RESIDENT RIGHTS AND ELECTRONIC MONITORING

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The purpose of this exploratory study was to examine resident, family member and staff perceptions of electronic monitoring and their effect on resident rights. The sample consisted of 53 nursing home residents, 104 staff and 25 family members, in the Dallas Fort Worth metroplex, from a nursing facility in which residents utilize video cameras in their rooms (Nursing Facility 1), two nursing facilities that have video cameras in their common rooms areas (Nursing Facility 2 and 3) and a nursing facility that does not utilize video cameras (Nursing Facility 4). The interview questions and self-administered surveys were in regard to the participant's perceptions of electronic monitoring, perceived risks and benefits of video cameras, awareness of resident rights and consciousness of potential risks to resident rights. Data were analyzed using a mixed methods approach using both ATLAS t.i and SAS. Study findings revealed that residents, family members and staff are aware of the potential benefits of electronic monitoring in nursing facilities. While respondents are hesitant to have electronic monitoring in resident rooms, they are interested in utilizing electronic monitoring in common areas. While residents and staff believe that electronic monitoring compromises resident rights, family members believe resident rights are protected. Different types of staff have different perceptions of electronic monitoring. Those staff members that are more directly involved in resident care are less accepting of electronic monitoring compared to staff that have episodic visits with residents. Among staff members, nursing facilities with prior experience with electronic monitoring are less accepting of electronic monitoring. Further studies are needed to enhance this research.

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CHAPTER 1

INTRODUCTION TO THE STUDY

According to the American Association of Homes and Services for the Aging, the National Center for Health Statistics and the American Health Care Association (2004):

- There are approximately 1.6 million people living in nursing homes across America
- The number of nursing home residents will increase to 2.6 million by 2010, and 3 million by 2020
- Two of five Americans will need nursing home care sometime in their lives
- The fastest growing segment of our population is people over age 85
- One of four in that age group lives in a nursing home
- With the baby boom generation aging, nursing home populations will increase exponentially over the next 15 to 20 years

Making the decision to put a family member in a nursing home can be difficult. The main concern is ensuring their loved one will receive quality care. Therefore, enabling the family to electronically monitor their loved one using video cameras is just one method proposed as a way to ensure their loved one is receiving quality care. Those in favor of electronic monitoring view it as an extra measure that brings peace-of-mind and is relatively cheap to install and maintain (Kohl, 2003). However, opponents argue that electronic monitoring violates the privacy and dignity of residents as well as discourages qualified people from working in nursing homes because they do not want to be monitored (Minuk, 2004). Related issues include: who makes the decision to install a camera, where the cameras are placed and the rights of roommates who may not want to be on camera. Due to the mixed opinions, the debate regarding utilizing electronic monitoring in nursing facilities has not been resolved (Adelman, 2002; Cottle, 2004; Kohl, 2003).

The federal government has a strong interest in this application of technology, but they have some concerns. The main concerns are due to ethical issues related to the use of technology such as privacy issues, the concern that users may not know how to use different forms of technology and cost concerns. Furthermore, there is a concern that these issues will not protect and promote rights of each resident in a nursing home. Therefore, the federal government has given each state the right to decide if authorized electronic monitoring is appropriate in nursing facilities, specifically in residents' rooms (Kohl, 2003; Toben & Cordon, 2007).

In 2001 and 2002, at least 11 states considered legislation addressed electronically monitoring nursing home residents: Arkansas, Florida, Louisiana, Maryland, Massachusetts, Mississippi, North Carolina, New Jersey, Ohio, Pennsylvania and Texas (Cottle, 2004). In 2001, the Texas legislature passed the SB 177 relating to electronic monitoring devices in nursing home residents' rooms (DADS, 2009). Texas became the first state to enact a law to permit electronic monitoring. In 2003, the Texas legislature, Senator Royce West, allowed electronic monitoring in assisted living facilities (DADS, 2009). Texas law requires a discussion with the administrator and permission to proceed with a video camera. If a resident wants a video camera in their room, the roommate or roommate designate must also approve the presence of a camera. Texas law allows residents to turn their device on or off at any time. The law also requires a sign to be posted in the room notifying all who enter that a video camera is present and video is underway. If the resident chooses, viewing can be protected by access codes as well as passwords, which prevent public viewing at any time. However, these laws also enable a third party to video and view individual residents in the nursing home environment.

Even after this law has been enacted, utilization of video cameras in nursing facilities is scarce and the debate continues of whether authorized electronic monitoring should be utilized.

Furthermore, the question remains: does electronic monitoring protect or compromise resident rights?

Research Statement

The principal research question is whether electronic monitoring protects or compromises resident rights according to nursing home residents, family members and staff. Other research questions include: the perceptions of electronic monitoring, whether residents, family members and staff believe the perceived benefits or the perceived risks of using electronic monitoring in nursing facilities are greater, if the type of nursing facility influences one's perceptions of electronic monitoring and if different types of staff have different perceptions of electronic monitoring.

Purpose for the Study

The purpose of this exploratory study is to examine nursing facility resident, family member and nursing facility staff perceptions of electronic monitoring and their effect on resident rights. The study also compares resident, family member and staff perceptions of those living, visiting and working in a nursing facility: that utilized video surveillance in resident rooms, that utilized video surveillance in common rooms or throughout the building, and that did not utilize video surveillance in the facility.

Rationale for the Study

There are several practical reasons for conducting this study. Studies of the process of aging have shown that new technology can create a better system with a higher quality of care

and quality of life compared to earlier generations (Gingrich & Woodbury, 2005). Consequently, it is essential to adopt technological advances to improve the quality of life and quality of care of nursing home residents.

Usage of technology in the nursing home can benefit the resident as well as healthcare professionals. Federal and state laws require nursing facilities to provide high quality, individualized care for every resident. In 1987, the federal government passed the Nursing Home Reform Act (OBRA), which requires certain services to be provided to each resident, and established the resident's bill of rights. Some residents' rights include the right to freedom from abuse, mistreatment, neglect and physical restraints, the right to privacy, and the right to be treated with dignity. However, the law has not deterred some nursing homes from repeatedly mistreating its residents. State surveyors have been inconsistent with inspections, resulting in not finding out the major problems until it is too late. In 2007, one in five nursing homes were cited for serious deficiencies- those that caused actual harm or placed residents in serious jeopardy (Elder Law, 2008). Video surveillance may significantly improve the overall care of residents (Adelman, 2002; Chen et al., 2007; Cottle, 2004). Technology may ensure resident's are receiving quality care and protect their rights.

There is also a debate on whether technology protects or compromises resident rights. *Grannycams*, hidden cameras, have sparked a great deal of attention (Bharucha et al., 2006). Some critics believe that video cameras are necessary to protect residents from abuse or lack of care in nursing homes while others believe it is a violation of resident's dignity and privacy (Minuk, 2004). While a wide range of experts have given their perspectives about video cameras in nursing facilities, there have not been any studies conducted to determine if electronic monitoring protects or violates resident rights.

The government recognizes the importance and benefits of technology. However, certain technology is not being allowed or often utilized due to the numerous ethical issues. While the government has concerns about ethical issues relating to electronic monitoring, many residents and health care professionals may find that the positive aspects of technology outweighs the negative aspects. Once these concerns are addressed, more may recognize the need for technology and realize that it can be more beneficial than traditional methods of providing care. Furthermore, this exploratory study needs to be conducted to convey results to the nursing home industry, to states, the government and even technology companies.

Assumptions

The following assumptions made for this research study are:

- There will be an adequate number of participants willing to be interviewed or surveyed.
- There will be an adequate number of nursing facilities utilizing video cameras in resident rooms or in common areas.
- Nursing home residents, family members and staff are competent and familiar with resident rights.
- Nursing home residents, family members and staff understand the terms: electronic monitoring, electronic surveillance and video cameras.
- Nursing home residents are capable of making a decision about desiring to or not desiring to utilize electronic monitoring in their rooms.

- There will be a variation of resident, family member and staff perceptions of electronic monitoring with those that utilize video cameras in their facility from those that do not utilize video cameras.
- If electronic monitoring fits one of the ethical principles, it would be considered ethical, justifiable and protects resident rights.
- If electronic monitoring violates these ethical principles, it would be considered unethical, unjustifiable and compromises resident rights.

Theoretical Framework

Theories are tools used to explain why phenomena occur (Breen et al., 2010). In the following sections, ethical theories and social theories are explained in detail. These theories are used to further explain the perceptions of residents, family members and staff members regarding acceptance and utilization of electronic monitoring.

Ethical Theories

The utilitarian and Kantian theories provided the framework for this study (Veatch, 2003; Beauchamp & Childress, 2001). It is argued that, "despite the fact that electronic monitoring always constitutes an invasion of privacy, it can still be ethically justified on both utilitarian and Kantian grounds" (Charters, 2002). From a utilitarian perspective, the emphasis must be on minimizing potential harms. The goal is to balance benefits and drawbacks to produce the best overall results (Beauchamp & Childress, 2001). For example, electronic monitoring can deter abuse, neglect and mistreatment. From a Kantian perspective, every person deserves respect regardless of the consequences of the action (Veatch, 2003). The emphasis must be on giving

residents complete information so that they can make informed decisions as to whether they are willing to be monitored (Charters, 2002). Nursing facilities are required to inform residents with information about electronic monitoring. Residents have the opportunity to turn their device on and off at their choosing. Ultimately, the decision to utilize electronic monitoring is made by the resident (Texas Health and Safety Code 242.843 & 242.847, 2010).

In this study, ethical principles provide framework for explaining ethical decision making regarding electronic monitoring. The main ethical principles are presented to explain the debate on whether electronic monitoring protects or compromises resident rights. Ethical principles are necessary to guide this research (Veatch, 2003). If electronic monitoring fits in the four ethical principles, it can be considered ethical, justifiable and protect resident rights. If electronic monitoring violates these principles, it can be considered unethical, unjustifiable and compromises resident rights. The first principle is Autonomy, which is regarding respect for persons; each resident should have control over their lives and desires. Most important, be able to make decisions concerning their life. The principle of beneficence strives to achieve the greatest amount of good (Veatch, 2003). The question that needs to be determined is if electronic monitoring achieves more good than not having electronic monitoring. Nonmaleficence is the principle of "do no harm" or do harm to the fewest number of people. Electronic monitoring may do less harm to residents then not having these devices placed in nursing facilities. The principle of justice emphasizes that ethical decisions should be fair to all of those involved. Electronic monitoring should be a choice of residents and employees and anyone entering an electronically monitored room should be fully aware of its presence (Cottle, 2004). Ultimately, ethical principles explain "what ought to be."

Social Theories

Social theories provide framework to explain people's function and feelings. The theory of unified theory of acceptance and use of technology (UTAUT) will also be useful to guide this research study. This theory aims to explain "user intentions to use an information system and subsequent usage behavior" (Bharucha et al., 2006). This theory holds four key constructs: performance expectancy, effort expectancy, social influence and facilitating conditions (Venkatesh et al., 2003). These constructs explain the intention of electronic monitoring. Specifically, performance expectancy explains the degree in which staff believe that using video cameras would improve their job performance. Effort expectancy explains the degree of simplicity associated with the use of video cameras, particularly for residents. Social influence explains the degree in which residents perceive that others believe he or she should use video cameras. Facilitating conditions include self-efficacy and anxiety. Self-efficacy explains the degree in which the residents judge their ability to use video cameras to accomplish their goals (ie. deter from abuse, neglect, theft etc.) Anxiety explains the emotional strain associated with using video cameras, for residents, family members and staff. "Gender, age, experience and voluntariness of use are posited to mediate the impact of the four key constructs on usage intention and behavior" (Venkatesh et al., 2003).

The UTAUT theory is a combination of 8 models such as the theory of reasoned action, theory of planned behavior, technology acceptance and motivational model (Venkatesh et al., 2003) that are most related to explaining electronic monitoring perceptions and usage among residents, family members and staff. The theory of reasoned action suggests that a person's behavioral intention depends on a person's attitude about the particular behavior; the theory of planned behavior suggests that there is a link between attitudes and behavior; technology

acceptance model suggests how a person accepts and uses technology as well as explains a person's decision to accept technology is influenced by perceived usefulness and perceived ease of use; and the motivational model suggests that perceived usefulness, degree of complexity and social influences motivate a person to utilize technology (Venkatesh et al., 2003). This theory will assist in explaining resident, staff and family member perceptions of the usage of electronic monitoring in nursing facilities. It will also provide some explanation as to why residents, family members and staff may accept or not accept video cameras in nursing facilities.

The task-technology fit model (TTF) suggests that there is an "increased chance of producing positive and/or efficient effects on individual performance and is more prone if the nature and the purpose of the technology matches the tasks that the individual performs" (Breen et al., 2010). The TTF has four key constructs, task characteristics, technology characteristics, which together affect the third construct task-technology fit, which in turn affects outcomes: performance and utilization (Goodhue & Thompson, 1995; Goodhue, 1995). Specifically, results include enhanced job performance, effectiveness, efficiency of tasks and utilization of technology. Goodhue and Thompson (1995) state that individual abilities, such as experience, are a common addition to a TTF model. Including individual abilities to the model is supported by the Work Adjustment theory, which TTF was originally derived from, as well as other studies. Thus, explaining that experience with a form of technology is generally associated with higher utilization of that technology.

