that these publications had been analyzed and coded as coming from non-nursing diffusion traditions.

In terms of the literature review in general, the majority of publications mentioning DOI were from nursing sources in the United Kingdom and Commonwealth countries related to changes in hospital-based nursing practices. A few nursing publications were from Canadian research conferences related to the dissemination of non-clinical information. Of the nursing publications from the United States, eight discussed the research-to-practice gap in disseminating clinical knowledge, three discussed the dissemination of research knowledge, and one discussed the use of computers in nursing education. In addition, one discussed the development of a model (CITIM) to assess health care setting readiness for point-of-care computerized clinical

decision-making support as a system innovation (Snyder-Halpern, 1999) and one discussed hospital pain management protocols. Medical publications that had some relevance to NP practice, but were not empirically based, discussed the theoretical dissemination of asthma education protocols to family practice providers and dissemination of practice guidelines generated by pediatricians for use by NPs.

Only one publication was found that related to NP clinical practice (Wood & Brucker, 1997). This publication concerned the development and testing of a geriatric breast model prototype for use in patient education. This publication did not mention Diffusion Theory, incorporate diffusion-type analysis, or list diffusion in the abstract's key words. Possibly the search identified the article because this project had National Cancer Institute funding under a Small Business Innovation Research grant.

Clearly, this literature review showed that DOI Theory use was widely mentioned in the literature of many disciplines that were unrelated to health care. Occasionally, it was mentioned in health care related literature where its use was often related to public education programs or technology. Diffusion was discussed in nursing literature related to the dissemination of ideas, usually in relation to dissemination of research concepts. Finally, it was rarely found in literature related to NP clinical research, practice, or education.

Literature Related to the Study

No literature was identified that focused on NP adoption of clinical innovations in general or to the adoption of emotionally-laden clinical innovations in particular. Related to the use of a grounded theory approach to the study of a clinical innovation, one study was identified that looked at teenagers' attitudes towards emergency contraception in the

United Kingdom. This study collected data via in-depth interviews and analyzed it qualitatively using a constant comparative thematic method (Ziebland, 1999).

Analysis and Critique of the Literature Related to the Study

This literature review focused on literature related to the theoretical perspectives of the proposed study. DOI Theory was introduced related to the historical development of diffusion theories, the development of Rogers' DOI Theory, a description of Rogers' theory, a description on how his theory was generally used, and a discussion of the theory's relative usefulness for the proposed study. DOI Theory had significant usefulness related to the research focus of this study. Areas of usefulness included a foundational knowledge, or sensitization, about the general process of adopting an innovation. In addition, it provided concrete ideas useful in the development of interview questions and probes to tease out the individual experience of innovation adoption. For each individual, this adoption process might be heavily influenced by social mores and individual value orientations that might make interviewing difficult. Finally, gaps in the literature related to the study were discussed.

The review of literature encompassed thousands of articles and books from sources worldwide with only a selected few presented in depth. This review provided a foundation for understanding the current state of knowledge related to NP adoption of clinical innovations and the lack of literature related to the adoption of emotionally-laden innovations. The philosophical and methodological approach to this study supported the development of a deeper understanding of how NPs develop their clinical practice over time. This understanding was meant to be part of the larger effort needed to better understand nursing practice. This understanding was needed to support nursing's social

mandate to serve the health needs of society.

CHAPTER 3

Methodology

The primary purpose of this study was to increase knowledge about the adoption of emotionally-laden clinical innovations by NPs. This study explored the process of deciding to adopt or reject an emotionally-laden clinical innovation by NP participants. A qualitative approach using grounded theory methodology was chosen to accomplish the aims of this study.

Method

The research design had a naturalistic approach and used a grounded theory methodology as delineated by Strauss and Corbin (1996). Data collection incorporated field interview techniques. Data analysis used the constant comparative method. This method utilized concurrent data collection and analysis. Based on the analysis of data, a substantive theory was developed regarding the process of adopting or rejecting emotionally-laden clinical innovations into NP practice.

Participants were chosen using inclusion and exclusion criteria designed to accomplish the aims of the study. Gaining entrée was considered, and ethical considerations were explored. The participants were the key informants in the study related to the raw data needed for the discovery of the processes of innovation adoption or rejection. Their willingness to divulge this data and their ability to have insight into their adoption processes were key factors in the success of the study.

Data collection and analysis methods were chosen to increase reflexivity and support rigor in the research. The researcher's role was to accurately and fully reflect the data in the final development of a grounded theory to provide understanding of the

process of adoption of emotionally-laden clinical innovations by NPs.

Participants

There were sixteen participants, all met the inclusion criteria for the study. Fifteen were female, one was male, all were Caucasian. The average participant was fifty-two years old, had been an RN for almost twenty-nine years, had been a certified FNP or ANP for almost thirteen years, and had been in her current NP position for almost eleven years. Participants had practiced as an NP in a variety of out-patient and in-patient settings. Prior to becoming an NP, they had previously been employed as an RN in a mix of settings that included the emergency department, trauma, ICU, pediatrics, other in-patient units, and a few out-patient settings.

At the time of the interview, 14 participants practiced in family practice or internal medicine out-patient settings (two in private practice, 12 in a health care agency) and two participants practiced in an urgent/emergent setting. Some participants practiced in more than one setting.

Inclusion Criteria

Participants had to be English-speaking Family, Adult, or OB/GYN NPs practicing for greater than one year in primary care settings within southern California. This inclusion criterion was designed to provide participants who had routine access to adult patients and who were currently in practice. The participants were not novices to the NP role as they had been in practice at least 1 year. These NPs practiced within the same health care region and had access to information about the local standards of care. Participants spoke the same language as the researcher, removing any necessity for translation and diminishing a possible source of miscommunication.

Exclusion Criteria

NPs practicing in Pediatric and Neonatal settings were excluded due to the complex nature of treating minor patients while communicating with and obtaining consent from parents and extended family members. NPs in practice less than 1 year were excluded, as they could be considered novices and might not have had exposure to many clinical innovations since leaving school. Travel and time constraints led to the exclusion of NPs practicing outside southern California. The researcher spoke only English and chose to avoid translation efforts and language-to-language miscommunication difficulties.

Gaining Entrée

Gaining entrée to the potential sample of NP participants was not difficult as the researcher was an NP established in this practice region. A recruitment flyer was used to disseminate information about the study and the need for participants (see Appendix B). The advertisement was distributed by hand and included study information regarding the period for data collection, the location for data collection, and the contact information for the researcher. The flyer also offered information about human subjects' protection and reimbursement for participation. Several key NP contacts were asked to help disseminate these advertisements at NP meetings within their professional organizations. Potential participants contacted the researcher by Internet or telephone.

This flyer was also emailed to NP contacts known to the researcher. These contacts were asked to refrain from volunteering, as the researcher wished to avoid recruiting NPs that she had taught or worked with. Instead, these contacts were asked to forward the information to NPs on their respective e-mail contact lists, enlarging the pool

of potential NP participants.

Recruitment from these various strategies yielded a pool of more than 60 potential participants. From this pool, 25 participants were initially chosen who met the inclusion criteria, were available for interview when needed, and were representative of a variety of practice settings and patient populations. Of this smaller group, 16 were interviewed for the study and all remained in the study to completion.

Ethical Considerations

Human subjects' protection was considered and planned for carefully. Participants received a detailed explanation of the study, including the consent form (see Appendix C). The participant discussed the consent form with the researcher and had the opportunity to ask questions. The participant then signed the consent form to participate and received a copy of the signed consent form. Participants could have discontinued their involvement by informing the researcher via telephone or mail and participation would have ceased immediately with destruction of any data already collected from the retiring participant; however, this did not occur. Participants were informed through discussion and the use of a consent form about their potential benefits, risks, and alternatives to participation. They were advised of how risks had been minimized and that participation was voluntary and reversible without prejudice.

The raw data was kept in a secure and confidential manner. The researcher and two transcriptionists had access to the raw recorded data. The transcribers signed and honored a pledge of confidentiality (see Appendix F). Only the researcher had access to the identities of the participants. Dissertation committee members and expert advisors only had access to anonymously coded data in written transcript form. The reporting of

data did not involve the identification of the individual participants or their work organizations. Presentations and publications related, in part or in entirety, to the study did not identify individual participants or their work organizations.

There were potential benefits to participating in qualitative health research. These benefits might include catharsis, self-acknowledgment, a sense of purpose, increased self-awareness, a perception of empowerment, and a voice for the disenfranchised (Hutchinson, Wilson, & Wilson, 1994). Often these benefits were unanticipated and significant to the participants.

There were potential risks to participating in qualitative health research. These risks could have included problems with confidentiality, privacy, fatigue, negative emotions related to the content or conduction of the interview, and a perceived need for education or referral. These risks were minimized through the careful consideration of interview conditions including privacy, comfort, transcriber and researcher confidentiality, security of collection and storage of data, and anonymity related to the dissemination of research findings.

Data Collection

Data collection occurred using individual audio recorded interviews with the participant by the researcher in a location where the conversation remained private. Audio recording was used to collect data accurately for later transcription. An initial interview guide (see Appendix E) was used to complete the first interview. With each interview, the interview guide was further refined as appropriate to reflect the constant comparative method of data analysis findings.

Audio recordings of the interviews were transcribed into written text. Original

tapes, copies of tapes, digital audio recordings, consent forms, participant contact information, theoretical memos, and analysis notes were securely stored by the researcher.

Data Analysis

The use of the constant comparative method provided a process of cyclic data collection, analysis, and comparison over time until saturation was achieved. From the initial data collection interview through the last interview, continuous development of categories, concepts, broader themes, and theoretical memos was used to guide each subsequent interview. The final analysis of this data provided a body of knowledge that was grounded in the reality of the participants and the researcher and provided the basis of a belief that credibility and consistency had been achieved (Strauss & Corbin, 1996).

The acquisition phase began when participants were selected and interviewed. Interview guides were revised as appropriate after each interview and modifications were made to the interview process. On-going early analysis guided the researcher in making appropriate changes to achieve useful data and achieve saturation in service to the study purpose and goals. Two NP participants reviewed their own transcript after initial coding and analysis and offered their reflections on the coding schema. The final phase was synthesis and analysis where the researcher's task was to code the data to produce patterns of meaning, then review and analyze that meaning to produce a true global meaning of the experiences of the participants that could be shared with other nurses and society (Lincoln & Guba, 1985).

Rigor of the Design

The appropriate criterion for determining the trustworthiness of the findings in an inquiry of this type consisted of credibility, dependability, confirmability, and transferability (Lincoln & Guba, 1985). Trustworthiness has always been an issue in both quantitative and qualitative research.

Credibility related to the belief that the findings were based on the data rather than on the researcher's bias. This credibility was established by checking the accuracy of the data text versus the audio recording of the interviews, checking the accuracy of the data interpretation with the participants, and triangulation with theoretical memos.

Dependability related to whether the same findings could potentially be replicated in a different but similar context and participant group. This might not have been achievable with this approach. Dependability was supported by the use of theoretical memos, by the avoidance of premature termination of interviews, by saturation of data, and by the exploration of all pertinent areas of theme and thought.

Confirmability was related to the confidence developed in the veracity of the findings and was supported by the maintenance of an audit trail of data and analysis. By the use of expert review, the conclusions could be traced back to the original data sources and the research procedures made methodological sense.

Transferability related to the opportunity to apply these research findings to other settings, contexts, disciplines, and to other theories and bodies of knowledge. Adequate descriptions of the process, setting, and findings allows others to gauge its usefulness to their own inquiry.

The challenge was to avoid bias, provide balance, give participants a true voice,

and tap into the many ways of knowing. The researcher utilized the expertise of committee members and other research professionals for guidance in an effort to practice the true art of naturalistic inquiry. The following section further addresses the researcher as the instrument of research.

Reflexivity Issues

The researcher was involved in a prolonged and intimate discussion with participants related to their values and behaviors. This discussion eventually led to researcher analysis of the underlying meanings and motivations behind their behaviors. A truthful and useful outcome of this analysis depended on the skills and judgment of the researcher. The researcher's interest in this area arose from more than 25 years of experience as an NP. In summary, these life experiences gave the researcher the opportunity to develop an understanding about her own background, values, clinical practice, adoption of clinical innovations into practice, and adoption of emotionally-laden innovations. The researcher believed that this body of experience made her suited to the sensitive and in-depth interviewing of NP participants and the analysis of data related to emotionally-laden clinical innovations.

Committee members were asked to look at the data and analysis to ensure that bias was minimized and sensitivity to the data was maximized. A dissertation support group which included three APNs also was involved in looking at the data analysis for further verification. Two participants reviewed the initial data analysis and theme development on their own interview transcripts to verify truth.

The goal was to produce a grounded theory that represented new knowledge related to NP adoption of emotionally-laden clinical innovations into NP practice. Areas

of new knowledge involved the identification of NP attitudes, behaviors, and values. The analysis uncovered perceptions of social mores and near-peer opinions, the effect of mass media and organizational communications, and the use of interpersonal channels of communication. Another outcome of data analysis involved the ability of the NP to take on the *role of other* in clinical interactions. This exploration looked at very complex phenomena that occurred in a variety of settings over time. With data saturation, many themes arose out of the lines of inquiry in this study that invited further exploration.

CHAPTER 4

Findings

Adoption of clinical innovations by NPs is a complex phenomenon, rooted in personal values and influenced by challenges within health care environments. To adopt an idea is to accept something created by another. Adoption of clinical innovations involves aspects of formally accepting an idea within a health care system and putting a policy or practice based on that idea into use. This new idea could be embraced enthusiastically, espoused to others with varying amounts of conviction, or adopted reluctantly as a foreign idea.

When clinical innovations were adopted or rejected by NPs, this decision carried meaning for patients, NPs, and society. The decision controlled the opportunity for patients to access a clinical innovation that could reduce morbidity and mortality, save money, and provide satisfaction related to the health care encounter.

Clinical innovations were identified by the participants as being new clinical ideas about which they had recently made a decision regarding adoption or rejection into their clinical practice. Examples of these clinical innovations offered by participants included medications, diagnostic tests, treatment procedures, and agency treatment guidelines.

Emotionally-neutral clinical innovations were clinical innovations identified by participants as having no challenge in the process of deciding to adopt or reject. Examples included medications, diagnostic tests, treatment procedures, agency policies, and community standards of care.

Emotionally-laden clinical innovations were clinical innovations identified by the participants as challenging to adopt or reject in some way. Because of the emotionally-

challenging aspect of the innovation, NPs experienced stress, anxiety, or moral distress within the decision-making process. Emotionally-laden clinical innovations identified by participants included emergency contraception, abortion, pain control medication for addicts, motivational interviewing, new procedures for which they had not received adequate training, and terminal sedation (controlled sedation until death for terminally ill patients). These innovations involved decisions about providing information, direct care including prescriptions for medication, and/or referrals.

In almost all of these interviews, NPs were able to give one or more examples of both emotionally-neutral clinical innovations and emotionally-laden clinical innovations in their practice. They all offered some ideas about the process of adopting or rejecting these innovations.

Theory Development

The data analysis allowed conceptualization of the process that NPs experience as they decide to adopt or reject an emotionally-laden clinical innovation into their professional practice. The analysis included an exploration of context, conditions, process, and consequences. Context involved the philosophy of patient care, revealed the NP's development of an individual philosophy of care, and encompassed the concepts of patient choice, equal treatment, giving information, and advocacy. Conditions involved the work environment, and included work setting, economics, time, power and role, and co-workers. Process involved how the clinical innovation was discovered and evaluated for adoption; included in this process was the concept of *Doing the Right Thing* related to innovation adoption or rejection. Process incorporated the actual adoption or rejection of the clinical innovation. This action occurred along a spectrum of adoption, and was the

product of a non-linear decision-making process that sometimes included strategies and subterfuge to complete. Consequences reflected the outcomes of innovation adoption or rejection, and included congruence or dissonance with the NP's personal views, expressed as risk, ambivalence, and/or satisfaction.

Philosophy of Care (Context)

Participants offered information about how they believed that their philosophy of care was developed and what that philosophy entailed. Philosophy of care provided the context and encompassed patient choice, equal treatment of and for patients, the process of giving information to patients, and advocacy on behalf of patients. "From my point of view, the patients' needs come first." Participants experienced both satisfaction and ambivalence related to their care of patients within this philosophy.

Individual Development

Many participants spontaneously introduced the subject of a personal philosophy of care into their interviews. Participants often could not pinpoint exactly when they developed their philosophy of care. Ideas about this process included formation of their philosophy in early childhood, and reframing of their values while parenting their own children before entering a nursing educational program. Their personal philosophy could also be informed by their basic nursing education, their NP program, and by their NP practice experiences.

Some participants believed that their philosophy of care arose from values formed in early childhood due to parental influence. One participant said,

I think it's who you are. I mean, because right from the very beginning, when I became a nurse, I worked in the operating room at ___ agency and there were days when they did abortions, and there were nurses that would refuse to work in that area and I had no problem working in that area because I am a person that

believes that it's that person's right to choose. That, I think it goes way back and I don't know that it was instilled in me in nursing school or through home, or through my family, my values.

Others described the influence of adult life experiences like parenting their own children. During these adult experiences, they reflected on values formed in early childhood:

It was long before I went to (nursing) school. I think it's something that I, I'm going to say and I can't be specific where I learned it or where I became, my guess it's during the time that I was raising my children and (pause), I don't know.

This participant believed that her personal philosophy was formed before her nursing education and did not change significantly during periods of professional education.

Participants discussed professional values developed in discussions about the philosophical/ethical foundations of care in their undergraduate nursing programs, graduate nursing programs, and other educational programs outside of the nursing discipline. When NPs reported covering this material in nursing programs, they rarely remembered specific guidelines, but rather a general perspective: "It was part of my personality, but it was nurtured in nursing school." Another spoke of the on-going development of this philosophy as nursing roles changed with advanced education:

I think it begins in nursing school of being non judgmental certainly we take I've worked many very high acuity areas with death and dying issues and you know um alternate lifestyle issues and all of that and learning to be non-judgmental but as a nurse practitioner when the buck stops with you, you can't say go talk to the doctor about that. You have to make the decisions yourself. So I base it on all of my years of working as a nurse and being respectful to everyone's lifestyle choices and things like that.

One participant spoke of the struggle to adapt to a new philosophy modeled in their NP program and said,

I was a straight A student of _____. I drank and ate what she gave me and that's what I put out. I didn't really have time to really think about it then. I knew, I thought all the people feel differently about this and I guess this is the way an NP's got to deliver care. I respected her and so I modeled that. I didn't really necessarily feel I was at all as liberal as my peers but I hid it. I hid that part and kept it aside. Nobody talked about it either. And I just thought, here I am, and nobody ever talked about if you had a problem for example, prescribing birth control, which I didn't have a problem with. But I thought, has anybody talked to you about this at all? Nobody ever said anything and then when I got to the clinic there was a list of physicians there who were willing to counsel for abortions but not do them. Willing to perform abortions and then not willing to touch them at all. I thought wow, we gave these guys a choice. These people all had a choice, they never even asked us how we felt about that. I'm sure if we got to a clinic setting or in that situation that was fine, but nobody ever said to you, you know, if you're in a situation with counseling a patient on this, this is how you can step out of it if you don't feel this way. It was never talked about.

This NP was adamant that her education emphasized the better approach to patients, she was always grateful to have accepted this perspective as her own and emphasized that it had served her well in many years of practice.

A working NP reported a change in philosophy:

Being on this committee changed my philosophy from looking at it (emergency contraception) as an excuse to be lackadaisical about birth control, to using it as an adjunct to the moratorium (mandate?) that we have to prevent a pregnancy from occurring to begin with.

The development of an individual philosophy of care occurred over time and was influenced by a variety of significant others. These significant others included peers, family members, educators, and patients. This development required intentionality and effort, and was a continuously evolving process.

Patient-centered Care

Patient-centered care was a sub theme within philosophy of care and involved the aspects of patient choice, equal treatment, giving information, and advocacy. Within this discussion were the ideas of free will, controlling bias, the patient's need for

confidentiality and control, and the belief that patient's choices take priority. NPs spoke of the satisfaction and deep personal meaning that they derived from patient-centered practice.

Patient choice. The NPs spoke about working with patients within a patient-centered philosophy. This work included taking on the *role of other* and setting aside personal views in favor of professional neutrality when experiencing the process of adopting an emotionally-laden clinical innovation. Here are observations from participants about this process:

Well generally speaking I think I'm probably one of those people that might be an early adopter because I think I am more well versed in the literature and for me it would have to be evidence based at least in a clinical innovation and I'd have to look at the research ... I would also want to know what other colleagues are saying about it, whatever that innovation might be, and then if there were an ethical component I would hope that I would look at that innovation and even if I didn't personally agree with something that, maybe because of my religious beliefs because I was raised Catholic, that I would still allow whatever that innovation is ... I would set, I believe and I have done this in the past, for example I have given out birth control pills to people in a primary care setting because I believe that that decision is up to me and ... if the patient is requesting it and its not harmful to the patient, that's not my personal belief and I have never taken birth control pills myself, but I also believe that I am there to represent health care and this is not about me so as long as I feel like the innovation is safe I would provide it, promote it...and I would not judge them, because I am not God.

The concept of free will was addressed by participants from a variety of clinical settings. Free will can be defined as a voluntary choice or decision, and is encompassed in the concept that humans have freedom to make choices that are not determined by prior causes or by divine intervention. Participants seemed to operationalize their belief in free will in their attitude that patients have the right to decide in a way that is not necessarily the decision that the NP would have chosen for them. In an ambulatory setting: "They ultimately go home and decide if they take that medicine and so they have

to decide what they are going to take or not.” In a specialty setting, one NP said, “I tell them this is your life” and “It’s always about what the patient wanted.” In a hospital setting, one NP stated “I try to make our unit a guilt-free zone.” Finally, one participant specifically referred to free will with the comment,

Whether the patient knows it or not, I feel like the Holy Spirit is working there anyway and so for me, ethically and morally, I can only give people what I know and it’s for them to make that decision. I guess for me too, I go back to the bible that God gave us the choice. He gave every person the choice to go towards God or to walk away and so I kind of model my practice on that. That I’ve given them the choice to make these decision which may bring that person closer to God, or farther away from God, and that ultimately God gave us each a choice and that I can’t make anybody do something anymore than anybody can make me do something. I mean unless they held a knife up to my throat. Free will, so I think for me that whole concept of free will goes back to my belief in my relationship with God.

One participant pointed out that bias may not be controllable: “I make decisions and I don’t even realize it, but subconsciously I am making decisions based on my own personal moral beliefs, but I try very hard not to do that.”

Another participant acknowledged that patients may struggle with their choices, even when these choices are made freely and with adequate information:

Its not something that I ethically or morally believe in but I am very non-judgmental, it is offered and I do make referrals and give them the information that they need... and also invite them to come back if there is something that we need to deal with.

NPs spoke of discretion and of respecting patient’s need to have control over the process: “Absolutely confidential. We can talk but it’s their final decision and we honor that.” This participant believed that patients deserved a respectful attitude from the NP while making difficult choices and support for those choices during and after the decision-making period.

Participants also acknowledged the differences between patient choices and NP

choices, and that patient choices were the deciding factor. One participant said:

There are a lot of things available, whether you use them or not it's your choice. It's not anybody else's and I was really careful to let them know 'you make this choice' because we are the ones that have got to live with our choices. It has nothing to do with whether you feel it is right or wrong.

A different participant said: "I keep myself separate from that if they are sure what they want." Another NP discussed the effects of bias on innovation adoption and stated: "If you are really going to provide women's health care, you really have to do it without bias." One NP gave the example of giving patients the right to refuse treatment even if the NP disagreed with that choice: "I do everything in my power to offer alternatives, but if the patient ultimately refuses, I have to let them refuse." This concept could be applied to adoption of innovations in many specialty areas including emergent care and end-of-life care.