Typically, TTF is used to explain organizational effectiveness. Job performance and effectiveness are extremely important in health care settings such as nursing facilities. Since Nance and Straub (1996) suggest that there is a link between TTF and performance, technology may be beneficial if utilized by staff members in nursing facilities to improve quality of care.

For this study, TTF is used to explain that certain functions that nursing facility staff members perform may be compatible to technology, such as video cameras. Some key factors considered when determining the benefits and compatibility of video cameras, in common areas, to the task include quality, reliability and ease of use (Breen et al., 2010). This model will assist to explain the nature of video cameras for different nursing facility staff members. If the function of video cameras match the type of tasks, requirements and demands of tasks (ability of video cameras to support tasks) performed by different nursing facility staff then video cameras may enhance task performance and utilization of electronic monitoring. For example, administrators have different job duties and tasks from certified nurse aides. If video cameras complement tasks performed by either administrators or certified nurse aides, this could result in enhanced job performance and increase quality of care. Thus, staff may have a greater acceptance of electronic monitoring in their nursing facilities.

Based on the compatibility of video cameras and certain tasks, different staff members may have different perceptions of electronic monitoring usage. “Perceived usefulness may be the primary factor affecting usage” (Nance & Straub, 1996). If staff perceptions of usefulness of video cameras match objective assessments of TTF, TTF may directly influence staff member’s perceptions of video cameras in nursing facilities. However, “good fit” technology may not lead to improved performance if staff members do not want to utilize video cameras in the nursing facility.

Definition of Terms

The following are operational definitions for the study terms:

- Older adults: Individuals 60 years of age or older

- Nursing facility: Skilled nursing facility or assisted living
- Residents: Those older adults residing in a skilled nursing facility or assisted living
- Staff: Administrators, physicians, director of nursing, nurses, nurse aides, social workers, etc working in a SNF or assisted living
- Family members: Any relative of a resident
- Electronic monitoring: Usage of video cameras (video, audio or both)
- Resident rights: Patient rights and certain protections under the law. Rights include: right to self-determination; personal and privacy rights; rights regarding abuse and restraints; rights to information; rights to visits; and protection of personal funds.

Limitations

The following limitations are acknowledged for this research study:

- This is an exploratory study with preliminary data.
- A resident's cognitive state will be examined using a quick and easy test, which may not accurately detect a resident's competency.
- The sample is likely non-representative of the population. There will be a smaller quantity of residents and family members but a wider range of staffs.
- There may not be a large enough sample to detect the effect of electronic monitoring on resident rights.
- Staff bias may be an issue if staff do not want electronic monitoring for personal reasons.

Delimitations

The following are delimitations identified for this study:

- Staff and family member participants are limited to persons that are competent, can read, write and speak English.
- Residents must be competent; must pass the Six Screener exam.
- Resident participants are limited to persons that read, write and speak English.
- Participants are derived from a large metropolitan area.
- Resident participants are limited to those age 60 or over.
- Resident participants are limited to those living in a nursing facility.
- No measurement of outcomes in terms of specific quality related measures, such as falls.

CHAPTER 2

REVIEW OF THE LITERATURE

A literature search was conducted to review available information on electronic monitoring, ethical considerations, OBRA and resident rights. While there is extensive literature on the ethics of electronic monitoring in the workplace, there is limited research on the ethics of electronic monitoring in nursing homes. According to the principal investigator's knowledge, there have not been any studies conducted to determine if electronic monitoring protects or violates resident rights. The literature review is presented under the subheadings of (a) role of technology responding to the needs of an aging society, (b) nursing facilities, (c) electronic monitoring, (d) government and ethical issues, (e) employee rights, (f) resident rights and OBRA, and (g) the debate of utilizing electronic monitoring in nursing facilities.

Role of Technology Responding to the Needs of an Aging Society

Currently, the healthcare system is unable to meet the needs of the growing aging population. As the population grows, there will be additional pressure placed on caregivers and health care professionals. "The vast number of people that will be living longer and being more active, than in previous generations, will change aging forever" (Coughlin, 1999). Therefore, a method to deliver quality care to the increasing number of seniors needs to be developed.

While people are living longer, the natural aging process still affect's their vision, physical strength and flexibility, cognitive ability, etc. These changes can greatly affect an individual's life. One of the most difficult challenges will be "how families, businesses, and government will respond to the needs, preferences and lifestyles of the growing number of adults" (Coughlin, 1999). Society has invested a large sum of money to improve healthcare and

medicine to increase the average lifespan. However, after spending billions of dollars to achieve longevity, “society has not made equitable investments in the physical infrastructure necessary to ensure healthy independent living in later years” (Coughlin, 1999). The government, businesses and individuals need to give more thought on how future generations of older adults will live.

Since technology is responsible for making longer life possible, it should be considered to assist in meeting the needs of the aging population. Health care and government organizations need to understand how the role of technology can respond to the needs of the aging society.

Recent developments in technology have been making an important contribution to the care of the elderly. The topic of aging and technology is receiving increased attention from researchers and policy makers because they believe the application of advanced technology is an important way to maintain and enhance an older person’s quality of life (Czaja & Lee, 2006).

Based on research, technology can provide higher quality, more affordable health and social services to aging baby-boomers (Williams & Torres, 2008; Czaja et al., 2006). The successful adoption of technology is becoming increasingly important to the aging population.

Nursing Facilities

Nearly 2.5 million Americans currently reside in nursing homes and assisted living facilities in the United States, which accounts for approximately five percent of persons 65 and older (Bharucha et al., 2006). Since a vast majority of the vulnerable population resides in nursing facilities, is important to ensure their needs are met and respected. The main goal of nursing home care is to ensure residents have positive outcomes and are satisfied with their care. In order to ensure positive outcomes for residents, the Ombudsman program and the Nursing Reform Act, which is part of Omnibus Reconciliation Act of 1987 (OBRA), were developed.

The Ombudsman program was included in the 1978 Amendment to the Older Americans Act. The Ombudsman Program is a program that helps protects the rights of people residing in nursing homes residential care facilities (OBRA, 1987). Ombudsman serve as a representative for residents in these facilities. They identify, investigate and try to resolve complaints on behalf of nursing home residents. Some of the complaints that ombudsman receive address quality of life and quality of care concerns such as issues with nursing facility staff, issues with roommates, food and unsanitary conditions and unanswered call buttons. While there are many positive aspects to this program, ombudsman programs have not been effectively addressing elder abuse complaints (Elder Law, 2008).

OBRA was the federal legislation that included the Nursing Home Reform Act of 1987. OBRA was a fundamental shift for the nursing home industry since it changed the focus for evaluating nursing homes from inputs to outcomes (Commonwealth Fund, 2007).

The Nursing Reform Act granted nursing home resident freedom from neglect, abuse, emphasized the importance of quality of life and preserved residents' rights (Commonwealth Fund, 2007). Despite the enactment of this law, there are serious concerns about the quality of care given to residents in the nation's 16,000 nursing homes (Bharucha et al., 2006). The United States General Accounting Office (GAO) recently reported that,

> One in five nursing home nationwide (3,500 homes) had serious deficiencies that caused residents actual harm or placed them in immediate jeopardy…Moreover, GAO found insignificant understatement of care problems that should have been classified as actual harm or higher- serious avoidable pressure sores, severe weight loss, and multiple falls resulting in broken noses and other injuries…(GAO, 2003)

The National Elder Abuse Incidence Study (September 1998) conducted by the US Administration on Aging estimated that for every report of elder abuse and neglect by adult protective services, more than five additional cases of abuse and neglect of elders are unreported

(Kohl, 2003). Even after the adoption of programs and amendments to deter from such negligence, these serious deficiencies are still occurring. It is necessary to address quality of care and quality of life in nursing facilities. Improvements to nursing home conditions must be made.

In order to deliver quality care to residents, attributes such as leadership and communication are important. These attributes are related to nursing home performance and positive resident outcomes. According to a study conducted on nursing home quality, in order for nursing homes to achieve good resident outcomes they must have leadership that is willing to embrace quality improvement, group process and see that basic care delivery is provided for residents at the highest level (Rantz et al., 2004).

Low facility quality has been associated with administration deficiencies (Forbes-Thompson et al., 2006). Therefore, administration must recognize the need to make changes and adopt methods that can improve care. As leaders in the nursing facility, Administrators are responsible for planning, organizing, directing and controlling the entire nursing facility operation. Directors of nurses are also involved in management and take the role and responsibilities related to nursing and health service management. Both leadership positions must collaborate and assume the responsibility to make improvements in quality when their facility has deficiencies. This could involve embracing non-traditional methods such as electronic monitoring, especially when other methods are not producing effective results.

In a study conducted comparing the resident safety culture in nursing homes and in hospitals, the findings revealed that nursing homes have a “less well-developed safety culture” (Castle et al., 2007). Addressing the residential safety culture could improve the quality of nursing homes as well as improve the image of nursing facilities. In nursing facilities, risk management refers to steps taken by the nursing facility to prevent harm. Risk management is

every nursing facility staff members' responsibility. If staff members control risks then they can provide higher quality of care. Staff members such as Administrators must implement effective risk management strategies to prevent abuse, mistreatment, neglect, theft and ensure overall safety for residents. Preemptive measures such as electronic monitoring, in common rooms, can minimize the risk of harm to residents and staff members. Electronic monitoring is feasible and can influence quality in nursing facilities. Electronic monitoring is not a substitute for direct care. It can document incidents that have occurred and prevent them from happening again. It can also expedite follow-up care and treatment. This preemptive measure could improve resident's safety culture.

Electronic Monitoring

Due to the increased aging population, limited health care professionals and the negative stigma of nursing facilities due to serious deficiencies, technology has been incorporated to help meet needs as well as to provide quality care. Health care organizations are trying to integrate various services to improve resident care and satisfaction (Russo, 2001). One technological advance, electronic monitoring, has been utilized in several nursing facilities in the United States.

Concerns about abuse and neglect of nursing home residents have led to the introduction of "granny-cam" legislation in at least eleven states (Carlson, 2001; Cottle, 2004). The passing of this legislation allows for families and legal representatives of nursing home residents to install video cameras in their loved one's room to monitor their care. Electronic monitoring is the consensual placement of an electronic monitoring device in a room of a resident. These devices can be placed in such a manner as to only tape areas of the room that the resident desires. Tapes

or recordings are made with the electronic monitoring device. Electronic monitoring devices include monitoring systems, video surveillance cameras, web based cameras or video phones installed in the room of a resident. Electronic monitoring devices are also placed in common areas or throughout the building of the nursing facility. Each nursing facility makes the decision to place electronic monitoring devices in their facility, in common areas and throughout the building.

Texas

The Texas bill (SB 177) permits audio or video monitoring of a resident's room in a nursing home facility and provides the parameters for both the resident and the nursing home to follow in relation to monitoring (DADS, 2009). This law establishes authorized electronic monitoring to include monitoring that is done at the request of residents, and to exclude nonconsensual or covert monitoring. In Texas, residents may request electronic monitoring in their rooms unless they lack the capacity to make such a request. In those cases, family members or legal guardians can make a request on their behalf. All requests for electronic monitoring must be made to the nursing home on forms provided by the state Department of Human Services. Residents must get the consent of their roommate or roommates' legal guardians before the monitoring can begin. The nursing facilities must make reasonable accommodations to install and maintain the equipment for authorized electronic monitoring but the residents must bear the costs of the installation and maintenance. The cost of electronic monitoring devices ranges from $100 to a thousand dollars (Kohl, 2003). The placement and use of the electronic monitoring device must be open and obvious (Texas Health and Safety Code- Section 242.843, 2010).

Notices must be placed at the entrance to facilities and to rooms in facilities where electronic monitoring is occurring.

Texas also has written guidance on the use of Authorized Electronic Monitoring (AEM) in nursing facilities. This guidance addresses who may consent to AEM, the right to refuse, the use of covert monitoring, installation of monitoring equipment, and notification of the use of AEM (Texas Health and Safety Code- Section 242.847, 2010).

Ultimately, electronic monitoring provides a leverage to influence quality care in nursing facilities (Russo, 2001). Electronic monitoring recordings can be used in a court of law. In the Texas AEM statue, the person who is responsible for conducting the monitoring is assumed to have reviewed the recording "on or before the 14th day after the date the recording is made" (Texas Health and Safety Code- Section 242.847, 2010). If abuse or neglect are detected, recordings are given to a second person to view. The recording can be admitted into evidence in a civil or criminal court action. However, the recording can only be admitted if the time and date are displayed, the recording has not been edited and if the recording has not been transferred from the original format to another technological format (Texas Health and Safety Code- Section 242.847, 2010). This form of leverage can ensure that staff will perform at a high level and ensure residents receive quality care.

Government and Ethical Issues

Based on research, technology can provide higher quality, more affordable health and social services to aging baby-boomers (Williams & Torres, 2008 p.33; Czaja et al., 2006). The federal government has a strong interest in this application of technology, but they have some concerns. The main concerns are due to ethical issues related to the use of technology such as

privacy issues, acceptance of AEM, the concern that users may not know how to use different forms of electronic monitoring, confidentiality issues and cost concerns. Furthermore, there is a concern that these issues will not protect and promote rights of each resident in a nursing home.

One of the main concerns is the protection of the "personal privacy rights of the individual being monitored and any possible roommate" (Carlson, 2001). Privacy issues are important to consider due to the private, personal services provided to residents in nursing facilities.

Electronic monitoring in nursing facilities is similar to Telehealth technologies regarding the ethical concerns such as privacy, confidentiality, cost concerns to name a few. Despite these issues, Telehealth technologies has been delivering quality care to individuals (Russo, 2001). Both electronic monitoring in nursing facilities and Telehealth technology share this attribute. The concept for these types of technology were developed to provide quality care due to deficiencies that have occurred, such as deficiencies in nursing facilities. Both forms of technology provide a service to directly benefit individuals and their families.

Technology is blamed as the "major driver" of elevated health care costs in the US, but it is not the only reason for elevated health care costs (Williams & Torrens, 2008 p.33). Drugs, surgery, and imaging techniques are just a few examples for high health care costs. It is suggested that while short term use of new technology may raise the immediate or short term expenditure, a longer term cost effectiveness analysis is likely to show a much more positive impact on health status and lower total cost over a lifetime (Williams & Torrens, 2008 p.34). This means that while technology may be costly in the beginning, in the end new technology can lower long-term costs. The development and use of new health care technology is likely to have significant economic impact on the American health care system in a positive manner. However,

the exact degree and direction of that influence is not clear. There is no real governmental policy on costs of new medical technology because it is up for debate and no one can come to an agreement on the matter.

Staff, Family Member and Resident Relationships

The relationship among staff members, family members and residents is extremely important in nursing facility care. Therefore, nursing home placement is an important decision. According to a study conducted on family member's experiences when admitting a relative to a nursing home, the family had a very difficult time making the decision (Ryan, 2001). Family members tried to hold off as long as possible but due to the relative's deteriorating health or deterioration of their own health, placing their relative in a nursing facility was the only option. The study revealed that family members had ambiguous feelings because they were relieved that the burden of care was lifted but had feelings of guilt about placing their relative in a home and not continuing their "duty of care" (Ryan, 2001). The findings also concluded that the guilt continued while their relative was living in the nursing home. Family members also feel guilt if they made promises to not place their relative in a home. Therefore, family members spend a great deal of time and effort choosing a nursing facility that will provide the best type of care for their relative and a place that their relative can be happy and call home. Family members expect their relative to receive high quality of care and hope that residents develop a bond with staff members so they are comfortable in their environment (Ryan, 2001).

Since staff members spend a great deal of time with residents, the trust and bond between staff and residents are important for resident satisfaction and quality of life (Ball et al., 2009). Several studies have concluded that most relationships between staff members, such as certified

nurse aides, and residents were described as friendships or like one of the family (Ball et al., 2009; Piercy, 2000). Friendships between staff members and residents evolve through the whole caregiving process. Direct care workers, such as nurses and certified nurse aides, are able to develop close emotional bonds with residents and empathize with residents and respond in appropriate ways (Ball et al., 2009). Since family members are not always able to be with their relatives, residents rely on staff members for support.

Resident vulnerability is a combination of three factors: health status, cognitive ability and social support (Kim & Geistfeld, 2008). Staff members understand resident's vulnerability. Some staff members are respectful and want to provide quality care to residents since they cannot care for themselves. However, there are staff members who will take advantage and exploit a resident's vulnerability. Some staff members in nursing facilities have been cited for abusing, neglecting, withholding food and even sexually assaulting residents. These residents have to depend on their abusers to care for them. When staff members abuse residents the trust is lost between the resident and caregiver. Most times family members are not aware abuse is occurring. Residents are vulnerable and need to be protected. Electronic monitoring is an option to protect vulnerable residents.

Employee Rights

OSHA Employee Workplace Rights allows for electronic monitoring in the workplace. Nursing facility employees have meager expectation of privacy in a resident's room (Carlson, 2001). Nurses and nurse aides, for example, assist the residents, then move on to assist other residents in other rooms. In general, staff do not perform tasks that would be considered private from an employee's point of view. Also, staff in a resident's room realize they can be interrupted

at any time. In resident rooms, most of the employees' conversations are not private matters from an employee point of view. For these reasons, an employee has little expectation of privacy in a resident's room. Also, employees would not have a viable legal claim for violation of privacy rights (Carlson, 2001). Since employees would be aware of the presence of electronic monitoring, due to the mandatory signs, utilizing electronic monitoring would not affect an employee's workplace rights.

Resident Rights and OBRA

Nursing home resident have patient rights and certain protections under the law. The nursing home must list and give all new residents a copy of these rights (Appendix D). Resident rights usually include respect; services and fees; management of money; privacy; and medical care. Specifically, residents have the right to be treated with dignity and respect. Residents must be informed in writing about services and fees before they enter the nursing home. Residents have the right to manage their own money or choose someone else they trust to do manage their money. Residents have the right to privacy, and to keep and use their personal belongings and property as long as it does not interfere with the rights, health or safety of others. Residents have the right to be informed about their medical condition, medications and the opportunity to see their doctor. Residents also have the right to refuse medications and treatments. Specific resident rights include the right to self-determination; right to personal and privacy rights; rights regarding abuse and restraints; rights to information; rights to visits; transfer and discharge rights; protection of personal funds; and protection against Medicaid discrimination (OBRA, 1987).

The Nursing Home Reform Amendments of OBRA 1987 require that nursing facilities "promote and protect the rights of each resident." The resident's rights must be displayed in the nursing facility along with a contact number for the state's Long Term Care Ombudsmen, which is a third party resident advocate (OBRA, 1987).

The general goals of the law are (OBRA, 1987):

- *Quality of life*: The law requires nursing homes to "care for the residents in such a manner and in such an environment as will promote maintenance or enhancement of the quality of life of each resident." An emphasis is placed on dignity, choice and self-determination for nursing home residents.

- *Provision of Services and Activities*: The law requires each nursing home to "provide services and activities to attain or maintain the highest predictable physical, mental, and psychosocial well-being of each resident in accordance with a written plan of care which is initially prepared with the participation to the extent practicable of the resident or the residents' legal representative."

- *Participation in Facility Administration*: The law makes "resident and advocate participation" a criteria for assessing a facility's compliance with administration requirements; and

- *Assuring Access to the Ombudsman Program*: "The law grants immediate access by ombudsmen to residents and reasonable access, in accordance with state law, by ombudsmen to records;" requires facilities to inform residents how to contact ombudsmen to voice complaints or in the event of a transfer or discharge from a facility; requires state agencies to share inspection results with ombudsmen.

Table 1

Electronic Monitoring Debate: Protects or Compromises Resident Rights

Protects	Compromises
Monitors the resident	Violates right of privacy
Improves QOL/QOC	Violates right of confidentiality
Deterrent against abuse, mistreatment and neglect	Violates dignity
Right to self-determination	Violates rights to visits
Provides evidence	Interfere with bond between residents and staff
Shows family type of care being given	Fear it could be a substitute for staffing
Empowers residents and legal guardians (device can be turned on and off)	Cost
EM will complement staffing	

Based on the literature review and theoretical framework, hypotheses will be developed for staff members. Social theories, unified theory of acceptance and use of technology (UTAUT) and task-technology fit (TTF), provide the framework to explain staff members function and feelings regarding electronic monitoring.

UTAUT aims to explain staff members' behavioral intentions and usage of electronic monitoring in nursing facilities. One of the key constructs of UTAUT, performance expectancy, explains the degree in which staff believe that using video cameras would improve their job performance. Since job performance is linked to improved quality of care, if video cameras enhance job performance, staff will more likely utilize video cameras because of its perceived usefulness. The theory also suggests perceived ease of use and social influences motivate a person to utilize technology. Since a staff member's behavioral intention depends on their attitude about the particular behavior, such as perceptions of electronic monitoring, those staff members with prior experience with video cameras will most likely have a positive preconceived opinion about electronic monitoring. Hence, Hypothesis 1 states that among staff members, nursing facilities with prior experience with electronic monitoring will have a greater acceptance of electronic monitoring.

TTF is used to explain different types of staff members' behavioral intentions and attitudes towards electronic monitoring. If video cameras complement the type of tasks that different staff members (such as Administrators, Nurses, CNAs etc) perform, it could determine that the compatibility of video cameras influence acceptance of electronic monitoring among different types of staff members'. If video cameras are compatible to certain tasks, enhanced job performance, effectiveness and efficiency are possible results. Since different staff members have different tasks, perceptions of electronic monitoring will most likely be different. Hence,

Hypothesis 2 assumes that different types of staff will have different perceptions of electronic monitoring.

CHAPTER 3

METHODS

The collection of data and treatment of data are presented in this chapter. Descriptions are provided regarding the (a) sample, (b) setting, (c) instruments, (d) pilot study, (e) protection of human subjects, (f) variables, (g) hypotheses, and (h) data collection.

Sample

This study took place in the Dallas Fort Worth metroplex, a large metropolitan area in North Texas. Participants for the study were recruited from skilled nursing facilities and assisted living. Specifically, participants were recruited from a nursing facility in which residents utilize video cameras in their rooms (Nursing Facility 1), nursing facilities that had video cameras in their common rooms or throughout their building (Nursing Facility 2 and Nursing Facility 3) and a nursing facility that does not utilize video cameras in their facility (Nursing Facility 4).

Nursing Facility 1 (NF 1) is both a 134-bed capacity skilled nursing facility and 127-bed capacity assisted living facility. This facility has been utilizing video cameras in common rooms since 1990 and intermittently has had residents utilize video cameras in their rooms since the 2002. Nursing Facility 2 (NF 2) is both an 80-bed capacity skilled nursing facility and a 16-bed assisted living facility. This facility has been utilizing video cameras in common areas since the beginning of 2009. Nursing Facility 3 (NF 3) is both a 110-bed capacity skilled nursing facility and 104-bed assisted living facility. This facility has been utilizing video cameras in common areas since the year 1992.

A convenience sampling strategy was employed to recruit participants from these nursing facilities for this exploratory study. The study sample consisted of 182 participants. The sample

population consisted of nursing home residents, family members and nursing home staff who live, visit or work in the four sample nursing facilities (skilled nursing facilities and assisted living). Resident participants were selected from the population of older adults who were (a) 60 years of age or older, (b) live in the nursing facility, (c) could read, write and speak English, and (d) are competent. Fifty-three residents participated in this study (n = 53). Residents were prior screened by nursing facility staff (directors of nursing [DONs] and activity directors) based on their perception of whether residents were competent. The principal investigator also screened residents for competency. Staff participants were selected from the population of staff who are (a) administrators, physicians, directors of nursing, nurses, nurse aides, social workers, etc and (b) could read, write and speak English. One hundred four staff participated in this study (n = 104). Family member participants were selected from the population of older adult's relatives who (could read, write and speak English). Twenty-five family members, only 1 per resident, participated in this study (n = 25). The participants who met study criteria and volunteered to participate were selected for the study (Tables 2, 3, and 4). The sample size was determined by those able and willing to participate in the exploratory study at the time.

Instruments

Three instruments were developed by the principal investigator to collect data for this research study (Appendix C). The instrument used on the residents consisted of open ended questions-total of 15 questions; demographic items such as age, gender, ethnic origin, education level and length of time residing in a nursing facility were also included. Sample questions on the resident survey tool include: Would you want a video camera in your room?; Which types of resident rights are most at risk when using a video camera?; and Overall, do you think a video

camera will protect or violate your resident rights? The instrument used on staffs and family members, consisted of Likert scaled questions- total of 29 questions. On the Likert scale, 5 represented *strongly agree*, 4 represented *agree*, 3 represented *neutral*, 2 represented *disagree*, and 1 represented *strongly disagree*. Demographic items such as age, gender, ethnic origin, position at nursing facility, length of employment, relation to resident and frequency of visits to nursing facility, were also be included on the staff and family members' survey. Some questions on the staff and family member survey tool include: "I believe a video camera is necessary for security purposes."; "Resident rights most at risk when using a video camera is privacy"; and "Electronic monitoring may interfere with the bond between residents and staff." The interview questions and self-administered survey were in regard to the participant's perceptions of electronic monitoring, perceived risks and benefits of video cameras, awareness of all resident rights and consciousness of potential risks to resident rights.

Pilot Study

A pilot study was administered identical to the participation of residents, staff and family members in the main study. The pilot study consisted of 25 participants (10 residents, 10 staff and 5 family members). The pilot study was formed to provide feedback on survey content and design as well as to ensure the survey was clear and readable. Based on their comments, changes were made to the survey tools. Participants were eager and very willing to participate in the study due to the importance of the issue.