Equal treatment. Equal treatment could be defined as care access and provision to all patients in a setting that is equivalent, impartial, and of like value to all members of a group. This care was described by participants related to similar access, delivery, adequacy, and timeliness. They focused on treating all patients equally: "I really do try to treat all comers equally...whatever it takes, we try to treat all patients equally." This equality of treatment speaks to consistent adoption of innovations and provision of information and treatment related to that innovation.

Others gave examples of equal treatment in certain challenging circumstances, including the relief of pain for patients who are/were drug addicts:

If you are in pain, I will treat you for pain. I have developed a philosophy that if you are in my emergency department and you are in pain, I will treat your pain and then provide you with a very small dose of going home with pain medicine and the appropriate referrals. I think we have to do diligence to keep track of patients that are frequent abusers, for lack of a better word, of the system who,

unfortunately, visit your facility quite often for a similar complaint. My philosophy is if you are in pain, you deserve humanitarian treatment for it.

Another participant stated, “If somebody comes in and they are in pain, I don’t care if they have a history of drug abuse, they still have the right to be treated.” This is an innovative area of practice as pain treatment for addicts has been slow to win widespread adoption.

Giving information. Giving accurate and complete information, including information about clinical innovations, was a facet of the philosophy of care. One participant said: “I am the conduit for information.” Information sharing with patients about clinical innovations encourages appropriate innovation adoption by building acceptance and demand.

NPs spoke of the need for complete and honest information: “I talk to patients very frankly.” Providing information is a key component of educating patients about the existence and availability of clinical innovations. Patients gain power as well as knowledge through information provision that supports them in obtaining clinical innovations, even in the face of NP adoption reluctance.

The NPs made a variety of choices regarding the delivery of information and clinical treatment services to patients related to clinical innovations. Some choices involved using direct communication approaches to provide the information: “I’m pretty much for giving the facts as they are.” Another choice included waiting for patients to request the information: “We really try to deal with everything in a very professional non-judgmental manner, if somebody wants to know our opinion, we are free to give our opinion but we don’t give it until it’s asked.” Other choices included offering the innovation in a partial way to certain patients and in certain circumstances, and at times

even using subversion to provide the information or treatment against the wishes of their co-workers or their agency. Finally, one participant acknowledged the challenge of finding the time and effort to provide information to patients: “I give them all the options all the time. I make sure I take the time.”

Participants spoke of discussing somber or distressing information with patients. This participant discussed end-of-life decisions with patients and said: “I hate to take hope away...I am surprised as an NP how frequently I address those issues. I wasn’t prepared for that.”

Advocacy. Acting as an advocate was seen as an important process in patient care for these participants: “I am a healer. I’m there to comfort the patient and see that they get the highest quality of life.” This same participant acknowledged that there was personal risk in acting as an advocate:

We really go to the provider and are an advocate for that patient and many times I get myself in hot water because I’m an advocate for the patient and I say you know what, you may not be willing to but we’re willing to keep seeing this patient and we’ll give them the narcotics and we will do everything we can to support you and if they don’t follow this contract then we will stop it. So I encourage the physicians to give the patient another chance if it’s appropriate.

Another participant acknowledged a potential dearth of advocates at the worksite and stated: “I may be the only person who is going to stand in the gap.” Advocacy could take many forms in these NP practices, including advocating for clinical innovations related to individual patients or related to agency policies.

NPs spoke of highly motivated patients who requested their assistance: “They are so intensely interested in cleaning up their life. We do everything that we can to help these patients.” Another NP spoke of a patient who requested help in committing suicide—a request that the NP could not honor: “I said no, but I can help you to live, that is my job

to help you live.” This participant saw herself as an advocate for life and for a high quality of life, within the clear boundaries of her practice scope and clinical setting. Advocacy takes on many different dimensions, and NP participants act on their desire to be an advocate. Motivated patients encourage NPs to act as advocates in seeking new treatments to solve clinical challenges.

Participants spoke of the deep personal meaning that they derived from advocating for patients: “Procedures are not what give me a high in nursing...I am a nurse when I can really help that patient have increased quality of life.”

Finally, some NPs spoke of not having all of the answers or resources that patients needed. In a discussion related to urging patients to seek innovations in the area of complementary therapies, one NP said: “I’m letting them know that we don’t have all of the answers at our institution and that they may want to look elsewhere to those other modalities.” Advocacy can take the form of referral to other care sources that can better provide what patients need.

In analyzing the philosophy of care section, the striking feature was that every participant either introduced or readily discussed their ideas of a personal philosophy of care. Participants could rarely identify any specifics about the development of their philosophy that related to their nursing education. There were many commonalities in ideas about what constituted a practice application of this philosophy. These ideas included focusing on patient’s needs and desires, acting as an advocate for patients through provision of information and equal treatment to all, and showing respect for patients. This respect was actualized as an acknowledgment that patients have the capacity for free will and the right to make choices about their own health care including

the right to refuse treatment against professional advice.

Work Environment (Conditions)

Work environment factors were conditions that could support and/or impede adoption of innovations. The sub-themes were work setting, economics, time, power and role, and co-workers. Within these sub-themes was data that alluded to facilitators and barriers to adoption. Work setting included information on type of setting and financial profit status of agency. Economics included expectations related to NP productivity and cost-effectiveness. Time was a factor in all environments and excessive time pressure discouraged innovation adoption. Power and role spoke to issues of autonomy and ability to adopt clinical innovations at the practice site. Co-workers could have negative, neutral, or positive effects on innovation adoption.

Work Setting

Settings of these health care institutions ranged from large HMO groups to small private practice settings with three providers. These sites were in primary, secondary, tertiary, and terminal care settings. Public sector, secular not-for-profit and for-profit institutions, and religiously-affiliated agencies all brought a mix of agency types to this data. Some settings guided NP practice with care suggestions, others gave in-services and provided protocols, and still others used incentives/disincentives to the point of employment continuation/termination. These work setting incentives/disincentives provided either a facilitative or barrier effect to the adoption of specific clinical innovations depending on the agency's stance related to the particular innovation.

Economics

Economics was a factor in all of these work settings. There were expectations

related to economics including NP job productivity, overall costs of providing care, patient-care service levels, and time pressure to do more with less over time. Pressure to be cost effective in the provision of patient care (HMO/PPO) or to serve too many patients (underserved sites) was reported in many interviews. One narrative was about providing prescriptions for over-the-counter drugs to adult low-income patients: “I will not give prescriptions for things that are over-the-counter ...because I think it is raping the system. I will write it for any child.”

Another participant, speaking about a lack of economic resources in their population of very low-income patients: “You have the knowledge to provide the care, but you have nothing to work with” and “How do you take all of these explosions (of knowledge and innovations) and come down to what should I do for this patient who had no money.”

Related to working with oncology patients who will refuse a new drug because of costs associated with treatment, even when free drugs were available, an NP said: “There are patients who refuse a new treatment, even if we can get the drugs for free.” (Participant explained that even if drugs were free, there were significant costs associated with the delivery of the drug treatment to the patients. These costs could include office visits, injection fees, expenses related to chemotherapy delivery devices, after-hours visit fees, costs of complications of treatment, and hospitalizations). This participant reported a patient saying, “I’m not going to leave my family with the burden of bills.”

In looking at economic effects on innovation adoption, the cost of the innovation in relation to reasonable established alternatives was an adoption facilitator or barrier. Innovations could potentially be cheaper, easier to obtain, easier to understand and

administer, and provide better outcomes at a similar or lower cost. An innovation that was able to offer equally effective or better care for a lower price would be very tempting to adopt. Generally, in the care of low-income patients, cost was always a barrier to innovation adoption since doing nothing was always the cheapest course in the short view and resources were severely limited in comparison with population needs.

Time

Time was a common factor noted in the interviews. There was significant time pressure in all of the participants' work environments. This time pressure had a significant effect on adoption of clinical innovations, primarily as a barrier to identification and initiation of use of an innovation in this pressure-cooker environment.

Moving patients quickly through the system was a common clinical agency mandate for NP participants. "My job is to move the meat." Another NP said: "My job is really to try to keep things moving along." This time pressure to move patients rapidly through the system was a common discussion point in many interviews, with most participants feeling that it was a negative factor in their jobs.

Providing good care under time pressure was another NP challenge in many settings: "We give the best possible care that we can, but we are on a time crunch." One NP felt that this battle of providing good care had already been lost and stated: "I'm swamped." This time pressure had a negative effect on adopting clinical innovations in an effort to improve care.

The effects of pace-related fatigue on care are noted: "Extreme exhaustion, I see it in myself; I see it in the doctors I work with." Others noted that time pressure could have a temporarily positive effect on performance: "Stress kind of fuels you to do better and

learn more.” Overall, participants believed that fatigue negatively affected the adoption of clinical innovation due to the added burden of the time and effort needed to discover, evaluate, and introduce an innovation into an already strained system.

There was a clear association between time pressure and pressure to be economically productive: “Time efficient is number one; it has to be time efficient because the reality is you’ve got to get the bang for the buck.” This multiple factor effect of need to be cost effective in general coupled with the need to be timely in an effort to be more cost-effective plus the fatigue associated with these efforts all provided a negative synergistic effect on innovation adoption.

Power and Role

Power and role were other areas of the work environment that received a lot of participant attention. There was a general feeling that some of the NPs had little or no power in their clinical agency to make official decisions about adoption or rejection of clinical innovations into their clinical practice.

Formularies, protocols, practice guidelines, and information were often flowing down to NPs. Some of this material involved clinical innovations. Other times, this information was about reinforcing standards of treatment that did not include the newest clinical innovations. Some of their comments included the following: “I don’t have any final say...my doctor group does” and “I don’t make policy.” When NPs did not have the power or opportunity to suggest clinical innovations within their health care agency, those innovations had less chance of adoption by the NP and by other agency health care providers.

Some NPs felt that they had a prescribed role to play. This agency expectation of

NPs as actors within the greater system could also impede the adoption of innovations. NPs were more likely to limit sharing information with patients and felt less power to autonomously act in adopting innovations within this rigid role. “I feel like the patient needs to feel like I’m in charge, that’s why they are coming to me and I have to take a certain demeanor to them.” Maintaining this role took precedence over being transparent in dealings with patients.

Other NPs were frustrated with the difficulties of providing adequate care to patients. Some focused on access of patients to needed services: “Access is an issue.” Inadequate resources to provide patient care limited the resources needed to provide care involving clinical innovations as well. Inadequate finances led to difficulties with obtaining new equipment, samples of new products, training to provide innovative services, and mentoring during innovative procedures. Inadequate access to the decision-making process within the agency led to a belief that the NPs had no power and control over the development of their professional role within the agency. All of these factors negatively affected the NPs’ ability to provide adequate care to patients in their work settings.

Others noted a lack of patient care services from other disciplines that previously provided this care: “Physicians won’t come in for non-paying patients.” Emergency Department NPs were pressured into doing procedures formerly done by these specialists. These were procedures for which the NPs had little or no formal training. This constituted an innovation practice situation by default, where NPs were being utilized to provide care not usually associated with the NP role without being provided with adequate training and preparation to assume this role.

Some NPs felt that there was a lack of focus by co-workers on what was most important, the patient. “Do no harm, that is what we are there for and it a hard place to come to sometimes.” That lack of focus could also occur at agency levels: “Consent forms are so complicated. I can’t stand these consent forms. It’s like we do it to protect the provider, not to protect the patient.” Dissonance among co-workers about existing modes of care did not provide a good foundation for supporting adoption of clinical innovations through the use of peer education and support.

Others saw the care provided by physicians and felt that it was out-dated, but had little power to affect change in these practices. Many felt that the power differential between the NP and physician role precluded any possibility of the NP urging clinical innovation adoption by the MD. “I just said no. I won’t do that. The research says that that’s not the way to handle that. I just left it at that, and just told him what I knew and did my own thing”, and “A couple of times I have had to say ‘could you let me know what you are thinking,’ I try not to do it in front of patients, it’s like ‘tell me what you are thinking, I need to know.’”

Some felt reluctant to follow through on new policies that were not patient-friendly. In one work setting, NPs were required to participate in the role of obtaining consent from patients for treatments and procedures. These NPs were unhappy with the process of obtaining consent and had no power over how the process was developed and implemented within the agency:

We are asking patients to make a really complicated decision. And they are really not capable of making the decision. And they are still making it based on information that is being given and you can’t give them all of the information... so you are editing what you give them and you can’t help but push them in a certain direction by your own biases. So I don’t think it is as full of free will as we like to think it is.