Protection of Human Subjects

A proposal with research was submitted to the University of North Texas Institutional

Review Board for the Protection of Human Subjects in Research to ensure the protection of the rights of the participants. This study was approved by the Institutional Review Board on December 7, 2009. An additional data collection site was added and the IRB approved this site on February 16, 2010. Permission to conduct this exploratory study was also granted by the Robert B. Toulouse Graduate School, the Department of Sociology at the University of North Texas and by the dissertation committee. Prior to participating in this study, potential participants were verbally read descriptions of the study and given written descriptions of the study (Appendix B). Specifically, potential participants were told participating in the study was voluntary, the risks to persons involved in the study, the protection of their identity and confidentiality. If participants agreed to participate voluntarily, participants were informed of their rights, including the right to withdraw from the study at any time without consequence. Participants were also given contact information for the principal investigator and the chair of the dissertation committee in case additional information was needed. No identifying information was asked in the interview, telephone survey or on the self-administered survey instrument in order to protect the identity and maintain confidentiality of participants.

Variables

The following are the independent variables, dependent variables and preconditions for this study:

- *Dependent*: Protection or violation of resident rights: right to self-determination; personal and privacy rights; rights regarding abuse and restraints; rights to information; rights to visits; protection of personal funds

- *Independent:* Usage of electronic monitoring: common areas/throughout the building and in resident rooms.
- *Preconditions (control*): Gender, age, race, ethnic origin, educational level, employment position, length of employment, length of residence at nursing facility and frequency of visits to nursing facilities

Hypotheses

1. Among staff, nursing facilities with prior experience with electronic monitoring will have a greater acceptance of electronic monitoring.
2. Different types of staff will have different perceptions of electronic monitoring.

Hypotheses were developed for staff members since it had an adequate number of total cases (n = 104). Bivariate analysis was used to test whether different types of staff have different perceptions of electronic monitoring. Multivariate analysis was used to test both hypotheses: whether staff members from nursing facilities with prior experience with electronic monitoring have a greater acceptance of electronic monitoring and whether different types of staff have different perceptions of electronic monitoring.

Data Collection

To protect the rights of the participants, research was submitted and approved by the Institutional Review Board. Once this study was approved, data collection began. This study focused on resident, family member and staff perceptions of electronic monitoring in nursing facilities and the effects of electronic monitoring on resident rights.

Resident participants were administered a cognitive exam (Six Item Screener) to test their competency. The Six Item Screener was used because it was a brief, reliable instrument

comparable to the Mini-mental state examination (Callahan et al., 2002). This short exam consisted of 3 orientation questions and 3 word recall questions; exam was completed in less than 3 minutes. For this study, participants could not have any errors to ensure there was no cognitive impairment. If the participant passed the cognitive exam, the resident was interviewed one on one with the principal investigator.

Verbal and written instructions of the study were provided before the interview began. A booklet of materials was given to each resident participant who met the eligibility criteria for the study (Table 2). Each booklet contained a letter describing the study, informed consent information, and contact information for the principal investigator and the major chair of the dissertation committee (Appendix C). Each participant was informed verbally and in writing that participation is voluntary and that they have the right to stop the study at any time. Residents were requested to explain the study in their own words to ensure that they comprehended the purpose of the study. A one on one interview, consisting of 15 open ended questions and several demographic questions, with participants was used to collect data. The principal investigator read each interview question slowly, clearly and at the appropriate tone. Ample time was given for the resident to respond to the questions. Interviews lasted about 10 minutes. The residents dictated their responses to the principal investigator who transcribed the responses by hand onto the survey questionnaire. Interviews occurred in the nursing facility; generally conducted during their free time in their room or in a common area. After the completion of the interview, each participant was thanked for their participation in this exploratory study.

Once data was collected, the principal investigator input residents' responses into qualitative data analysis software, Atlas t.i. A qualitative approach was used to analyze this data. Specifically, a thematic analysis was conducted with the responses to the interviews questions. A

list of emerging themes across all the resident's transcripts was compiled and clustered into groups based on similarity and overlap. The different theme categories were then analyzed. Answers were also analyzed under the appropriate ethical principles.

Table 2

Residents: Study Eligibility Criteria, Independent Variable and Dependent Variable

Eligibility Criteria	**Independent Variable**	**Dependent Variable**
Older Adult 60 + years of age	Use of electronic monitoring-	Resident rights-
	In common areas	Right to self-determination
Reside in a nursing facility located in North Texas (skilled nursing facility or assisted living)	Throughout the building	Personal and privacy rights
	In resident rooms	Rights regarding abuse and restraints
Competent		
		Rights to information; Rights to visits
Able to read, write and speak English		
		Protection of personal funds

Staff members (administrators, physicians, nurses, nurse aides, social workers, etc) were given a self-administered survey questionnaire to complete. Verbal and written instructions were given to the participants before the survey was administered. A booklet of materials was given to each staff members who met the eligibility criteria for the study (Table 3). Each booklet contained a letter describing the study, informed consent information, contact information for the principal investigator and the major chair of the dissertation committee and the survey questionnaire (Appendix B and C). Each participant was informed verbally and in writing that participation is voluntary and that they have the right to stop the study at any time. The survey tool, consisting of 25 Likert scaled questions and several demographic questions, were used to collect data. Survey questionnaires were distributed in the beginning of their staff meeting.

Surveys were collected immediately after completion or after the staff meeting. The survey took about 15 minutes to complete. After the completion of the survey, each participant was thanked for their participation in this exploratory study.

A quantitative approach was used to analyze the data. Staff member's perceptions of usage of electronic monitoring were analyzed by frequency distribution, bivariate analysis (cross tabulation) and multivariate analysis (logistic regression) through statistical analysis software, SAS 9.1 for Windows.

Table 3

Staff: Study Eligibility Criteria, Independent Variable and Dependent Variable

Eligibility Criteria	**Independent Variable**	**Dependent Variable**
Work in a nursing facility located in North Texas (skilled nursing facility or assisted living) Staff (administrator, physicians, director of nursing, nurses, nurse aides, social worker etc) Able to read, write and speak English	Use of electronic monitoring- In common areas Throughout the building In resident rooms	Resident rights- Right to self-determination Personal and privacy rights Rights regarding abuse and restraints Rights to information; Rights to visits Protection of personal funds

Family member participants, relative of a resident, were identified by residents who participated in this study. Residents interested in having their family member participate in this study and were able to provide contact information for family members were recruited for this study. Family members were contacted by telephone and informed of the study. If family members met the eligibility criteria (Table 4) and were interested in the study, verbal instructions were given before administering the telephone survey. The principal investigator read a booklet

that contained a letter describing the study, informed consent information, contact information for the principal investigator and the major chair of the dissertation committee as well as the survey questionnaire (Appendix B and C). Each participant was informed verbally that participation is voluntary and that they have the right to stop the study at any time. The principal investigator read each question on the survey questionnaire slowly, clearly and at an appropriate tone. Ample time was given for the participant to respond to the questions. The survey tool, consisting of 25 Likert scaled questions and several demographic questions, was used to collect data. The telephone survey took about 15 minutes to complete. After the completion of the survey, each participant was thanked for their participation in this exploratory study.

A quantitative approach was used to analyze the data. Family member perceptions of usage of electronic monitoring were only analyzed by frequency distribution due to the limited number of participants.

Table 4

Family Members: Study Eligibility Criteria, Independent Variable and Dependent Variable

Eligibility Criteria	**Independent Variable**	**Dependent Variable**
Relative of a resident who resides in a nursing facility (skilled nursing facility or assisted living)	Use of electronic monitoring-	Resident rights-
	In common areas	Right to self-determination
	Throughout the building	Personal and privacy rights
Visits resident at the nursing facility	In resident rooms	Rights regarding abuse and restraints
Able to read, write and speak English		Rights to information; Rights to visits
		Protection of personal funds

CHAPTER 4

RESULTS

This chapter presents the data analyses conducted for this research study. Data were procured from several one on one interviews with residents, telephone interviews with family members and survey questionnaires from staff members from four nursing facilities in the Dallas Fort Worth metroplex during the years 2009-2010. A convenience sample was used to enlist the participants in this study. The study consisted of 53 residents, 104 staff members and 25 family members. A total of 182 participants met the study criteria and answered all interview questions or questions on the survey questionnaire (no missing values). There were 20 questions to answer on the resident survey, 34 questions on the family member survey and 34 questions on the staff survey. Data were analyzed using the mixed method approach. Both qualitative and quantitative data analysis software were utilized; Atlas t.i 6.1 and SAS 9.1 for Windows, respectively. Thematic analysis and various statistical methods such as frequency distributions, cross tabulation and logistic regression were performed to answer the research questions in this study.

Demographic Data

Nursing Facility Residents

The demographic variables of (a) gender, (b) age, (c) ethnic origin, (d) education level and (e) number of years residing in a nursing facility, were used to describe the personal characteristics of the sample from the four nursing facilities in the Dallas Fort Worth metroplex. Table A.1 displays the demographic variables of all of the residents in this study. The distribution of gender in the sample population was 41 (77%) female participants and 12 (23%) male participants for a total of 53. The age of the sample population ranged from 64 years to 100

years, mean age of 81.5 years. The sample consisted of 6 (11%) in the age range of 60-69, 14 (26%) in the age range of 70-79, 24 (45%) in the age range of 80-89 and 9 (16%) in the 90 plus age range. The ethnic origin reflected 51 (96%) participants considered who themselves Caucasian, 1 (2%) was African American and 1 (2%) was considered other. The survey question regarding the highest level of education received showed 27 (51%) participants have a high school diploma, 15 (28%) received a college degree and 11 (20%) received a graduate degree. The survey question regarding the number of years residing in a nursing facility ranged from 1 month to 18 years (216 months), mean of 2.75 years (33 months).

Table A.2 reflects the demographic variables of participants residing at NF 1, NF 2, NF 3, and NF 4. When comparing all four of the nursing facilities, the majority of the residents were female, Caucasian, over the age of 64, had at least a high school diploma and had resided in the nursing facility for at least 1 month. In NF 1, residents were exposed to video cameras in resident rooms and in common areas. In this facility, NF 1 had been utilizing electronic monitoring for the past 20 years in common areas and utilized video cameras in resident rooms intermittently for the past 8 years. Therefore, all of the residents who entered NF 1 were aware electronic monitoring was in place. In NF 2, residents were exposed to video cameras in common areas and throughout the building. In this facility, NF 2 had been only utilizing electronic monitoring in common areas and throughout the building for slightly over 1 year. Therefore, many residents may have entered NF 2 prior to electronic monitoring being installed. In NF 3, residents were exposed to video cameras in common areas and throughout the building for the past 18 years. Therefore, all of the residents who entered NF 1 were aware electronic monitoring was in place. In NF 4, residents have not been exposed to video cameras.

In summary, the majority of the residents in this study were female and of the Caucasian origin. The residents were predominantly part of the 80-89 years age group. When comparing the residents from all four nursing facilities, NF 1 residents were the only residents who have experience with electronic monitoring in resident rooms and in common areas. NF1 had utilized electronic monitoring for the longest period of time compared to the other nursing facilities. NF 2 residents had the highest level of education. Most of the NF 2 residents held college or graduate degrees. In NF 2, all of the residents entered the nursing facility prior to the installation of electronic monitoring in common areas. The NF 2 residents also had the longest amount of exposure electronic monitoring, specifically in common rooms, because all of the residents had been exposed to electronic monitoring for at least one year, indicated by the months living in the nursing facility.

Staff

The demographic variables of (a) gender, (b) age, (c) ethnic origin, (d) position at nursing facility and (e) length of employment, were used to describe the personal characteristics of the sample population from the four nursing facilities in the Dallas Fort Worth metroplex. Table A.3 displays the demographic variables of all of the participants in this study. The gender in the sample population was 90 (86.5%) female participants and 14 (13.4%) male participants for a total of 104 participants. The age of the sample population ranged from 21 years to 72 years. The ethnic origin reflected 53 (50.9%) participants Caucasian, 27 (25.9%) was African American and 24 (23.1%) was considered other. The positions in the nursing facilities was 6 (5.7%) administrators, 4 (3.8%) director of nurses, 13 (12.5%) registered nurses, 13 (12.5%) licensed vocational nurses, 41 (39.4%) certified nurse aides, 10 (9.6%) activity directors/wellness

directors, 12 (11.5%) rehabilitation (physical therapy, occupational therapy, speech therapy), 2 (1.9%) social workers/social services, 1 (0.9%) medical technician, and 2 (1.9%) maintenance director/security. The length of employment at the nursing facility ranged from 1 month to 30 years (360 months).

Table A.4 reflects the variables of participants employed at NF 1, a nursing facility that utilizes video cameras in resident rooms. The participants consisted of 29 (78.3%) females and 8 (21.6%) males, a total of 37 participants. The age range of this sample population was 21 years of age to 64 years of age; mean age of 42.1 years. The ethnic origin reflected 10 (27%) participants Caucasian, 22 (59.4%) was African American and 5 (13.5%) was considered other. The positions in the nursing facilities was 3 (8.1%) administrators, 5 (13.5%) registered nurses, 5 (13.5%) licensed vocational nurses, 18 (48.6%) certified nurse aides, 3 (8.1%) activity directors/wellness directors, 1 (2.7%) rehabilitation (physical therapy, occupational therapy, speech therapy), 1 (2.7%) social workers/social services, and 1 (2.7%) medical technician. The length of employment at the nursing facility ranged from 1 month to 25.5 years (307 months).

Table A.5 reflects the variables of the participants employed at NF 2, a nursing facility that utilizes video cameras in common areas and throughout the building. The participants consisted of 29 (93.5%) females and 2 (6.4%) males, a total of 31 participants. The age range of this sample was 21 years of age to 64 years of age; mean age of 40.3 years. The ethnic origin reflected 20 (64.5%) participants Caucasian, 3 (9.6%) was African American and 8 (25.8%) was considered other. The positions in the nursing facilities was 1 (3.2%) administrator, 2 (6.45%) director of nurses, 5 (16.1%) registered nurses, 5 (16.1%) licensed vocational nurses, 11 (35.4%) certified nurse aides, 6 (19.3%) activity directors/wellness directors and 1 (3.2%) maintenance

director/security. The length of employment at the nursing facility ranged from 1 month to 30 years (360 months).

Table A.6 displays the variables of the participants employed at the NF 3, a nursing facility that utilizes video cameras in common rooms and throughout the building. The participants consisted of 16 (94.1%) females and 1 (5.8%) males, a total of 17 participants. The age range of this sample was 22 years of age to 72 years of age; mean age of 44.5 years. The ethnic origin reflected 12 (70.5%) participants Caucasian, 1 (5.8%) was African American and 4 (23.5%) was considered other. The positions in the nursing facilities was 1 (5.8%) administrator, 1 (5.8%) director of nurses, 2 (11.7%) licensed vocational nurses, 3 (17.6%) certified nurse aides, 1 (5.8%) activity directors/wellness directors, 8 (47%) rehabilitation (physical therapy, occupational therapy, speech therapy), and 1 (5.8%) social workers/social services. The length of employment at the nursing facility ranged from 1 month to 23.7 years (285 months).

Table A.7 reflects the variables of the participants employed at NF 4, a nursing facility that does not utilize video cameras. The participants consisted of 16 (84.2%) females and 3 (15.7%) males, a total of 19 participants. The age range of this sample was 21 years of age to 57 years of age; mean age of 39.6 years. The ethnic origin reflected 11 (57.8%) participants Caucasian, 1 (5.2%) was African American and 7 (36.8%) was considered other. The positions in the nursing facilities was 1 (5.2%) administrator, 1 (5.2%) director of nurses, 4 (21%) registered nurses, 1 (5.2%) licensed vocational nurses, 8 (42.1%) certified nurse aides, 3 (15.7%) rehabilitation (physical therapy, occupational therapy, speech therapy) and 1 (5.2%) maintenance director/security. The length of employment at the nursing facility ranged from 1 month to 10 years (120 months).

In summary, the majority of the staff in this study were female and of Caucasian origin. Certified nurse aides were the type of staff more predominant in this study. When comparing staff from all four nursing facilities, the majority of NF 1 staff were of African American origin. The majority of NF 3 staff were part of rehabilitation therapy (physical therapy, speech therapy and occupational therapy). Staff members from NF 2 were employed the longest period of time. Compared to the other nursing facilities that utilize electronic monitoring (NF 1 and NF 3), NF 2 staff have the least experience with electronic monitoring since it was only made available one year ago.

Family Members

The demographic variables of (a) gender, (b) age, (c) ethnic origin, (d) relation to resident and (e) frequency of visits to nursing facility, were used to describe the personal characteristics of the sample population from the four nursing facilities in the Dallas Fort Worth metroplex. Table A.8 displays the demographic variables of all of the participants in this study. The gender in the sample population was 16 (64%) female participants and 9 (36%) male participants for a total of 25. The age range of this sample was 23 years of age to 74 years of age. The ethnic origin of the sample population was 16 (64%) Caucasian, 4 (20%) African American and 5 (25%) responded other. The relationship between the resident and the family member included 3 (12%) wives, 1 (4%) husband, 11 (44%) daughters, 6 (21%) sons, 1 (4%) niece, 1 (4%) granddaughter, and 1 (4%) grandson. The frequency of visits to the nursing facility was 16 (64%) visit weekly and 9 (36%) visit monthly. The distribution of family member participants from each nursing facility: 9 (36%) from NF 1, 7 (28%) from NF 2 Denton Village, 5 (20%) from the NF 3 and 4 (16%) from NF 4.

In summary, the majority of family members were female and of Caucasian origin. Daughters were the predominant family member to participate in the study. Among all of the family members, the majority visited their relative in the nursing facility on a weekly basis. The majority of family members had relatives residing in NF 1, the nursing facility that utilizes both electronic monitoring in resident rooms and in common areas.

Quantitative and Qualitative Approaches

Residents

Resident perceptions of usage of electronic monitoring were analyzed qualitatively. Thematic analysis was most appropriate to analyze the resident's interview responses. "Thematic analysis is a search for themes that emerge as being important to the description of the phenomenon" (Daly, Kellehear, & Gliksman, 1997). The process involves identifying themes through "careful reading and re-reading of the data" (Rice & Ezzy, 1999, p. 258).

The interview questions were structured in order to elicit specific information about electronic monitoring. Following the one- on- one interviews, a recurrent pattern emerged through their responses. These themes became the categories for analysis. The categories found in this study include: perceptions of electronic monitoring, awareness of resident rights and consciousness of the potential risks to their rights if nursing facilities utilize electronic monitoring, whether video cameras protect or violate their rights and if their perceptions were different based on the type of nursing facility they reside in. The findings were organized in relation to each category.

Research Question: What are residents' perceptions of electronic monitoring?

1. According to the responses, 79% of residents did not express support for video cameras in their rooms.

    - No, I definitely do not want a video camera in my room. I don't want to be watched.
    - No, I choose not to have one. At this stage, I don't need one but if I was totally helpless I may consider putting one in.
    - No. At this point no but that is subject to change. If items were missing or there was abuse, I would want a video camera.

2. According to the responses, 94% of residents did express support for video cameras in the common areas or throughout the building.

    - I don't mind. I think it's a wise idea and prefer it. It's a good safety measure.
    - I wouldn't mind. I'm glad that we have video cameras, especially at the front door.
    - Wouldn't be a bad idea. Hope they consider it at this place.

3. According to the responses, 83% of residents were not aware that they were allowed to have a video camera in their room if they were willing to pay for it.

    - No, I didn't know. I don't care for it. I wouldn't pay for it.
    - No, but it doesn't concern me. My POA [daughter] deals with all the paperwork. She tells me the important things.

4. According to the responses, 66% of residents did not want a video camera in their room, even if they could turn it on or off at anytime.

    - No, more trouble than it's worth, more effort to turn it on or off; I may not remember to turn it on again.
    - If I can turn it on or off, so could someone else [referring to nurse aides at nursing facility]; then it's not useful.
    - It might be alright if I knew how to use it. I don't usually use those things.

A response from one of the resident's that did want a video camera in the room if it could be turned on or off:

- Sure, because you could turn it on or off at your choosing and when you want to. I would turn it off when I was dressing and turn it on when I was leaving the room… to prevent theft.

5. A large majority of residents are not interested in having a video camera in their room even if there was an option to have only video or only audio.

- Don't want it, it's all the same. Still invading my private life.

However, if residents were to have a video camera in their room, they prefer to have both video and audio, not one or the other.

- Both are important and necessary if I was going to have a video camera in my room. Not as effective with just one.

6. According to the responses, residents were almost evenly split regarding whether video cameras could improve their quality of care. Almost 51% of residents think video cameras will improve their quality of care.

- Yes, staff would be more likely to assist you if they knew they were being constantly watched. Sometimes you have to call them more than once.
- It might; Staff may come more often knowing they are being taped; They would keep a better eye on me.

Response from residents that do not think video cameras will improve their quality of care.

- Don't see how I could get better care because I am satisfied with my care.
- No, but not sure…I haven't had one.

According to the responses, if residents were not happy with their care, 58% agree that video cameras will improve their quality of care.

- Yes, absolutely. In fact, I think any nursing home that has bad ratings should be required to have video cameras throughout the building. That is the only way they would improve their care.
- Yes, it could make staff realize they need more nurses and employees.

7. According to the responses, 59% of residents reported there were benefits to having a video camera in their room. The most frequent responses include: protection from abuse and theft, protect those permanent residents that are unconscious or suffer from cognitive impairment such as dementia or Alzheimer's disease, and overall safety measure.

- Alert to abuse, mistake with medication, neglect, mistreatment, theft.
- Witness aides ignoring residents; Beneficial for permanent residents especially if they have Parkinson's or Dementia; It is for protection of the resident and for family members to know their loved one is getting good care.
- Finding out if things have been stolen; Being able to have evidence of theft.
- It's like having a private detective.

At least 41% of residents reported there were no benefits to having a video camera in their room or there were no benefits for them at this point in their life.

- No benefits for me; It is not needed in this stage of my life but maybe down the road it could help.

8. Residents reported there were disadvantages to having a video camera in their room. The most frequent responses include: invasion of privacy (32%), issues with confidentiality, loss of dignity and modesty while undressing or using the restroom (19%), cost issues, nuisance, unsure how to use a video camera and issues if it is used for the wrong reasons.

- Mechanical spy…I don't need to be spied on. It's an invasion of privacy.
- Room is my home; I don't want to be uncomfortable and watched in my own home. I would feel claustrophobic or fenced in. I don't want to feel like I'm in jail.
- Loss of dignity; It would be embarrassing to undress in front of cameras.
- Having a video camera is another issue to have to deal with; It is just one more thing that I need to be concerned about- costs, how to use it, who will be watching it, can it get in the wrong hands.
- Cost, why should I have to pay for a camera when I already pay a lot; No one's business of what I do, not that I have anything to hide.
- Sensors are a lot less intrusive.

9. According to the responses, 43% of residents think video cameras would give them less control.

- Less control because you would lose your rights as a resident.
- Less control; When there is something that watches over you then you wouldn't be in control of your life. You would have to watch everything you did.
- Less control; Just because I need assistance and moved to a nursing home doesn't mean they can treat me like a child.
- Less control; It would interfere with life because I would have to watch everything I did.
- Less in charge of life because "it" would always be watching you. However, it could be lifesaving.

Research Question: Are residents aware of their resident rights and conscious of the potential risks to resident rights if nursing facilities utilize electronic monitoring?

1. According to the responses, 92% of residents are familiar with most of their resident rights.

- When I moved in here, they gave me a copy of my rights. I remember most of them but not all of them.
- Yes, they are also posted in several places. They are on the boards in the dining area and in the TV room.

2. According to the responses, 25% of residents stated that all of the resident rights were important to them. The most frequent responses include: privacy (21%), safety, freedom and confidentiality as the most important resident rights.

- Not one in particular, all are important. Obviously all are important or they would not have been turned into a law.
- Freedom to choose what I want to do.
- Residents Council is important; Privacy, security, my records are confidential.

3. According to the responses, 66% of residents reported privacy as the resident right most at risk if a video camera was utilized in the nursing facility. Residents also frequently stated that all rights, confidentiality and freedom were most at risk.

- All of them especially privacy.
- Lack of privacy when family comes to visit.
- Loss of freedom; Someone else could get video and blackmail or get access to personal information.

One resident responded "Not sure, haven't had one before." This resident could not make a decision until a video camera has been used in the facility.

Research Question: Do residents think a video camera will protect or violate their resident rights?

1. Almost 55% of residents think video cameras will violate their resident rights.

    - Violates resident rights. However, the advantages of a video camera are greater than the disadvantages.
    - Violates both you and your rights.
    - Violates my privacy and freedom.

Approximately 20% of residents think video cameras will protect their resident rights.

- Protect; Video cameras will help more than hurt even if it is not ideal in all situations. Safety is more important that privacy.
- Protect but must keep good control of it [video camera footage].
- In the long run, it would protect you; as we age, it would be a type of protection.
- Protect, it is a good safety precaution; Stories about abuse, mistreatment, neglect are in the news all the time. It worried me.

2. Interestingly, 25% of residents think video cameras will do both- protect and violate resident rights.

    - Protects more but still could violate. It is up to each person to decide which is more important to them. I have to decide what is more important- privacy or safety?
    - Both, it depends on the circumstances. If I had Alzhiemer's then it might be a good idea and could protect me. But if I was competent then it wouldn't be needed and would violate me.

Research Question: Are residents perceptions of electronic monitoring different based on the type of nursing facility they reside in?