New policies often constitute a decision related to innovations in clinical care or the delivery of that care.

There were times when things were just not what they originally seemed to be: “The actual purpose of the trip was evangelism under the guise of providing medical care...as a provider I felt inadequate.” Unclear mission and goals of the health care agency undermined the NP’s ability to effect change through the adoption of clinical innovations.

When NPs believed that they had limited power in the work setting, the prerogative for innovation adoption decisions was surrendered to the agency. The reality of limited professional power as well as the common situation of agency-driven NP role constraints favors following treatment protocols that potentially inhibit adoption of innovations. For most NP participants, having perceived or actual limitations on power and role put pressure on them to accept agency and physician recommendations related to adoption of clinical innovations. This lack of control over individual practice created limited interest in individually-initiated innovation discovery and trial but promoted adoption of innovations in cases where agencies promoted the innovation.

Co-workers

Co-workers were a significant factor in NP practice. The effects of co-workers on the NP’s practice could be perceived as supportive, neutral, or non-supportive. Relationships with co-workers are outside of the policy realm, are not mandated by agency or professional practice guidelines, and are an interpretation of professional role. These relationships could also positively or negatively affect adoption of clinical innovations based on personal opinions that are not founded in evidence-based health

care research.

Supportive co-worker relationships with MDs and other providers were discussed by a number of participants. One participant observed that part of her role was to support physicians within and outside of her practice setting: “I feel that it is very important not to undermine the doctor-patient relationship even though I was being consulted as the secondary provider.” Support from MDs and other providers was also discussed. One example of support from physicians was offered: “The physicians support me and if the patient did circle the drain, they would be there for me.” In these supportive relationships, there was more support for discussion and adopting new innovations.

Conditional support was also discussed. This was illustrated by this quote: “You have to learn who you can talk to, who you can go to.” In these cases, NPs used strategies and subterfuge to receive help from those co-workers who would potentially offer support while avoiding co-workers who were consistently unsupportive. In these conditionally supportive relationships, it was unclear what the effect on innovations would be from situation to situation, but the net effect was an inconsistent environment that did not provide stable support for innovation adoption.

Non-supportive physician co-workers were discussed by a number of participants. One NP reported resenting that feeling of “Do I have to call for a kind of mother-may-I” related to being required to see approval to provide care that was within their NP role. About a physician who did not support a treatment change that had evidence-based clinical support: “I am much more of a patient advocate. He doesn’t know the patient like I know the patient.” Describing feelings towards an MD co-worker who balked at supporting an established pain treatment plan: “I was angry, I was insulted, and I was sort

of disgusted by her position.” This was related to the physician changing the care of a patient with chronic pain who had been this NP’s patient for many years. Physicians tended to have more power than NPs in the clinical settings. When they were non-supportive, they could have a profoundly negative effect on NPs’ efforts to adopt clinical innovations.

Occasionally NPs had non-physician coworkers who disagreed with their patient care approach and undermined their care in some manner. This challenge by co-workers was a major discussion area and included a number of observations by participants. In a discussion about being pressured to minimize discussion of a clinical innovation, one participant said: “The chief of ___ and the chief of ___ thought that I was talking too much about it and I was pretty much told to shut up about it.” In this manner, NP voices were silenced and the effect of this silencing was a loss of opportunities to adopt innovations. Loss of NP voice occurred due to the actions of MDs, administrators, health care providers from other disciplines, and NP peers.

In all of these discussions related to co-workers, there was again a focus on having the power to decide on a plan of care, and have support for implementing that care without interference. The power differential was not in favor of NP participants when the co-worker was a physician. NPs had to compromise their practice to support other professionals, but were often not accorded this same courtesy. This loss of power due to the actions of co-workers directly and negatively affected NPs’ freedom to choose and use a clinical innovation without permission or interference.

Innovation Adoption (Process)

In almost all of these interviews, NPs gave examples of both emotionally-neutral clinical innovations and emotionally-laden clinical innovations. They offered ideas about the process of identifying, evaluating, and adopting or rejecting these innovations.

NPs reported pressures to identify clinical innovations and analyze them for usefulness. There was also pressure to adopt clinical innovations and use this new clinical knowledge in their workplace. Participants spoke of the need to *Do the Right Thing* in the process of adopting clinical innovations. Subterfuge and strategies were used to avoid worksite policies and people that were dissonant to NPs' professional/personal philosophies. There was a spectrum of adoption of the innovation, including full adoption, conditional adoption, intermittent adoption, or rejection.

Discovery of the Innovation

Participants learned about clinical innovations from professional sources including conferences, in-service programs, and professional peers. Academic programs, both initial NP preparation and continuing education programs, were also professional sources of information. In addition, NPs learned about clinical innovations from patients, caregivers, community members, and the lay media.

Professional sources of information. Professional sources of information about clinical innovations included individually sought information from conferences, journals, continuing education offerings on internet, in print, on audiotapes, CDs, and DVDs. Worksite exposure to drug representatives, in-services, and agency distribution of protocols outlining preferred treatments were other information sources. Academic programs provided information during initial educational preparation as an NP or within

post-graduate courses. Information was also gleaned from informal peer conversations with other NPs, MDs, and health care professionals at work as well as at professional meetings.

One participant described sources of information:

We learn about those both by internet, e-mail type of memos. We learn about them through... in-service educational systems for continuing education. And we also learn in some of our monthly NP/PA meetings. Also too, we have bulletins and newsletters that come out...and I've learned also through other additional community-based and national organizational meetings and conferences, as well as journals.

Another participant listed several other sources, including professional organizations: "I learn about clinical innovations not only in my work setting but at conferences, and also I'm involved in several professional organizations including the Emergency Nurses Association, Sigma Theta Tau, and others, and probably through my own reading and research."

Lay sources of information. Lay sources of innovation information included newspapers, magazines, internet sources, community organizations, and public media such as billboards. Religious organizations disseminated information through meetings, publications, and internet distribution of information.

Conversations occurred with members of their social network in the local community, and in communication with extended social systems that stretched internationally. In addition, information was exchanged at home with close friends and family members.

NPs also spoke of patients as sources of information about clinical innovations: "I'm listening all the time (for new information)...patients are wonderful teachers."

Pressure to identify and adopt innovations. Participants spoke about the pressures

to learn about innovations, and of being overwhelmed by the amount of new information and by their work load. An NP who worked three jobs discussed trying to stay clinically current on new innovations:

I really had no time to go to a conference, because on the two days I might have off, the last thing I wanted to do was go to a conference...I work sun up to sun down, day and night, day and night, trying to do this.

Time, money, and the desire to balance work life with some free time pursuits were all factors.

There was also considerable pressure to adopt clinical innovations and use this new clinical knowledge. NPs employed a process in deciding about innovation adoption or rejection. That process was more complicated when the innovation was emotionally-laden from their personal perspective. Adoption occurred along a spectrum.

Evaluation of the Innovation

Within the process of deciding to adopt or reject a clinical innovation, participants discussed weighing the cost-benefit ratio, often having input from their employing agency with guidelines for adoption or rejection. They were influenced by professional literature, and by professionally-sourced information in the lay literature (usually “science reporting” from professional journals into the lay press/TV). They sought information on the internet from professional sources.

The process of weighing the cost-benefit ratio was actually a complex multi-step process. The first step was often a review of the aspects of the innovation. Second step was the identification of the existing clinical problem that was being addressed by the innovation and/or a review of the treatment currently in use that this innovation would replace. Third was an analysis of the evidence-base for the innovation to determine if it

had scientific merit. One participant discussed the process of evaluating innovations:

Well I work in the particular HMO setting and we do have our own levels of standards of practice in clinical, and those are all evidence-based medical practices and medical interventions. We basically follow those particular evidence-based clinical approaches to health care that have been, I wouldn't say directed to us, but instructed by us as far as evidence of a sound clinical practice. Also too, we have bulletins and newsletters that come out from the pharmacies as far as clinical evidence and clinical evaluations of particular medications and therapeutic approaches that are all...and the pharmacological therapeutic boards, they come to conclusions on particular medicines and give us our directive. Also, too we have a group of nurse practitioners, physician assistants, and physicians that work together too, for our drug formularies and drug protocols for particular medicines as well as the formulations of our protocols for practice.

Fourth was a comparison of the existing standard of care, both in the local health care community and at the national level. Community standards of practice influence individual providers, agencies, and patients. Related to national standards of practice and scope of responsibility, one participant stated that there were discussions between NPs at her worksite:

There are lots of procedures being performed and you do have a lot of nurse practitioners now doing placing chest tubes doing central lines very much along the lines of the acute care nurse practitioner. But there is another school of nurse practitioners that work in emergency departments, like myself and others, that really draw the line and say that's not why we're there. We are there to see mostly the primary care patients, the non urgent and urgent patients. We are not there to be junior doc. We don't intubate, we don't put in chest tubes, we don't put in central lines ... and not because we couldn't learn to do that but then there are other nurse practitioners that feel like that's why they are in the emergency department that they are just like a physician and they'll just take the next patient off the rack.

Another step was to analyze the effects of the innovation on the provision of care, including the time it would take to explain and implement. Patient preferences were also a factor, and included cost, availability, comfort, side-effects, stress of changing the treatment plan, and potential for errors or non-adherence. A participant discussed the aspect of patient preferences with regard to innovation evaluation in this quote:

I think you have to think about the individual patient to begin with. And I think you have to think about the facet of that patient that you are seeing. I think you have to think about their ability to afford a change in what you've been previously doing or a new approach. The difference is not that one practice is better than the other, it's just a matter of changing what you're doing. For example changing a medication from one you've used for years as opposed to something new. If another medication is going to be obviously proven to be much improved and better than you're gonna make your decision based on the effectiveness and the basically how much it's going to improve the patient's quality. But...and not withhold that if they can afford it. And I don't withhold a new medication because people can't afford it if I think it's better but I will be more reluctant to use something new if something hasn't been proven to be any better than what is less expensive for them. I work in an area even though it's an HMO system, I also work in an area where ethically there may be patients that could not afford a particular type of cost of medications or changes in that cost of medicine. Also think about the person....when I change the method of clinical practice from one medication to the other, to think about what they do for a living, other affects that it's going to have on them as far as the other parts of their life, their social lives and such. So, there are a lot of facets that I think have probably take into the patients consideration more than I take into whether the..... the patients situation at that time, rather than taking into the consideration the fact that it's a newer method of doing something. It maybe a newer method.....more streamline, more efficient than I have no problem doing that. But if it's...if it hasn't been really proven to be much more effective, or to have that greater benefit over changing them, then I'll wait.

These steps were non-linear and occurred in various orders within the analytic process of evaluating the innovation for adoption or rejection.

Some NPs were willing to try new innovations that seemed uncomfortable to contemplate initially, for the benefit of patients: "Wade into the water." These feelings of both reluctance and willingness are indicative of the energy that NPs invested in the process of adopting clinical innovations.

In a common sense assessment of innovation adoption, if an innovation was easy to adopt and worked well, the facilitators were taken for granted and the barriers did not appear to exist. If adoption was difficult or unsuccessful, then NPs and/or other interested parties looked for barriers and assessed those factors for change opportunities.

Doing the Right Thing

When the clinical innovation was emotionally-laden, there were extra steps involved in the decision to adopt or reject the innovation. These steps involved all of the routine steps for adoption of an emotionally-neutral innovation and also additional work in identifying the emotionally-laden characteristics of the dilemma, usually a conflict with their religious or personal values. Sometimes their information about the innovation came from non-professional sources, like religious literature. They then decided whether the dilemma would preclude adoption or whether they would set aside their personal beliefs to provide the innovation in some manner to patients. The great majority of NPs interviewed believed that it was their professional responsibility to provide the information and treatment associated with the innovation to patients in a neutral manner. They were conscious of instances of cognitive dissonance between their personal thoughts and their professional self-talk in the adoption process.

The concept of *Doing the Right Thing* arose out of discussions in many interviews that revolved around the theme of their philosophy of care related to the adoption of emotionally-laden clinical innovations. NPs spoke of separating themselves from the patient situation and of setting aside personal values and preferences in the process of adopting clinical innovations as part of providing care:

My own personal philosophy is that I have my own personal values but I respect and understand that other people do not have the same value system, but health care is still health care...it is not up to me to judge them and I feel like I need to help them through the process of getting their needs met from a health care perspective.

None of the NPs stated a belief that there was a single right course of action related to clinical innovation adoption, nor did their perception of the right thing appear

to be evidence-based. Rather it was their individual perception or belief that this was the right thing to do. All but one participant stated in some manner that patient's needs and desires should come before NP preferences, as long as the innovation was medically appropriate. NPs spoke of their need to do what they thought was the right thing as a professional and the desire to avoid being judgmental: "My way of being an ethical person is that I made a decision to help people come to their own decision, not to come to my decision."

Subterfuge was used to get around the system, both for patient advocacy and for avoiding agency guidelines that the NP personally rejected. In a case of possible abuse, "We'll try to really stall and keep the patient around, we'll try several angles." This strategy was used to keep patients in the area to gather additional information, to create opportunities to interview the patient privately, and to offer numerous opportunities for the patient to reveal the abuse.

In another example of using strategy to do the right thing, a participant told the following story:

Working as a nurse in the ER, a woman came in wanting emergency contraception and the physician is morally opposed to it and refused to give her a prescription. So I said I can make a referral and he says, you can do that but I cannot do anything with this, so I was able to do an admit then discharge her and give her the information that she needed so that her needs would be met.

This strategy was used to provide patient care that was normally available in this ER setting, but was not available at this particular time because the physician chose to withhold it from the patient based on his informal and unauthorized version of a *conscience clause*.

There was one participant whose interview data was strikingly different from all

of the other participants. This participant made practice decisions about innovation adoption that were based on religious convictions alone. These decisions did not reflect the prevailing community standards of care, the needs and wants of the patients, or the mandates of the health agency that provided employment to the NP. Data from this interview was helpful in looking at the theory from a contrarian point-of-view.

Comments from that interview data set related to direct care of patients were as follows. On requests for emergency contraception: “If they call for it, I’ll say the advice nurse can prescribe it, get the MOD (doctor of the day) to sign for it.” During routine care where it was discovered by the NP that patients have had multiple terminations: “The patients really need to be sat down, I leave religion out of it, I tell them that it’s not good to have this many procedures to your body.” When a patient asked for emergency contraception or termination information: “I feel that life begins at conception. That is not my job to tell people that. But I feel that they are sent to me for a reason...If they are requesting that, they can get it at the front desk.” About patients who were sent to the genetics department, received test results, and were offered further advanced testing, and sometimes offered termination: “That bothers me, but I am out of the loop.”

This same NP discussed the discovery and adoption of an innovation (emergency contraception) at the agency: “I just don’t know who to believe anymore” and “I just still haven’t been convinced. I haven’t seen enough literature.” The NP was discussing an innovation that had been used in various forms for almost eight years within this agency. This was a strategy used by this NP to delay being censured by the agency, to avoid pressure to follow agency standards of care, and to avoid having to declare a conscience clause. It was a strategy based on the statement that she was still seeking information and

could not make a decision until she received enough information to make the choice clear to her. It was a strategy that worked for the NP. Meanwhile, patients were unaware that information and services were not being provided to them in a manner consistent with community standards of care.

Providers who choose either innovation adoption or rejection could be seen as being overt or covert in their decision-making process. Eventually, the decision was usually transparent to co-workers and to patients. This NP's strategy had preserved the secret nature of this professional stance for a significant period in a power-over style that was not the norm for any of the other participants in this study.

The Adoption Spectrum

Innovation adoption by an individual NP could be full adoption, conditional adoption, or intermittent adoption. Conditional or intermittent adoption reduces the chance of a patient receiving the innovation. Innovation rejection could also occur and would preclude patient access to the innovation. Rejection could be overt or covert. Responsibility for the adoption or rejection process could be individually held or shared with others to varying degrees.

Adoption of innovation. Full adoption would be the straightforward application of the clinical innovation into practice, employing the innovation each time that it appropriate to the medical facts within the patient situation. An example would be to offer a particular antibiotic every time community-acquired pneumonia was being treated. Full rejection would be the practice of never using the innovation.

Conditional adoption would be adoption that occurs only in certain circumstances. It could encompass a variety of conditions that modify the dissemination of information

or treatment: certain types of patients, certain clinical circumstances, or certain settings.

In other conditions, innovation rejection would be in effect.

Participants spoke of conditional adoption situations that involved providing different birth control and abortion treatment/referral options in different work settings, anticipatory provision of emergency contraception to certain patients, gender differences in the provision of cardiac disease medications with women receiving less treatment, provision of estrogen to certain breast cancer patients to treat symptoms affecting quality of life, choice of lab tests that is dependent on insurance coverage, and use of controlled sedation in hospice patients for intractable pain but not for psycho-social-spiritual suffering. Following are three examples of conditional adoption. Related to practicing differently at different work sites:

Well the subject of birth control comes up all the time here, all the time, and because of the philosophy of this particular ____, we don't dispense birth control here. So that has been something that we have found that we have to refer out for. I suppose that is a bit of a dilemma because there is a definite need for it here but it's not one of the services we provide. Well I know at the ____ in a faith-based organization, I had a patient that was unmarried and pregnant and asked for information on terminating the pregnancy and I could not in that environment, give her a referral. That goes against the institution's philosophy. I could refer her over to the counseling department and go from there, that is an ethical dilemma for me because personally I am pro-life and at the same time as a clinician, when people ask for resources, what is my responsibility to provide those resources. And in some ways it was easier there because the institution decided it for me, I didn't have to decide myself. Had I been in my other practice where I could have, what I would have done is given her a variety of different resources, including the pregnancy health centers in ____, it was within the community that I worked in. I could give alternatives to abortion as well as Planned Parenthood, an environment that they could go in and be given options. That's what I would have done.

Related to offering medication that is in opposition to the usual standard of care:

Women who had breast cancer, say who had a positive estrogen receptors and they come in and they are so miserable because of the lack of estrogen, they are on medication such as tamoxifen which makes you menopausal, it brings on all the menopause signs and symptoms and you think ok, could I give them an

estrogen cream. There is very little absorbance, would it just give them some relief. Their relationship with their spouse has just gone down the drain, because they can't have sex because they're the vaginal vault is so atrophic. They feel lousy, they feel lousy about themselves and that is probably the hardest one because the data out is, is nothing conclusive that that would. You know you get into quality of life issues.

Related to offering selected patients controlled sedation:

We have, not frequently, but perhaps, what I've seen maybe half a dozen times in the past six years, done controlled sedation. Where the patient, the family and the team have agreed that perhaps the best way for a person to weather the storm, is to just be asleep through it until they pass away. And when it is something like pain, that is pretty easy to do. We have had two people that have had what was termed as spiritual suffering, not pain but emotional. Both of those people that came in much more functional than others. One patient in particular, X, had made arrangements for all of X's friends to visit. X told the friends they needed to come see the patient because on ___ day the guy was going to put X to sleep. Just that use of terminology made some of us, certainly myself and a lot of the nursing staff that are involved in the actual care, uncomfortable. It was done. And actually that intervention now, as an agency, we don't do controlled sedation for psycho-social spiritual suffering although I know it's done in other agencies. I think the issue really was psycho-social-spiritual suffering. I think that it's a hard one to wrap your hands around. Actually, I think I have presented that as an option. I know that I have. In my case it's been a person in severe pain, intractable pain.

Intermittent adoption/rejection would encompass a pattern of off-and-on use by the NP that was not dependent on certain conditions. This could be the random or inconsistent use of a certain medication, based on information from co-workers or individual experiences with prescribing the medication. One participant spoke of intermittently offering information to patients about alternative treatment modalities:

Because it's important to do evidence-based care, that's what we do and that isn't to say that some of these other things won't provide comfort it's just within this discipline, because we consider ourselves a sort of a scientific discipline, we've got to be careful that that's how we're doing it but if we don't have enough evidence-based, really solid stuff, then we better be careful.

Intermittent usage can also be the effect of a system factor. An NP participant in a nation-wide health care system offered this insight into intermittent adoption of a

particular drug:

We do use new drugs but when the formulary has to be changed at the national level, then it sort of filters down into the different businesses and different businesses pick different things. They have a set amount of money and they've got to provide all the medications for all the conditions that we treat, and we're one area, and unfortunately new meds cost a lot of money.

Some NPs reported clear and consistent adoption or rejection of an innovation but other NPs reported that they would decide on a case-by-case basis whether to utilize or reject an innovation. A few others admitted to adopting then rejecting then adopting an innovation in a somewhat random pattern.

Overt rejection of innovation. Some NPs and MDs have utilized conscience clauses to refuse care that is not consistent with their personal values. One participant discussed their shock and dismay at finding out that other providers had been offered this option while the NP was unaware of its availability as well as her belief that this type of clause was operating at the patient's expense. Conscience clauses have been widely reported in the literature related to health care clinical practice but were not the focus of this study. One participant, related to conscience clause-type choices, said, "Wow! We gave these guys (physicians) a choice."

At times, rejection can occur following an initial full adoption. One participant spoke about this experience:

New tests, so why don't we try it, we've had the lab come in to detail us on things, certainly the BNP when that first started coming out and its like well we're doing it at the hospital why don't we try, why don't we look at that, but then our clinic was having trouble, it has to be frozen, and there were issues that we weren't doing correctly, so we had incorrect accurate numbers, so we had to have the lab personnel come in and teach us how to do that lab a little differently, some of it has to do with cost and insurance, another way of doing cholesterol lipids where you don't have to be fasting we really wanted to try because a lot of our patients will not come back fasting so we try to do it but then it ended up being very costly and it wasn't good quality with the lab so we stopped that one.

In another example of rejection, a participant rejected an innovative NP role for personal reasons:

We are somewhat pressured to do injections into joints. I haven't done one. I don't want to do injections, at all. I could learn it, I don't like the idea of occasionally doing it, I don't like to do invasive things so there is some pressure.

Several participants spoke of rejecting a treatment plan that was medically appropriate to the condition in theory, but futile for the particular patient:

An example would be a patient with stage three metastatic breast cancer that has gone through all the new treatment protocols, wants to continue. You know that hospice would be a better choice for them, that if they continue aggressive treatment that they are actually going to shorten their life by most evidence that you've seen and they choose to continue treatment and want TPN and lipids at home to help maintain them and they are getting blood transfusions every other week, their iron load is going high, all those issues come and they can't let go and they can't stop treatment and that's such an individual choice that you have to respect it but from your knowledge and often the family knows it's time to let go and they won't let go and those are hard, to continue to hook people up to drugs, continue to send them in for blood transfusions and often it's detrimental.

In another example of avoiding futile treatment from a different participant:

That comes up for me as well when you talk about interventions that would be futile. And so if you have a patient that comes in and you have a shotgun approach of things that can be done, different things that can be done, the question then becomes do you, are you obligated to inform them about that whole array of things. In some ways, and this is something that I've learned through ___ and through our meetings, interdisciplinary meetings, and our Noon conferences, and stuff like that. In some ways if you present that whole array you can really confuse the patient and make the decision almost impossible so you can in your mind, selectively take away the things that you think are inappropriate. And I don't mean inappropriate from a religious point of view or inappropriate from a... I mean inappropriate in that they wouldn't make a difference, medically inappropriate. They would not help. If that is the case then um....let's say a I think false hope would be one, I think that side effects or risks, if you're weighing risk vs. benefit, certainly. Well cost to the person, their time. they might be nauseated, vomiting, so cost to the person in terms of suffering.

Covert rejection of innovation. Some NPs were unwilling to adopt a clinical innovation and unwilling to let that decision become known to patients, co-workers, or

their employing agency. A negative case from this data analysis was used in an earlier section to illustrate how the NP avoided adoption without suffering worksite consequences, at least temporarily. This type of *non-decision* amounts to a rejection of the innovation from the patient's perspective and can delay the widespread adoption of innovations that may offer significant reductions in morbidity or mortality to patients with an attendant significant cost savings to society. The NP from the negative case discussed earlier remarked about not yet deciding on an innovation after eight years of in-service information, "I haven't seen enough literature."