1. Only 9 (15%) residents from all four nursing facilities were interested in having video cameras in their room. Interestingly, NF 3, a nursing facility that utilizes video cameras in their common areas and throughout their nursing facility, had the most residents (3) interested in having video cameras in their rooms.

    - Yes; I think I would want to try it out to see if I like it and if it is something that will benefit me.

2. Only 15 (28%) residents from all four nursing facilities were interested in having a video camera in their room if they could turn it on or off at their choosing. NF 2 Village, a nursing facility that utilizes video cameras in their common areas and throughout their facility, had the most residents (6) interested in this option.

    - Yes, being able to turn it on or off would important and the main reason I would consider having it in my room.

3. Almost 6% of residents did not support video cameras in common areas or throughout the building. Interestingly, the residents that did not support video cameras in common areas resided in NF 3 and NF 1 (3), nursing facilities that utilize video cameras in their common areas.

    - Would mind if there was a video camera; I'm not comfortable having it around. I don't see the advantage.

4. A large majority of NF 1 residents reported all resident rights are at risk when using a video camera. NF 2 Village, NF 3 and NF 4 residents reported privacy as the resident right most at risk when using a video camera.

5. The majority of NF 1 residents reported video cameras violate resident rights. NF 2 Village residents were evenly split on whether video cameras protect or violate resident rights.

The majority of NF 3 residents agreed that video cameras protect and violate resident rights. A large majority of NF 4 residents reported video cameras violate resident rights.

In summary, residents are aware of the benefits of electronic monitoring. Some benefits stated by the residents include deterrent from abuse, neglect and theft. Electronic monitoring such as video cameras may improve quality of care. While they are interested in having video cameras in common areas for security measures, they are reluctant to have video cameras in their rooms. Residents believe utilizing video cameras in their rooms would be an invasion of privacy. Even if residents had the option to turn their video on or off at their choosing, they are not interested in utilizing video cameras. Some of the main reasons residents are not interested in this option include: unfamiliar with using video cameras and concerned that others will be able to turn the video cameras on or off at the choosing ultimately being useless. Furthermore, residents consider their resident rights to be compromised with the usage of electronic monitoring. Interestingly, residents also stated that if video cameras were necessary at a stage in their life, their quality of care and safety outweigh the risk to privacy. When comparing residents from different nursing facilities, those nursing facilities with prior experience with electronic monitoring affects residents' perceptions of video cameras. Those residents exposed to video cameras in resident rooms and in common areas (NF 1) and those residents not exposed to video cameras in their nursing facility (NF 4) were least interested in utilizing video cameras in resident rooms and believe that electronic monitoring in general violates resident rights. Those residents exposed to video cameras in common areas (NF 2 and NF 3) had mixed perceptions on its affects on resident rights. Those residents from NF 2 concluded that half of the residents believe electronic monitoring protects their rights while the other half believes it compromises

their rights. Those residents in NF 3 believe that electronic monitoring both protects and compromises their rights.

Family Members

Family member responded to questions regarding the perceptions of usage of electronic monitoring using a 5-point Likert scale, ranging from *strongly disagree* (1), *disagree* (2), *neutral* (3), *agree* (4) and *strongly agree* (5). The family members, who responded with a higher score, have a higher level of agreement; while family members who responded with a lower score, are in more disagreement with the statement. The responses were analyzed using frequency.

On the family member questionnaire, several questions relating to their preferences regarding electronic monitoring was asked. Family members were asked if they would prefer if video cameras were placed in resident rooms. The most frequent response was 12 (48%) stating that they disagree or strongly disagree with the placement of video cameras in resident rooms. However, 17 (68%) family members strongly agree with the placement of video cameras in the common areas of the nursing facility. While 16 (64%) family members strongly disagree that nursing facilities should not have any video cameras. Of the 25 participants, 17 (68%) agree or strongly agree that residents want video cameras only under certain circumstances. These results are reflected in Table A.9.

Several questions relating to the possible advantages and disadvantages of video cameras in nursing facilities were asked. According to the family members, 13 (56%) agree or strongly agree that video cameras will improve a resident's quality of care; 21 (84%) agree or strongly agree that video camera's can protect resident's from abuse; 20 (80%) agree or strongly agree that video camera's can minimize neglect; 21 (84%) agree or strongly agree that video cameras

are necessary for security purposes; and 13 (52%) agree that video cameras will complement staffing. Furthermore, 15 (60%) family members agree or strongly agree that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks. According to the family members, 15 (60%) agree or strongly agree that residents may not utilize video cameras due to cost; 14 (56%) agree that electronic monitoring may cause anxiety; 13 (52%) agree that electronic monitoring may interfere with the bond between residents and staff. Furthermore, 13 (52%) family members disagree or strongly disagree that the perceived risks in using electronic monitoring are greater than the benefits. These results are reflected in Table A.9.

Questions relating to the resident rights most at risk when utilizing a video camera were asked. According to the family members, 22 (88%) agree or strongly agreed that privacy was most a risk while 20 (80%) agree or strongly agree that dignity was at risk. Interestingly, family member's responses that confidentiality was most at risk was evenly split between 8 (32%) agree and 8 (32%) neutral. These results are displayed in Table A.9.

According to the family members, 16 (64%) agree or strongly agree that video cameras protect resident rights. While 9 (36%) agree or strongly agree that video cameras compromise resident rights. Interestingly, 5 (20%) responded neutral in regard to video cameras compromising resident rights. These results are also reflected in Table A.9.

In summary, family members are aware of the benefits of electronic monitoring. Family members believe electronic monitoring is necessary for security purposes. Family members also believe that video cameras deter abuse and neglect and can also improve quality of care. Therefore, they prefer to have video cameras in common rooms. However, they are reluctant to agree to video cameras in resident rooms. Some reasons they are against video cameras in resident rooms is because they may cause anxiety, interfere with the bond between resident and

staff, and invade privacy and dignity. However, since family members believe the perceived benefits outweigh the perceived risks of electronic monitoring, family members believe that overall electronic monitoring protects resident rights.

Staff

The staff responded to questions regarding the perceptions of usage of electronic monitoring using a 5-point Likert scale, ranging from *strongly disagree* (1), *disagree* (2), *neutral* (3), *agree* (4) and *strongly agree* (5). The staff, who responded with a higher score, have a higher level of agreement. Staff perceptions of usage of electronic monitoring were analyzed using frequency distribution, cross tabulation and logistic regression with predictors through statistical data analysis software, SAS 9.1 for Windows.

On the staff questionnaire, several questions relating to their preferences regarding electronic monitoring was asked. Staff were asked if they would prefer if video cameras were placed in resident rooms. The most frequent response was 49 (47%) stating that they disagree or strongly disagree with the placement of video cameras in resident rooms. However, 69 (66%) staff members agree or strongly agree with the placement of video cameras in the common areas of the nursing facility. While 16 (62.5%) staff members disagree or strongly disagree that nursing facilities should not have any video cameras. There is substantial support for video cameras, though much less for that in the resident rooms. These results are displayed in Table A.10.

According to the staff, 45 (43%) agree or strongly agree that video cameras protect resident rights. However, 42 (40%) staff members responded neutral that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks. While 34 (32%) agree

or strongly agree that video cameras compromise resident rights. These results are reflected in Table A.10.

Table A.11 reflects the perceptions of the staff employed at NF 1, a nursing facility that does utilize video cameras in resident rooms. According to the NF 1 staff, 18 (48%) disagree or strongly disagree with the placement of video cameras in resident rooms. However, 25 (67%) agree or strongly agree with the placement of video cameras in the common areas of the facility. While 19 (51%) disagree or strongly disagree that nursing facilities should not have any video cameras. Interestingly, 17 (45%) staff members disagree or strongly disagree that video cameras protect resident rights. While 16 (43%) disagree that video cameras compromise resident rights. Of the 37 staff members, 17 (45%) disagree or strongly disagree that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks.

Table A.12 reflects the perceptions of the staff members employed at NF 2, a nursing facility that does utilize video cameras in the common areas or throughout the building. According to the NF 2 staff, 18 (58%) disagree or strongly disagree with the placement of video cameras in resident rooms. However, 24 (77%) agree or strongly agree with the placement of video cameras in the common areas of the facility. While 23 (74%) staff disagree or strongly disagree that nursing facilities should not have any video cameras. Of the 31 staff, 16 (51%) agree or strongly agree that video cameras compromise resident rights. However, 13 (41%) agree or strongly agree that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks.

Table A.13 reflects the perceptions of the staff members employed at NF 3, a nursing facility that does utilize video cameras in common areas or throughout the building. According to the NF 3 staff, 10 (58%) responded neutral regarding the placement of video cameras in

resident rooms. However, 9 (52%) agree or strongly agree with the placement of video cameras in the common areas of the facility. While 8 (47%) staff members disagree or strongly disagree that nursing facilities should not have any video cameras; 8 (47%) staff also responded neutral. Of the 17 staff members, 11 (64%) responded neutral regarding whether video cameras compromise resident rights. However, 8 (47%) agree that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks.

Table A.14 reflects the perceptions of the staff members employed at NF 4, a nursing facility that does not utilize video cameras. According to the NF 4 staff, 9 (47%) responded neutral regarding the placement of video cameras in resident rooms. However, 11 (57%) agree or strongly agree with the placement of video cameras in the common areas of the facility. While 15 (78%) staff disagree or strongly disagree that nursing facilities should not have any video cameras. The remaining 4 (21%) staff members responded neutral. Of the 19 staff members, 14 (73%) agree or strongly agree that video cameras protect resident rights. The staff are almost evenly split regarding the statement that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks, 9 (47%) agree and 9 (47%) are neutral regarding the matter.

In summary, based on the frequencies, staff members were uncertain if the perceived benefits of electronic monitoring were greater than the perceived risks. Staff supported the placement of video cameras in common areas however they did not have strong support for video cameras in resident rooms. Ultimately, staff members believe that video cameras compromise resident rights. All of the 4 nursing facilities similarly believe that video cameras should be utilized in the facilities, especially in common rooms but do not believe video cameras should be utilized in resident rooms. Both NF 1 and NF 2 staff believe electronic monitoring

compromises resident rights. However, NF 1 staff do not believe the perceived benefits of electronic monitoring are greater than the risks, contrasting to NF 2 staff. While NF 3 staff are neutral or uncertain if electronic monitoring compromises resident rights but they do believe that the perceived benefits are greater than the perceived risks of electronic monitoring. Interestingly, NF 4 staff, the only facility that does not utilize video cameras, believe electronic monitoring protects resident rights and the perceived benefits of electronic monitoring are greater than the perceived risks.

Bivariate Analysis

The staff members were collapsed into five categories: (1) administrator and director of nursing (don), (2) registered nurses and licensed vocational nurses (nurses), (3) certified nurse aides (cna), (4) activity director and social services (social services) and (5) other: rehabilitation, medical technician and maintenance director/security. Table 5 displays the distribution of the staff members.

Table 5

Collapsed Distribution of Staff

Position at Nursing Facility	Frequency	%
Administrator/Director of Nurses (DON)	10	10
RN/LVN (Nurses)	26	25
CNA	41	39
Activity Director/Social Services	12	12
Other	15	14

Cross tabulation was performed to display the relationship between types of staff and their perceptions of the effect of video cameras on resident rights. This analysis was performed to test Hypothesis 2. Interestingly, 60% of other staff tend to agree that video cameras protect

resident rights. Staff (administrator/DON, nurses, and CNAs) are almost evenly split between agree and disagree that video cameras protect resident rights. Interestingly, 47% of other staff disagree that video cameras compromise resident rights. The remaining other staff responded neutral. Staff (administrator/DON and nurses) are evenly split between agree and disagree that video cameras compromise resident rights. The different perceptions among different staff support Hypothesis 2. Table A.15 displays these results.

Cross tabulation was employed to explain the relationship between types of staff and their perceptions of whether electronic monitoring benefits outweigh the risks. Interestingly, 60% of Other staff tend to agree that the perceived benefits of video cameras outweigh the perceived risks. Staff (Administrator/DON and CNAs) are almost evenly split between agree and disagree that the perceived benefits outweigh the perceived risks. Furthermore, nurses and social service staff were evenly split between agree and neutral. The different perceptions among staff support Hypothesis 2. Table A.16 reflects these results.

In the following sections, cross tabulation was performed to explain the relationship between the types of staff, the type of nursing facility they are employed at and their perceptions of the effect of video cameras on resident rights. This analysis was performed to test both Hypotheses 1 and 2.

Among the 37 staff at NF 1, a nursing facility that utilizes video cameras in resident rooms, there is a mix of perceptions regarding video cameras protecting resident rights. Administrator/DON and CNAs agree in their perceptions that video cameras do not protect resident rights. None of the administrator/DONs think video cameras protect resident rights while 50% of CNAs disagree that video cameras protect resident rights. However, 50% of nurses agree or strongly agree that video cameras protect resident rights. Interestingly, 40% of nurses

disagree that video cameras compromise resident rights. Nurses are split in their perceptions of video cameras. While 66% of administrator/DONs agree that video cameras compromise resident rights. In support of Hypothesis 2, administrator/DONs and nurses have different perceptions. Furthermore, staff at NF 1 generally tend to disagree that video cameras protect resident rights. The results from NF 1 staff do not support Hypothesis 1. Table A.17 displays these results.