Responsibility. Responsibility for innovation adoption was seen by some NPs as being on a spectrum, ranging from being the sole responsibility of the NP to being a shared responsibility with the agency or patient. Agencies were more commonly cited as originators of policies or protocols that affected adoption within the work environment.

One participant, discussing emergency contraception as a recent innovation in the role of an over-the-counter drug, noted:

If it were over the counter, physicians or NPs who have a moral bias against it would not be opposed to saying that it is at the pharmacy because then it is in the hands of the patients and they are not writing for it and therefore they are not responsible of them doing it. When you write a prescription, you are giving your blessing or your okay for this to happen.

In analyzing the innovation adoption process section, the effect of social systems was an interesting area to contemplate. In the discovery of innovations, professional sources played a major role in providing information to NPs but lay sources were also powerful media influences. Lay sources were not peer-reviewed, but were still seen as reliable sources of information. There was pressure on NPs to identify and adopt innovations from a variety of social system sources, including peers, community

members, and patients.

In evaluating the innovation, NPs felt that it was important to *Do the Right Thing*; this could have the implication of an ethical “third eye” judging their actions from a social perspective. The adoption spectrum also occurred within the context of social factors, and was affected primarily by patient attributes such as role, social status, age, economic status, and education. These attributes have social meaning. The fact that rejection of innovations was done in both overt and covert manners also carries an implication that the attitudes of the greater social system affect how transparent the NP is willing to be regarding the rejection decision.

Finally, NPs discussed the level of responsibility that they felt for adoption/rejection decisions in various situations, with shared decision-making carrying less individual responsibility for the NP. This implies that social approval or mandates are reassuring or empowering from the NP’s perspective. The powerful effects of social system factors on the process of identifying, evaluating, and adopting or rejecting a clinical innovation are significant. These factors are embedded in each NP’s everyday thought processes and may not be easily evaluated related to clinical practice decisions.

Values Continuum: Congruence to Dissonance (Consequences)

Consequences could theoretically be experienced at the societal level, at the professional level, and at the personal level by NPs, patients, peers, and members of society. However, participants primarily focused on the personal consequences of adoption or rejection of clinical innovations. The consequences related to adoption/rejection decisions were conceptualized as occurring along a continuum from congruence to dissonance. Congruence occurred most when NP’s personal and

professional values were in alignment with patient and agency perspectives. Dissonance occurred more often when there was conflict between values. The consequences related to adoption/rejection decisions are conceptualized as occurring along a spectrum from congruence to dissonance. The complexity of the adoption process does not lend itself easily to categorization into congruence or dissonance. Various aspects of each innovation adoption decision-making process could lead to a placement somewhere on the congruence to dissonance continuum.

Dissonance

These aspects can include the dissonance created as a consequence of adopting an innovation that is contrary to personal values, including religious values. NPs and other health care providers could decide to reject a clinical innovation that leads to values dissonance. That rejection could be overt or covert.

Participants were aware that professional practice codes, community standards of practice, and agency policies could all mandate their professional actions. Failure to meet those guidelines in their practice could mean criticism, censure, malpractice claims, or loss of ability to practice as an NP. There was a risk that professional decisions, including adoption of clinical innovations, could lead to a loss of their professional career.

One participant spoke of feeling forced to practice in a certain way by the way that protocols were written, feeling that the agency would know if protocols were not being followed, and that she was being compared to the norm of other providers. This participant was clearly concerned about agency censure and co-worker criticism if she deviated from agency guidelines.

I think within our department we are guided a little bit on that way. If we see something new it needs to go through a series of approvals before we can just

start using something or not using something, I believe there are regional committees that probably decide some of things. I think that we first go to our bosses and talk to them and then they usually take it to a chief's meeting. Sometimes there is a little bit of forcing in writing up a protocol and I say that that kind of eliminates your ability to not use it because then they will come back and say that you are not using protocol. I mean sometimes with things like the visits for a while they were mandating that we spread out our visits for OB patients and a lot of us weren't real comfortable with waiting two months in between appointments the patients don't want that so were allowed to be a little flexible with things like that but they kind of scrutinize what you do compared to the norm. But if you need to see a patient more often and you have a reason you can justify, and we usually can't prescribe things that are off formulary, if we don't have it, we can't write it as NPs we have to get an MD to approve it.

Another participant spoke of the real risk of censure if treatment protocols/policies were not followed while she was employed on active duty in the military. This censure could have involved separation from military service.

Someone enlisted is pregnant. You are supposed to refer them for prenatal services, you are not supposed to be able to refer them for any abortion services. So what we had to do was say, you would have to tell them off on the side. If you don't want this pregnancy, and are certain about it. You may want to give "XX Clinic" a call, there are people you can talk to there who can support you. AGENCY policy is that if someone's pregnant you refer them for prenatal services. Not just enlisted, all members. Refer for prenatal care, we do not refer for any abortion services and they are not done by the AGENCY. That is all done on the hush hush and I had a patient who came to me, who was pregnant by someone else that was enlisted and she had come to me right after she had an abortion and she was forced into it because...well she felt like she was forced into it.

Some NPs had lingering feelings of ambivalence when patients made choices that were inconsistent with the NP's personal beliefs. NPs believed these choices would not have been their own choices if faced with a similar situation. This was mitigated by the belief that the NP had acted professionally and responsibly in offering the choice and satisfaction in knowing that the NP had done what he/she thought was ethically and morally right in the situation. One NP made the distinction between what patients wanted and what the NP wanted for them: "My teacher helped me realize that sometimes I

wanted things for the patients more than they wanted it for themselves” (related to being a student and giving patients advice based on the NP’s conservative religious ideals). In this situation, the participant described the ambivalence of wanting something for a patient but also wanting to avoid asserting her preferences into her patient’s experience.

Finally, one participant eloquently expressed the dissonance of personal sadness coupled with professional satisfaction when she said: “If they were to choose an abortion at that point, that would have grieved me personally; but professionally I would have done the right thing.” In this statement, the participant captured the emotional mix of personal sadness and satisfaction with upholding her professional practice standards, encapsulated in one clinical exemplar.

Congruence

On the congruence end of the continuum, the innovation could be more acceptable if the patient or another entity was the active decision-maker, so that the full responsibility of adoption did not rest with the NP. Even if the NP adopted the innovation, there could be feelings of being at risk as well as being satisfied. A mix of the feelings of being at risk and being satisfied could produce a state of being ambivalent.

Satisfaction was derived from practice that was congruent with the NP’s personal philosophy of care and promoted a patient-centered care approach, but was not necessarily predicated on the actual choices made by the patient or the outcomes of those patient choices. Quotes shared in earlier areas of discussion can also be used here to illustrate the satisfaction of practicing in a way that constituted doing the right thing.

In building a practice that gave them satisfaction, NPs spoke of their need to do what they thought was right and the desire to avoid being judgmental: “I am not God”

and “paternalism is not for me.” One NP felt that the advocate role was very satisfying and stated that while acting as an advocate for patients, she had the feeling that she “was standing in the gap” between the patient and care that the patient needed. Another NP stated that she would cautiously “wade into the water” and try a new clinical innovation that she was not completely sure about using if she thought that it might help a patient, in an effort to practice in a satisfying way. “I am a nurse when I can really help that patient have increased quality of life” said another participant.

The continuum of congruence to dissonance embodied the consequences of practicing within the complex role of the NP and the challenging health care milieu. The consequences of clinical innovation adoption or rejection for NP participants included being at risk, being ambivalent, and/or being satisfied to varying degrees. These consequences were individually experienced, even though the decision process was affected by many factors that derived from the agency, the patient, co-workers, and community members. NPs were motivated to do the right thing for patients and for themselves. In their attempts to do the right thing, many contextual factors were part of the decision process. These factors were not necessarily considered a part of traditional definitions of evidence-based health care decision-making processes. The adoption spectrum evidenced this desire to do the right thing for each patient within their unique health care situation. This spectrum of decision-making lead to variations in placement on the values continuum of congruence to dissonance.

CHAPTER 5

Discussion of Findings

NPs fulfill a role that is complex in nature, borrowing from both nursing and medicine in scope, content, and level of both responsibility and autonomy. NP participants in this study had a variety of challenging practice settings, many with acutely or chronically ill patients who provided clinical issues that were difficult to address. These participants were highly motivated to address these issues in a way that constituted doing the right thing. Adoption or rejection of emotionally-laden clinical innovations was a strategy used to meet patient needs and do the right thing.

NPs practice within the macro context of global, national, and regional society. This context includes culture, social mores, gender/sex roles, values, worldviews, and channels of communication. NP practice is situated within the professional context of the cultures of nursing, health care agencies, medicine, and other disciplines, with their attendant perspectives. Professional communication strategies could play a role in how information is developed and disseminated, including information about clinical innovations. Professional near-peers influence practice locally. Finally, NPs live and work within the micro context of the personal worlds of the individual NP and patient. Both NPs and patients are influenced by their families of origin, friends, communities, religions, local organizations, lay press information, economics, and possibly other factors.

This chapter discusses major findings as they are related to the literature. It also offers commentary about the strengths and limitations of this study. Implications for future research in the areas of clinical practice and agency administration, as well as NP

education, are offered.

Findings Related to the Literature

The research findings in the areas of Philosophy of Care, Innovation Adoption, and Values Continuum: Congruence to Dissonance were analyzed related to existing literature. Everett Roger's DOI theory (1995) literature provided a significant contribution to this discussion. This research produced findings that were unique areas of knowledge not previously covered in existing literature.

Philosophy of Care

The concept of Philosophy of Care as the basic context for the innovation adoption process focused primarily on individual development of a philosophy of care and patient-centered care. Data related to context involved the sub themes of patient choice, equal treatment, giving information, and advocacy. These themes were consistent with the literature discussed in earlier chapters related to ethical aspects of care, acting faithfully, and truth-telling.

Literature related to *acting faithfully*, a topic that included covenantal relationships, fidelity, personal integrity, moral strength, sincerity, and honesty was authored by Cody (2003), Cooper (1988), Milton (2002), Mitchell (2000), and Pilkington (2004). In these articles, authors discussed the idea that these concepts were related to acting faithfully and that acting faithfully was a goal, a moral imperative, a recognizable phenomenon, and/or was measurable in some manner. In this study, NP participants also discussed concepts that can be seen as congruent with the overarching concept of acting faithfully, even though they did not use this term in vivo. These areas of discussion included respect for patient choices, providing patient-centered care that allowed for

patient choice, providing equal access and delivery of care to all patients, providing needed information in a timely and complete way to all patients, and acting as an advocate. These areas of NP practice all speak to acting faithfully as a health care provider in the direct provision of patient care, and indirectly in agency decisions that affect the provision of care.

Literature related to *truth-telling* between patients, providers, agencies, and communities; that included informed consent, cultural differences in the concept of truth-telling, and the provision of hope, information, and knowledge was generated by Banja (2001), Begley & Blackwood (2000), Berger (2003), Carter (2002), Crow, Matheson, & Steed (2000), Hébert, Hoffmaster, Glass, & Singer (1997), Johns (1999), Joni (2004), Kasman (2004), Rosenbaum, Bradley, Holmboe, Farrell, & Krumholz (2004), Sullivan, Menapace, & White (2001), Surbone (1997), and Tuckett (2004). This was a broad collection of articles that focused on various aspects of communication between many entities involved in the provision of health care. This study focused on a part of that area of knowledge: communication between NPs, patients, and co-workers. There is some overlap with activities that are seen to also be involved with acting faithfully, discussed above. In this study, consistent with the articles reviewed, NPs spent considerable time and effort on communicating information to patients and their families, as well as to co-workers, related to provision of knowledge, hope and encouragement, consent process information, and deciding how much information to reveal using cultural concepts.