Among the 31 staff at NF 2, a nursing facility that utilizes video cameras in their common areas, the majority agree that video cameras compromise resident rights. While the Administrator/DON and social service staff tend to agree that video cameras protect resident rights, almost 60% of nurses disagree that video cameras protect resident rights. While 63% of CNAs' agree video cameras compromise resident rights. The different perceptions among types of staff support Hypothesis 2. There is a different pattern among staff at NF 2 and NF 1. The findings from NF 2 do not support Hypothesis 1. Table A.18 reflects these results.

Among the 17 staff at NF 3, a nursing facility that utilizes video cameras in their common areas, the majority of all types of staff agree that video cameras protect resident rights. These results support Hypothesis 1. However, the majority of most types of staff were neutral regarding whether video cameras compromise resident rights. Interestingly, staff in the other category were evenly split between (50%) disagree and (50%) neutral regarding whether video cameras compromise rights. While staff at NF 3 generally tend to agree that video cameras protect resident rights, they are uncertain if video cameras compromise resident rights. The different perceptions among types of staff at NF 3 support Hypothesis 2. Table A.19 displays these results.

Among the 19 staff at NF 4, a nursing facility that does not utilize any video cameras in their nursing facility, the majority of all types of staff agree that video cameras protect resident rights. Interestingly, the administrator/DONs agree that video cameras both protect and compromise resident rights. Nurses are evenly split; 40% agree video cameras compromise resident rights and 40% disagree that video cameras compromise resident rights. There are mixed perceptions among staff, supporting Hypothesis 2. Table A.20 reflects these results.

In summary, after examining staff members from all three nursing facilities (NF 1, NF 2, NF 3) with prior experience with electronic monitoring, the findings reveal that staff members from these facilities do not necessarily have a greater acceptance of electronic monitoring among staff. Therefore, the findings do not support Hypothesis 1. Only staff members from NF 3 believe that electronic monitoring protects resident rights. Therefore, the findings from this nursing facility do support Hypothesis 1. Staff members from NF 4, that do not utilize electronic monitoring in the facility, revealed that electronic monitoring does protect resident rights. The different perceptions among staff at all four of the nursing facilities (NF 1, NF 2, NF 3 and NF 4) support Hypothesis 2, that different types of staff will have different perceptions of electronic monitoring.

Multivariate Analysis

Multivariate analysis employed logistic regression analysis, predicting several independent variables. The nursing facilities were collapsed into three categories: (1) NF 1, (2) NF 2 and NF 3 and (3) NF 4. NF 4 is the reference category because it is the only nursing facility that does not utilize electronic monitoring. The staff were collapsed into three categories: (1) administrator and director of nursing (DON), (2) registered nurses and licensed vocational nurses

(nurses), (3) certified nurse aides (CNA), (4) other: activity director and social services (social services) and other. CNA is the reference category because it is the predominant type of staff in the sample. Multivariate analysis was performed to test Hypothesis 1 and 2.

Logistic regression with predictors (comparing nursing facilities and staff in nursing facilities with video cameras and without video cameras) was performed (refer to Table A.21). Odds ratios and confidence intervals (upper bound and lower bound) were reported in the tables. In support of Hypothesis 2, other staff are about one-fourth as likely to agree that video cameras compromise resident rights compared to CNAs' (0.27, $p < .05$ level). Those staff members that have been employed longer are also less likely to agree that video cameras protect resident rights (0.99, $p < .05$); about one percent decline in agreement per year of employment. These results also support Hypothesis 2. Staff working in nursing facilities that utilize video cameras in common areas (NF 2 and the NF 3) are almost three times as likely to agree that video cameras compromise resident rights compared to NF 4 (2.92, $p < .05$). To reiterate the previous results, NF 2 and NF 3 staff are less likely to agree that video cameras protect resident rights (0.42, $p < .05$). These findings do not support Hypothesis 1. Staff in a nursing facility with video cameras in rooms (NF 1) are about one-fourth as likely to agree that video cameras protect resident rights compared to those in the reference facility (NF 4) that does not monitor (0.24, $p < .01$). These results do not support Hypothesis 1.

NF 1 staff are about one-fifth as likely to agree that the perceived benefits of electronic monitoring are greater than the perceived risks of electronic monitoring compared to NF 4 staff (0.20, $p < .01$ level). These results do not support Hypothesis 1. NF 1 staff, those who have video cameras in their resident rooms, are less likely to agree that video cameras complement staffing (0.15, $p < .001$). These findings do not support Hypothesis 1. NF 2 and NF 3 staff, those

who have video cameras in their common areas, were likely to disagree that video cameras complement staffing (0.23, $p < .01$). These findings do not support Hypothesis 1. While those staff who have been employed longer from NF 1, NF 2, and NF 3 were very likely to agree that video cameras complement staffing compared to those staff who have been employed for a short length of time (1.00, $p < .05$). These results support Hypothesis 2. Those staff who have been employed longer tend to agree that electronic monitoring may interfere with the bond between staff and residents (1.00, $p < .05$). These findings also support Hypothesis 2. However, those staff who have worked longer and have more experience are less likely to agree that video cameras protect residents from abuse and less likely agree that video cameras will increase quality of care (0.99 and 0.99 respectively, $p < .05$). Consequently, staff from NF 1, NF 2 and NF 3 also disagree that video cameras increase quality of care (0.24 and 0.24 respectively, $p < .01$). These findings do not support Hypothesis 1. These results are reflected in Tables A.22, A.23 and A.24.

In support of Hypothesis 2, other staff are three times more likely to agree that residents will have more control or leverage by utilizing video cameras compared to CNAs (3.97, $p < .01$). However, NF 1 staff disagree that residents will have more control or leverage (0.29, $p < .05$ level). NF 1 staff are also less likely to agree that residents will feel empowered by utilizing video cameras compared to NF 4 staff (0.14, $p < .01$). Nurses are three times more likely than CNAs to agree that electronic monitoring may cause anxiety (3.13, $p < .05$ level). Administrator/DON tend to agree that residents do not utilize video cameras due to cost compared to other types of staff ($p < .05$ level); specifically Administrator/DON are also five times more likely than CNAs to agree that residents do not utilize video cameras due to cost (4.6,

$p < .05$ level). The different perceptions among different types of staff support Hypothesis 2. These results are displayed in Tables A.24, A.25 and A.26.

In summary, after examining staff members from nursing facilities (NF 1; NF 2 and NF 3) with prior experience with electronic monitoring, the findings revealed that staff members from these facilities do not have a greater acceptance of electronic monitoring compared to staff members from NF 4, a nursing facility that does not have any experience with electronic monitoring. The collapsed nursing facilities are more likely to agree that electronic monitoring compromises resident rights compared to NF 4. Therefore, the findings do not support Hypothesis 1. The staff members from nursing facilities (NF 1; NF 2 and NF 3) are less likely to agree that electronic monitoring protects from abuse or that it increase quality of care compared to staff from NF 4. The findings also revealed that staff members from NF 1, the nursing facility that utilizes both electronic monitoring in resident rooms and in common areas, are less likely to agree that the perceived benefits of electronic monitoring are greater than the perceived risks or that residents feel empowered utilizing electronic monitoring compared to NF 4. Both of these results also do not support Hypothesis 1.

The different perceptions among staff at the nursing facilities support Hypothesis 2, that different types of staff will have different perceptions of electronic monitoring. Other staff members were less likely to agree that electronic monitoring compromises resident rights compared to CNAs. Other staff members were also more likely to agree that electronic monitoring will give residents more control or leverage. RN's were three times more likely to agree that electronic monitoring may cause anxiety compared to CNAs. Administrator/Director of Nurses were five times more likely to agree that residents will not use electronic monitoring because of cost compared to CNAs. Among staff members from the nursing facilities, those that

were employed longer were more likely to agree that electronic monitoring complements staffing and interferes with the bond between residents and staff compared to those staff members who were employed for shorter length of time; those employed longer were more likely to disagree that electronic monitoring protects resident rights. All of these findings support Hypothesis 2.

CHAPTER 5

DISCUSSION OF FINDINGS

While there is extensive literature on the ethics of electronic monitoring in the workplace, there is limited research on electronic monitoring in nursing facilities and the ethics of electronic monitoring in these facilities. The debate of electronic monitoring in nursing facilities continues throughout several states, the nursing home industry and in the media because there have not been any studies conducted proving whether the benefits of electronic monitoring are greater than their risks. Therefore, the current study focused on this under-researched topic. The main objective of this exploratory study was to understand resident, family member and staff perceptions of electronic monitoring in nursing facilities and determine if electronic monitoring protects or compromises resident rights. This chapter presents a discussion of the findings from data collected through interviews and survey questionnaires.

Findings from the present study indicated that some of the residents', family members' and staff perceptions of electronic monitoring are similar, specifically regarding some of the benefits that electronic monitoring can provide. However, they differ in their perceptions of whether electronic monitoring protects or compromises resident rights. The findings also revealed that nursing facilities with prior experience with electronic monitoring in resident rooms and in common areas affect residents, family members and staff perceptions of electronic monitoring differently. The findings also support that different types of staff will have different perceptions of electronic monitoring.

Both ethical theories and social theories explain resident's perceptions, acceptance and utilization, of electronic monitoring. Ethical theories and ethical principles of decision making provide a foundation and guideline as to how residents may make decisions regarding whether

electronic monitoring is acceptable, should be utilized and whether protects or compromises their resident rights. Drawing upon the Unified Theory of Acceptance and Use of Technology (UTAUT), residents' behavioral intentions and attitudes towards electronic monitoring is explained.

The UTAUT has four predictors of behavioral intention and usage: performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003). Gender, age, experience with technology and voluntariness of use are suggested to moderate the influence of the four predictors on behavioral intention. When effort expectancy and social influence were moderated by gender, age and experience, the effect was stronger for women (Venkatesh et al., 2003). The majority of residents in this study were female, in the 80-89 age range, Caucasian were high school graduates and from NF 1, the facility has been utilizing video cameras in common areas for the past 20 years and intermittently in resident rooms for the past 8 years. It was not surprising that a large majority of the residents were females because females have a longer life expectancy compared to males (National Institute on Aging, 2007). Consequently, the female older adults most likely spend their later years in a nursing facility.

For residents, effort expectancy, social influence and facilitating conditions, self-efficacy and anxiety were examined to determine if it influences resident's attitudes toward electronic monitoring. Effort expectancy was not found to influence the adoption of video cameras. Residents were not fully educated about electronic monitoring. They were not aware of all the advantages and disadvantages nor were they were aware how to use a video camera. The option to turn the video camera on or off at their choosing was not supported for this same reason. The perception that video cameras are difficult to use may hinder them from adopting them. In turn, the video camera would be useless. However, some residents were willing to learn how to use a

video camera. Based on the simplicity and ease of use, residents' perceptions may change after their trial. Then effort expectancy could influence residents to adopt video cameras for their rooms.

Social influence negatively affects a resident's attitude towards video cameras. In this study, family members disinterest in video cameras in resident rooms affects resident's attitudes and intention to adopt. Family members have feelings of guilt for placing their relatives in nursing homes. Therefore, adding a video camera to monitor a relative would invade their privacy and cause anxiety in residents. Family members also want their relatives to have a trusting relationship with the staff members since that trust and bond between staff and residents are important for resident satisfaction and quality of life (Ball et al., 2009). If family members suggest utilizing video cameras, the trust between the resident and staff member could be broken.

Based on this evidence, social influence negatively affects a resident's attitude towards video cameras. Even though residents were required to sign a form informing them of electronic monitoring and the option to utilize video cameras in their rooms, the majority of residents were not aware it was an option. Residents typically stated that their "family took care of paperwork" and told them the important information. If family members were not interested in electronic monitoring in rooms then they might not have considered electronic monitoring an important matter and may not have discussed the option. Therefore, residents would not perceive that their family members believe they should use a video camera. Freedom to make decisions is a resident right. The ethical principle of autonomy allows each resident to make a decision regarding video cameras. The resident's wishes should be respected. Family members that do not fully inform the resident of all aspects of electronic monitoring and allowing them, if competent, to make such a decision were violating the ethical principle of autonomy.

Some residents supported video cameras in their room, but did not have a video camera in their room. Based on these responses, self-efficacy would not influence residents' to adopt video cameras in their rooms. One reason is because the benefits of a video camera are similar to the benefits of roommate. However, if they need immediate help, roommates would be more beneficial. Furthermore, video cameras would not accomplish a resident's goals as effectively as a roommate. Like a video camera, if they have a roommate, "they do not have much privacy." Residents were not interested in the option to have a video camera that could be turned on or off at their choosing to protect their privacy. Residents believe they would forget to turn the camera back on after turning it off. Residents were also afraid if they could turn it on or off so could someone else. Ultimately, it would be useless and not achieve the goals that video cameras were intended to accomplish such as preventing abuse, neglect, theft or overall safety precaution.