Literature related to the concept of *power* and power differentials was written by Ball & Cox (2004), Gilbert (1998), Goodyear-Smith & Beutow (2001), and Wright (2004). This literature was relevant to the study and consistent with study findings. In this

study, NPs had a constant awareness of power and power differentials in their work environment. These power situations occurred between NPs and patients, NPs and co-workers, and between NPs and their employing agencies.

NPs were in a power-over situation within most patient encounters and were dedicated to avoiding the abuse of power. This was evidenced by their strong interest in providing patient-centered care and providing choices to patients, even when those choices were contrary to NPs' preferences.

NPs were in a power-down position in most encounters with physicians and with agency policies and treatment protocols. This was evidenced in the findings related to lack of influence over the practice of physicians, need to defer to physicians in their own practice decisions, and lack of input to and control over treatment protocols.

NPs could evidence an internal power that was not derived from their actual job description or educational status. It could be characterized as a moral force, or a dedication to perseverance in the face of opposition. NPs used that power for advocacy and the procurement of necessary services for patients and families, at times using subterfuge and other strategies to defeat the opposition of co-workers or the health care system.

The concepts of acting faithfully and truth-telling, as well as the awareness of power and power differentials, was a major focus of the study interview data. These concepts were directly related to the findings of doing the right thing as well as a significant factor in decisions made about adoption and rejection of innovations.

Conscience clauses act as legal *opt-out* mechanisms for providers to avoid providing care that is at odds with their personal values without legal repercussion and

potentially without a patient's knowledge of the omission. This concept was discussed in literature authored by Childress (1997), Place (2003), Tanne (2004), and White (1999). Some discussion of conscience clauses or similar mechanisms could be expected to occur in a study such as this. In fact, no participants reported currently working with anyone using a formal conscience clause, nor were they using this mechanism themselves. One participant noted that physicians who were co-workers during her NP education program did have choices about what procedures and treatments they would participate in providing to patients; this was in the distant past and she did not approve of it at the time. Another participant had a physician co-worker, who did not have a formal conscience clause in effect with the agency, refuse to provide community standard of care treatment to a patient in an emergency department setting based on a moral stance.

Innovation Adoption

The concept of innovation adoption included the discovery and evaluation of an innovation as part of the basic process. The focus of this process was on the entire process of adoption or rejection of the emotionally-laden innovation as it was developed within the relationship between context and conditions.

Within the process were the sub themes of *Doing the Right Thing* and the *Adoption Spectrum*. The adoption spectrum showed that innovation adoption could be full and consistent, conditional, or intermittent. Innovation rejection could be overt or covert. Literature related to Roger's DOI Theory was consistent with the concept of *Doing the Right Thing* and inconsistent with the concept of the *Adoption Spectrum*.

Doing the Right Thing was related to literature that evolved from Roger's DOI Theory (1995), it was consistent with the idea that interpersonal channels of

communication, opinion leaders, social mores, cultural norms, and symbolically meaningful behaviors of community members all contribute to a communication system that leads to a critical mass in the process of adoption of innovation. These concepts were all part of DOI theory but were not routinely the primary focus of DOI research; often the focus was the mapping and quantifying of an innovation's use within a geographic area of interest. Research related to emotionally-laden innovations was not found in the review of DOI literature; this was a new area of inquiry to which the study findings offered unique insights.

Emotionally-laden innovations had not been the focus of any identified DOI research. Most DOI research focused on large quantitative data sets looking at the diffusion of educational programs, drugs or devices, computer systems, or health care technology through vast social systems involving many community members. In these studies, community members have not been afforded the opportunity to express opinions about the adoption process. Quantitative methods often forced a dichotomous "yes-or-no" answer regarding adoption that did not allow the development of knowledge related to deeper meaning regarding the adoption decision. Simple adoption statistics harvested in one moment also do not reveal whether the adoption decision will be sustained over time, the innovation will be consistently used over time, or the adoption decision will be maintained at the expense of individual community member's feeling of satisfaction. Further DOI studies related to emotionally-laden topics could be a rich area of further DOI theory development. An exploration of future study ideas is offered in a later section.

Adoption Spectrum is a concept that is clearly inconsistent with Roger's DOI

literature. This literature lays out a linear and absolute pattern of innovation adoption that has a mathematical certainty to its logic. In this literature, individual adopters would be expected to adopt a new innovation over time by expected percentages until the entire set of community members was involved in the use of the innovation. They would be expected to consistently use that innovation unless a better innovation displaced the original gold standard. Innovations would be analyzed for a number of factors that would accurately predict their ease of adoption.

This study showed adoption to be, at times, intermittent and/or conditional. Adoption was affected by the interpersonal relationship between NP and patient as well as NP personal beliefs about the innovation as it was situated within the unique context of the patient care situation and work environment. This is the idea that an adoption decision is made each time an NP is confronted with a unique patient need context and is modified by many work environment factors acting on the situation at that moment in time. An innovation could be offered or utilized in each instance, based on the NP's analysis of the entire contextual and conditional environment. Adoption is not primarily driven by the aspects of the innovation traditionally thought to predict ease of adoption. This constitutes the spectrum of adoption, with a variety of adoption/rejection outcomes that are a prism-like reflection of many internal and external facilitators and barriers affecting adoption.

Values Continuum: Congruence to Dissonance

The concept of Congruence or Dissonance as the basic consequences of the innovation adoption process focused primarily on the outcome of the process of adoption or rejection of the innovation. Consequences primarily focused on personal consequences

and included aspects of being at risk, being ambivalent, and being satisfied, alone or in combination. This concept incorporated the internalization of attitudes and experiences into the context and conditions of the next innovation process in an endless cycle of reinvention.

The concept of dissonance between workplace and personal values was consistent with literature related to *plural traditions of moral reasoning* as described by Godfrey (2002), Lazarus (1997), and Turner (1998). Exemplars from the study data spoke to the conflicts between NP values and the values expressed through work environment policies and philosophies, values of co-workers, and social system values supported by community standards of care. This body of literature also discussed the dissonance, created by moral pluralism, that arose from different value systems and cultural norms of patients and providers. Exemplars from the study also spoke of differences between NP values and values of patients and their families/significant others. These differences arose around emotionally-laden innovations and were potential sources of NP moral distress and patient mistrust.

Congruence is a concept related to the literature that speaks to honoring patient's choices, non-judgmental care, avoiding paternalism, the idea of practice as a presentation of self, avoidance of ethnocentrism, and avoiding the imposition of one's values onto others. These concepts all speak to the primacy of patient's interests and are found in the writings of Bournes (2000), Koh (1999), and Quill & Brody (1996). These authors also spoke to the situations where providers experience the difficulty of witnessing outcomes of a difficult choice; this was also seen in the study findings and constitutes the ambivalence seen in some participants. The study findings are similar to findings

discussed in the literature related to moral distress. Not part of the original literature review for this study, this body of work is cogent to this review and is added at this time.

Moral distress is another concept that relates to the study findings. It arose in the nursing literature as a contrast to moral dilemmas. Dilemmas occurred when the provider did not know what to do in a particular situation. In contrast, moral distress occurred when providers arrived at a judgment that the agency or co-workers made difficult or impossible to act upon, when providers were frustrated with moral aspects of care, or when patient situations caused providers to question how much resistance they could mount to change situations that seem intolerable. Moral distress literature included articles looking at a number of situations that were cogent to nursing practice.

Tensions between physicians and nurses regarding situations of moral distress (Andre, 2002), nurses experiencing burnout related to moral distress in practice (Sundin-Huard & Fahy, 1999), nurses assisting with elective abortions (Hanna, 2005), and parent's refusal of treatment (Linnard-Palmer & Kools, 2005) all spoke to issues that directly affected practicing nurses.

Other disciplines also grappled with this issue, including pharmacists (Sporrong, 2005), and psychologists (Austin, et al., 2005). Patient advocacy related to professional organizations was another focus (Welchman & Griener, 2005). Ethical work environments also received attention (Corley, M. C., Minick, P., Elswick, R.K., & Jacobs, M., 2005). Finally, there was a specific reference to moral distress in NP practice in an article related to NPs in primary care (Laabs, C. A., 2005).

This body of literature was closely aligned in thought and intent with the study findings of dissonance and congruence related to adoption or rejection of clinical

innovations. Moral distress, though not specifically part of the initial lines of inquiry, was certainly evident as a concept emerging from the data analysis. This work was consistent with the emergence of literature related to broader moral thought in nursing. Key articles in this area focused on moral reckoning in nursing (Nathaniel, 2006), defining and addressing moral distress (Rushton, 2006), moral ambiguity in practice (Peter, 2004), and nurses as participants in moral community (Hardingham, 2004).

To summarize the consistency between the literature and the study findings, findings were consistent with the literature reviewed in all areas except for the significant inconsistency between the study finding of an Adoption Spectrum in relation to emotional-laden innovations, compared with the DOI literature commonly believed to provide an explanation of innovation adoption processes.

Critique of the Study

A critique of the study is offered and focuses on both limitations and strengths of the study design and execution. Limitations were primarily identified in terms of generalizability of findings as well as availability of perspectives from only the NP participant group. Strengths included the experiential base of the researcher as well as the extensive utilization and acceptance of NPs within health care systems in the geographic region utilized for this study.

Limitations of the Study

Limitations of the study could include the biases of a single investigator. A well-documented audit trail was established. Interview transcripts were read by three other reviewers. Limitations to generalizability in this study were consistent with qualitative methodology (Strauss and Corbin, 1996).

The participant group was not representative of all geographic areas, genders, ethnicities, and NP specialties. Self-selection to participate could alter the type of responses found in the study data. Participants could have limited their responses to provide only socially desirable information. The presence of a tape recorder could inhibit some participant responses.

The perspectives of other health care providers, patients, and patient's families/significant others were not included in this study. This study looked through the lens of only one group. It would be helpful to have multiple perspectives on this process.

Strengths of the Study

Grounded theory methodology was well suited to the exploration of these lines of inquiry. There was no theory already evolved related to these lines of inquiry, and limited research was available related to NP adoption of clinical innovations.

The researcher had an extensive NP experiential base as a foundation for this study. This provided an understanding of the NP practice arena, complexities of this clinical role, and work setting challenges. A journal was utilized to capture research ideas and identify the components of the audit trail process. The journal and audit process was designed to capitalize on this experiential base while identifying and attempting to control bias.

NP participants were from varied educational backgrounds. All NPs were currently in practice, and practiced in a variety of health care agencies and areas of specialty. They were seasoned NPs who had experienced the arrival of new clinical information after leaving their initial NP education. They self-selected to participate and came to the study desiring participation. The participants were forthright in their

responses and often volunteered ideas and experiences that enriched the data.

The southern California area provided a region where NPs were widely integrated into the health care systems, and where there was a diversity of practice settings within these systems. There was a high level of recognition and acceptance of NPs by health care providers, patients, and the general public. NPs in this region have a broad legal scope of practice, but experience some practice limitations. There are large numbers of total patients served, high acuity levels of illness, and significant numbers of vulnerable population patients. These factors provided a unique practice milieu that supported the provision of an experienced and diverse group of potential NP participants.

Implications for Nursing

This study has implications for clinical practice and health care administration, nursing education, and future research. Consumers, health care providers from other disciplines, and health care agencies that employ NPs could potentially benefit from the study outcomes, as well as be the focus of future studies in this area.

Implications for Clinical Practice and Agency Administration.

Protocols and clinical guidelines are researched, designed, and implemented to provide a consistent standard of care to patients. They are generally based on evidence from health care research and are reviewed by a panel of health care experts including NPs. These protocols also reflect the economic realities of resource availability and management. Protocols are designed with the idea that most or all providers will adhere to them. When an NP or other provider declines to participate, patient care is altered and additional costs may be incurred by the health care organization.

Health care administration needs to be cognizant of how and why NPs use

subterfuge or refuse outright to participate in providing health care that is consistent with protocols or treatment guidelines. This would help to define the issues around protocol content, areas of needed improvement in patient care protocols, challenges in the work environment that impede protocol adherence, and patient care situations where patient care may be compromised by a deviation from protocol-driven care.

Adoption information could be obtained through interviews, written survey instruments, pharmacy prescribing records, and referral/treatment records tracking. This would guide in-service education, support the use of opinion leaders to encourage protocol usage, evaluate quality improvement processes, and identify NPs who are not participating as expected in the provision of care.

Guidelines for handling values dissonance among providers including NPs, the health care agency, and/or patients should be developed. These guidelines would allow for differences of opinion while still identifying risks to patients, NPs, and the agency. The use of conscience clauses is one form of this process and usually arises from a unilateral decision on the part of the provider to refrain from providing care in certain situations. The inherent problem with conscience clauses is that patients are often unaware of the issues around the conscience clause and can be unaware that they are not being offered a full range of treatment options. An agency guideline for disclosing this fact, along with adequate alternative providers to offer a full range of care, would help to minimize risks to patients.

A process occurs with NPs in agencies where there is no clear option for opting out of the adoption of an emotionally-laden innovation. In this case, the NP can delay deciding on the innovation by reporting that they are still learning about it, still thinking

about it, still unsure about how to adopt it, or waiting for more information to arrive. This form of indecision is socially acceptable and a covert way to reject the innovation without actually stating that this is the case. While the NP is involved in this process, patients are not being offered care, agencies are not overtly aware that the NP has not adopted the innovation, and the NP receives no censure.

Research into practice behaviors by health care agencies needs to specifically focus on the costs of having NPs reject innovations that are cost effective and provide improved health outcomes for patients. The costs of not adopting appropriate innovations could have significant short-term and long-term costs that are passed on to consumers of health insurance and to society. Ultimately, NPs as employees, consumers, and society members, are negatively affected by soaring health care costs.

Implications for NP Education

Universities, Schools of Nursing, and continuing education providers all play a role in the shaping of NPs as clinical providers of care. Part of that education involves how to learn about clinical innovations, how to evaluate new information such as clinical innovations, and how to make practice decisions about the provision of information and treatment to patients. Preparation for practice involves more than obtaining clinical information about diseases or drugs. Managing the NPs' own thoughts and feelings in a professional manner for the benefit of patients while sustaining personal integrity is a balance that must be nurtured.

Curricula development involves nurses and others who also hold certain positions regarding values and perceptions about the rights of the NP and the patient. It would be a difficult task to address these values, make them explicit, and provide a unified approach

in curricula across a nation of nursing programs to set a standard for NP practice within NP educational programs. Public schools are tasked with avoiding certain areas of societal thought, including religious principles. Faith-based schools have pressure to put their faith teachings above a unified but secular approach to patient care. Different geographical areas have different community standards of care.

Based on the findings of this study, it is suggested that curricula provide a realistic orientation to the practice arena. This work and other research findings give real insight into the everyday work experiences of NPs. These experiences need to be brought into NP curricula. NP students need to be given explicit direction and tools to manage the process of clinical innovation adoption or rejection. Students need exposure to the reality of the practice world.

Additionally, NP students bring their personal philosophy of care into their practice. This philosophy may have been developed in childhood or early adulthood before nursing education but will potentially evolve through nursing educational experiences and practice after education completion. Efforts to nurture this philosophy in a way that serves the NP, patient, and other entities within health care and society is of paramount importance.

National and international professional NP and nursing organizations could play a vital role in clarifying the components of NP education that can support the appropriate adoption of clinical innovations. These organizations have the power and influence to shed light nationally on regional and individual perspectives related to this area of practice. Position statements and policies as well as accreditation processes can direct and develop responses to these practice issues.

Patient and consumer groups could also play a role, both in grassroots efforts at the local level and in national policy in this area of health care. Public forums that include consumers, health care providers, and patients/families are an excellent strategy for gathering information and opinions about innovation adoption.

Inadequate access to care and the pressure to provide care without adequate preparation is an educational, as well as policy, issue. NPs in this study were frustrated with the difficulties of providing adequate care to patients, with inadequate access to needed services to care for patients, and noted a lack of patient care services from other disciplines that previously provided this care. Emergency Department NPs were pressured into doing procedures formerly done by these specialists. These were procedures for which the NPs had received little or no formal training. This lack of training could provide a barrier to adoption-both as an initial rejection factor or as a factor in extinguishing adoption after negative experiences. Agency policies, health care reimbursement to specialty providers, and scope of practice legalities are beyond the focus of this study but deserve attention.

Ultimately, it is the individual NP, in the exam room with an individual patient, who will make this a reality in the clinical world. NPs need assistance in clarifying their values and perceptions, their motivations and strategies for innovation adoption. They require tools to assist them as they make decisions that have far-reaching implications in the lives of patients. They deserve support to be overt in their decision-making so that patients and agencies are aware of the choices being made. NPs crave support and concrete agency mechanisms to remain true to their own values while preserving the choices that patients need and want.

Future Research

A grounded theory was evolved from this study's findings. Further research is needed to promote additional theory development and testing. Tool construction may be needed to test this theory within other research methodologies. Research opportunities for theory development would need to be sought in other service venues, with additional groups of participants who bring disparate perspectives, and with additional foci related to aspects of emotionally-laden innovations. Prospective and in-the-moment studies of innovation adoption processes would also add another dimension to understanding of this phenomenon.

Future research could focus on the various clinical innovations that were deemed emotionally-laden by the NP participants in this study. Further studies could identify other emotionally-laden innovations as well. A deeper exploration into the emotionality of these innovations might give insight into the dilemmas that NPs face in this area.

Tracking NP decision-making focused on one emotionally-laden innovation may give detailed useful information on how thoughts are formed, opinions are shared, subterfuge is developed, and stalling strategies are employed. Identifying an innovation early in its inception would provide an opportunity to see the entire process unfold during data collection and analysis, avoiding the problems inherent in retrospective recollection. Doing this research in one agency would help to illuminate the effectiveness of agency efforts to provide in-service, the process of development of protocols, the effects of opinion leaders, and the patient outcomes associated with the innovation. Studying an innovation adoption within one community would assess how adoption moves through

various NP groups and what influences this adoption pattern.

Studying NP-patient dyads over time in an exploration of joint decision-making about clinical innovations would illuminate the effects of their social relationship on this process. Groups of providers within collaborative practice situations within health care agencies would be another rich study opportunity related to clinical decisions about innovations.

Research that is internet-based would reach a wider audience of NPs and provide for a higher level of anonymity and privacy. Focus groups of NPs might be a strategy that would synergize thinking and provide rich data in this area. Tracking NP students over time as they move into practice and assume the role of adopting or rejecting innovations in their own practice could be another wonderful source of data. Bringing NPs and patients together in participatory or emancipatory research projects might give new insights into the interplay between NPs and patients.

Identifying NPs and other providers who have opted for conscience clauses and inviting them to be research participants is another area for research. Involving their co-workers, patients, and health care agency in a combined study or series of studies would provide a data set that incorporates many, if not all, of the players in the arena where conscience clauses are in effect.

Conclusion

This study provided an opportunity to interview NPs about the adoption of emotionally-laden clinical innovations. Many of them had never previously spoken about this topic. Little is known about this area of NP practice. This study contributed to the larger body of clinical research knowledge available to nursing and other practice

disciplines.

This is a beginning approach to building a theoretical model. There are many other areas to explore related to this topic. Adoption or rejection of emotionally-laden innovations can have far-reaching consequences for NPs, patients, health care agencies, and society. Further research is needed to understand this process and support NP practice that serves the profession and society.

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APPENDIX B

Participant Recruitment Advertisement

Dear Colleague:

You are invited to participate in a research project by a nurse practitioner involved in doctoral dissertation research.

The research project focuses on how providers decide to adopt or reject new clinical innovations into their practice.

Information will be collected using private interviews. These interviews will last approximately one hour and will be scheduled at a centrally located place and at a time convenient to you. Interviews will be private and data will be reported confidentially.

You will be reimbursed \$50 for your time and effort. A brief follow-up interview may be requested.

Little is known about how providers adopt new clinical information into practice. Please participate in this research project and add to the body of knowledge about this important area of clinical practice!

If you are interested in finding out more about this research project, please contact the researcher immediately at: (619) 540-7869, or email: rhoberta@sandiego.edu

Thank you very much,

Rhoberta Jones Haley, PhD(c), RN, FNP

Faculty Advisor: Dr. Patricia Roth

Hahn School of Nursing and Health Science

University of San Diego, San Diego, CA 619-260-4548

APPENDIX C

Consent Form

University of San Diego
Research Participant Consent Form

Nurse Practitioner Adoption of Clinical Innovations

Rhoberta Jones Haley is a doctoral student in nursing at the Hahn School of Nursing and Health Science at the University of San Diego. You are invited to participate in a research project for the purpose of exploring nurse practitioner adoption of clinical innovations.

The project will involve one interview that asks questions about the process of deciding to adopt or reject a clinical innovation into practice. The interview will last approximately 60 to 90 minutes and will include a demographic questionnaire. The interview will be at a time and place convenient for you. Participation is entirely voluntary and you can refuse to answer any question and/or quit at any time. Should you choose to quit, your information will be destroyed right away.

Your interview will be audio-recorded, written, coded, and studied in a manner that protects your identity. A transcriptionist who has signed a pledge of confidentiality will type the interview. Any information provided and/or identifying records will remain confidential and safeguarded in a locked fireproof safe/file for a minimum of five years.

The results of the research project may be made public and information quoted, but all individual data will remain anonymous and confidential. Participation or nonparticipation or refusal to answer questions will have no effect on services you are entitled to receive from health or social services providers. There may be a risk that you will become tired during the interview. The benefit to participating will be in knowing that you helped nurses learn about the process of adopting or rejecting clinical innovations into nurse practitioner practice.

I have talked with Rhoberta Jones Haley about this project and have had my questions answered. I may reach her at (619) 540-7869 or Dr. Patricia Roth from the University of San Diego at (619) 260-4548, if I have more questions at a later time.

I will receive a \$50.00 stipend or gift certificate for participating in the study, even if I decide to withdraw.

I have read and understand the above explanations and on that basis, I give my consent to my voluntary participation in this research project. My signature indicates that I give my permission for information I provide to be used for publication in articles, books, and teaching materials, as well as for presentation at research conferences or educational seminars. I have received a copy of this consent form for my records. There is no agreement written or verbal beyond that expressed in this consent form.

 Printed Name & Signature of Participant

 Date

 Signature of Principal Investigator

 Date

APPENDIX D

Demographic Information Form

Name

Contact information: address, telephone numbers, and email address.

Age

Sex

Education RN (location, year graduated)

Education NP (location, year graduated)

Years in practice as NP

Years in current practice site

Current practice setting (describe)

Previous practice experiences:

APPENDIX E

Interview Guide

1. Please describe your current practice setting.
2. Please describe your NP role in this clinical setting.
3. How do you learn about clinical innovations? (Prompt: new interventions, new clinical ideas, new medications.)
4. How do you decide whether to adopt or reject clinical innovations into your practice? (Prompt: How do you decide to use a new idea?)
5. Describe a recent innovation that has been difficult for you to adopt into your clinical practice. (Prompt: This could be an innovation that is emotionally difficult for you. This could be an innovation that presents a moral dilemma for you. This could be an innovation that you have mixed feelings about adopting. This could be an innovation that worries you in some way.)
6. Why does this innovation create an issue? (Prompt: Describe your concern about using this new idea.)
7. How did you decide to adopt or reject this innovation? (Prompt: What were you thinking or doing to help you decide?)
8. If this decision creates a conflict for you, how would you describe the nature of the conflict? (Prompt: What is your main worry about this decision?)
9. What would make this innovation easier or harder to implement?
10. How will you handle informing or not informing patients about this innovation? (Prompt: Please share your thoughts on the innovation from a patient education perspective.)

APPENDIX F

Transcriber's Pledge of Confidentiality

I will be participating in the transcription of audiotaped research interviews into text. I will not purposefully know the names of the participants being interviewed, but I may inadvertently obtain information that would give me clues as to their identity. I agree to maintain the confidentiality of the participants. I will maintain confidentiality by not discussing the information that I transcribe with anyone for any reason and by not identifying the participants to others in any way. I understand that if I do not maintain confidentiality that the participants' right to privacy will be seriously violated and this will constitute unethical behavior that will jeopardize this research project.

Name of transcriber

Signature of transcriber

Date: _____