Based on these findings, anxiety would not influence residents to adopt video cameras. The majority of residents were not interested in having video cameras in their rooms because of the emotional strain that video cameras would cause residents. They repeatedly stated their disinterest in video cameras for reasons such as "don't want to be watched 24 hours of the day," "I don't need one now; I don't think I have been stolen from," "no, I won't have any privacy" or "it is too costly." Residents believed the resident right most at risk if they had a video camera in their room was privacy. Their privacy would be invaded if they were talking on the phone, visiting with family or friends, dressing, etc. Video cameras can range from under 100 dollars to thousands of dollars after installation (Kohl, 2003). Some residents expressed that since they are responsible to bear the cost for the video camera and installation they could not afford it. Since Medicare does not pay for video cameras, it would not be available to many residents. The cost of video cameras would cause residents anxiety.

Based on this response, self-efficacy does influence residents to adopt video cameras in their rooms. In certain situations, residents believe that video cameras could accomplish their expected goals. Residents also stated if "I needed a video camera at a point in my life, I would consider it." Moreover, if the residents were at a stage in their life in which they were not competent and they needed a video camera in their room then they considered their safety was more important than privacy and loss of dignity. Residents were aware of some of the benefits of video cameras such as alert to abuse, neglect, theft and mistake with medication. There is evidence that confirms that video cameras deter resident abuse and neglect, which suggests that electronic monitoring may be the next step toward enhanced resident safety (Kohl, 2003). "Resident's safety embodies the first principle of medicine: 'do no harm,' nonmaleficence" (Chen et al., 2007). Under the ethical principle of nonmaleficience, staff are expected to "do no harm." Staff are obligated to minimize risks and prevent harm from occurring to their residents. Unfortunately, staff have been found abusing, mistreating and neglecting residents in some nursing facilities (Cottle, 2004; Kohl, 2003) thus, violating the ethical principle of nonmaleficence. Video cameras can deter staff from harming their residents. Furthermore, residents believe that video cameras could aid them in such situations by preventing harm and thus, ultimately, improving their quality of care. In this situation, video cameras would be beneficial.

Self- efficacy influences residents to adopt video cameras in common rooms. Video cameras in common areas were more appealing to residents. Residents understood that video cameras could protect them from unwanted visitors, altercations, crime, etc. Many residents preferred to have video cameras in common areas of the nursing facility. They did not feel their privacy was violated because "nothing private happens in common areas." Video cameras in

common rooms would not be violating the ethical principle of justice because nursing facilities are required to post signs indicating the presence of electronic monitoring. Every resident, staff and family member would be fully aware of the presence of video cameras in the nursing facility. Based on the ethical principle of beneficence, residents are more accepting of video cameras in common areas because they believe electronic monitoring would achieve more "good" than not having electronic monitoring. Video cameras could improve quality of care and quality of life for residents.

Ultimately, half of the resident's overall perception of electronic monitoring was that it violates their resident rights. Based on their responses, it appears that since electronic monitoring in resident rooms invades privacy it was unethical, unjustifiable and compromises their rights (if they were competent and did not feel video cameras were necessary). However, if the resident was incompetent, feared being harmed or feared being stolen from then under the utilitarian and Kantian perspectives electronic monitoring in resident rooms would be ethical and justifiable. The utilitarian perspective emphasizes minimizing potential harms while the Kantian perspective emphasizes that the resident is making an informed decision about being monitored. Electronic monitoring in common areas would also be considered ethical, justifiable and fit both utilitarian and Kantian perspectives. Based on the differing perceptions of video cameras in resident rooms and in common areas, many residents believed that video cameras both protect and violate resident rights. Ultimately, residents had to decide which is more important- violating the resident right of privacy or protecting the resident rights such as being free from abuse, mistreatment, theft etc. Based on their responses, a quarter of the residents were not able to make this decision.

Not surprising, resident's perceptions of electronic monitoring were different based on the nursing facility they resided in. Residents from NF 2, have video cameras in common areas, were evenly split between whether video cameras protect or violate resident rights. NF 2 residents were most interested in video cameras in residents room if there was an option to turn the video camera on or off at their choosing. While residents from the NF 3 believe that video cameras both protect and violate resident rights. NF 3 residents were the most interested in testing video cameras in their rooms to determine if they would consider video cameras in the later stage of their life. Based on this finding, UTAUT was explained. Residents from both nursing facilities seem to have had a positive experience with electronic monitoring in common areas. It appears that nursing facilities with electronic monitoring in common areas were more accepting of video cameras in resident rooms. Based on UTAUT, these residents are more likely to accept and utilize electronic monitoring.

However, this theory contrasts the findings for NF 1 residents. NF 1 residents are most familiar with electronic monitoring in resident rooms and in the common area. These residents concluded that all resident rights were at risk with the use of video cameras. Ultimately, these residents felt that video cameras violate their resident rights. A possible explanation for this conclusion is that residents experience with electronic monitoring is negative. Residents seem to believe that video cameras cannot accomplish goals to improve quality of care. These residents may have had the opportunity to enter a resident's room that had a video camera and had the experience of being monitored. The residents may have been uncomfortable and thus believe video cameras violate resident rights. It is essential to note that each nurse's station has monitors displaying the floors common areas at this facility. Therefore, anyone can monitor the activities occurring in the common areas. Residents may believe this to be a reason that video cameras

violate their rights. Residents are a vulnerable population and losing these rights will not influence them to accept electronic monitoring. NF 4 residents do not have any experience with electronic monitoring. Furthermore, they are least educated on electronic monitoring. Consequently, these residents believe that video cameras violate resident rights. NF 4 residents seem to be happy with their care and do not see video cameras as a necessity. Therefore, they believe video cameras will negatively affect their life and violate their rights.

The findings revealed that self-efficacy, in relation to using video cameras in resident rooms at a certain stage in their life as well as using video cameras in common rooms, is the only determinant that could influence resident's to adopt electronic monitoring. It appears those residents that have more experience (NF 1) or no experience (NF 4) with electronic monitoring are least interested in electronic monitoring. Whereas, residents that have some experience with electronic monitoring are interested in electronic monitoring and willing to test it to determine the advantages and disadvantages. Consequently, there is a link between type of experience with electronic monitoring and residents' perceptions of electronic monitoring.

The unified theory of acceptance and use of technology (UTAUT) was also used to explain family members' behavioral intentions and attitudes towards electronic monitoring. For family members, facilitating conditions, self-efficacy and anxiety were examined to determine if it influences family members' attitudes toward electronic monitoring.

The majority of family members in the study were female, in the 23-74 age range, Caucasian, mainly daughters of residents and visit their family weekly. Since these family members visit the resident frequently, it appears that they are close with the resident and are a significant part of their life. Therefore, residents may rely on them to assist in making decisions

regarding their life at the nursing facility. Furthermore, a family member's perception of electronic monitoring could influence the resident's perceptions.

Since the majority of family members visit frequently, they believe that video cameras are not necessary in resident rooms. There is bias towards video cameras in resident rooms because of the lack of privacy for both themselves and the residents. Family members also fear that video cameras can cause anxiety in the residents. Anxiety influences family members that video cameras should not be adopted. Another fear is that video cameras may interfere with the bond between resident and staff. If a video camera is placed in a room, trust could be lost between the resident and staff. Since family members are unable to be with the resident at all times, the trust and friendship between staff and resident is important (Adelman, 2002).

Self- efficacy influences family member's to accept video cameras in nursing facilities. Ultimately, family members believe the benefits of electronic monitoring surpass the risks. Therefore, family members believe that video cameras can accomplish the expected goals, ensuring their relative receives quality of care. Family members believe that video cameras are necessary for security purposes. Since older adults are vulnerable, they believe video cameras can protect residents from abuse and neglect. Studies indicate that video cameras may help eliminate abuse (Kohl, 2003). Family members have strong, positive feelings towards video cameras in common areas. A video camera at the front door can show who enters and exits the nursing facility. Specifically, video cameras are important for security reasons especially for residents with dementia or Alzheimer's disease that wander (Logsdon et al., 1998). Overall, family members believe that video cameras protect resident rights. Family members believe that video cameras are an added form of protection whose benefits are greater than the risks. Based

on their expected goals of video cameras, family members will accept and utilize electronic monitoring if needed.

There was a small sample of family members for this study. Possible explanations include: residents did not provide their family members name and phone number because they did not want to burden their family members with this survey; residents did not remember their family member's phone number; and residents that were not interested in video cameras in their rooms did not want this survey to influence their family members or have family members suggest this option.

The unified theory of acceptance and use of technology (UTAUT) was also used to explain staff members' behavioral intentions and attitudes towards electronic monitoring. For staff members, job performance was examined to determine if it influences staff members' attitudes toward electronic monitoring.

The majority of staff in this study were female, in the 21-72 age range, Caucasian and certified nurse aides. The majority of staff from all four nursing facilities believe that video cameras are necessary for security purposes and should be present in nursing facilities. Perceived usefulness is a main factor that affects whether staff members will accept electronic monitoring.

Job performance can influence staff members to accept video cameras in nursing facilities. Enhanced job performance is linked to improved quality of care, which is a priority for nursing facilities. Staff from all four nursing facilities believe video cameras should be placed in common areas. Video cameras monitoring staff members will ensure that they perform at the highest level of care. However, the majority disagree with their placement in resident rooms. Specifically, NF 1 staff and NF 2 staff disagree with video cameras in resident rooms. NF 1 staff have experience with video cameras in resident rooms, they have been utilizing video cameras in

resident's rooms intermittently for the past 8 years. Their prior experience with video cameras in rooms may have been negative. Therefore, staff with prior experience with electronic monitoring will not be more accepting of video cameras in nursing facilities. NF 2 staff have had experience with video cameras in common areas only for the past year. Yet, their prior exposure to video cameras seems to have been negative. Both of these findings do not support Hypothesis 1.

A few reasons that staff do not believe that video cameras should be present in rooms is because of the fear that electronic monitoring can cause anxiety in residents, because it interferes with the bond between staff and residents and because it invades privacy. Specifically, nurses believe electronic monitoring can cause anxiety. Nurses work with residents on a daily basis and may be able to sense resident's anxiety around video cameras. As direct care workers, they understand their resident's vulnerability because they work so closely with the resident. Video cameras could make residents more uncomfortable and reduce their quality of life. Staff members understand that privacy is a priority of residents. Therefore, video cameras are not favorable to those staff members, especially if they have developed a trusting relationship with their residents. If residents utilize electronic monitoring in rooms, trust could be broken between staff members that are more involved in their care especially since some staff members are like family. NF 3 staff, utilize video cameras in common areas, and NF 4 staff, do not utilize video cameras in their facility, were both conflicting on whether video cameras should be placed in resident rooms. NF 3 staff have prior experience with video cameras in common areas for the past 18 years. However, these staff members are still uncertain if video cameras in resident rooms are appropriate. These findings do not support Hypothesis 1. NF 4 staff do not have prior experience with video cameras and are uncertain if they are necessary.

The task-technology fit theory is used to explain different staff members' behavioral intentions and attitudes towards electronic monitoring. If video cameras complement the type of tasks that staff members perform, it could determine if it influences particular types of staff members' attitudes toward electronic monitoring.

Less than half of the staff believe that electronic monitoring protects resident rights. NF 4 staff have the least experience with electronic monitoring but believe it can protect their resident's rights. The findings suggest that staff falling in the Other category, such as rehabilitation therapy, medical technician, activity directors/social services and maintenance director/security, who have less contact with residents due to episodic or scheduled appointments, tend to believe that video cameras protect resident rights. Since these staff members are less involved in the care compared to direct care staff members (RN, LVN and CNA), they are not as aware of residents feelings, attitudes and their vulnerability. Other staff members do not have the same type of close relationship with residents. Thus, believe that video cameras are more favorable for residents. The tasks of other staff members complement video camera usage. For example, activity directors tasks include providing entertainment for residents and ensuring their safety in common areas. Video cameras complement the task of ensuring residents safety while in their social groups in the common areas. While a nurse's main task is on providing medical for residents, which video cameras cannot provide. Other staff believe that video cameras protect resident rights because residents have more control or leverage. Staff members believe video cameras give residents evidence to prove their claim, thus protecting their safety rights. In general, staff believe that video cameras can protect residents from abuse and minimize neglect, two important resident rights.

NF 1 staff and NF 2/NF 3 (collapsed) staff and those staff who have been working a

longer period of time all strongly believe video cameras do not protect resident rights; those who have more experience with video cameras have this belief. These findings do not support Hypothesis 1. Nursing facility staff believe that privacy and dignity were most at risk if video cameras were utilized. These are two explanations as to why staff believe that electronic monitoring compromises resident rights. However, some staff were conflicted on whether video cameras compromise resident rights. NF 1 staff have prior experience with electronic monitoring in resident rooms and in common areas, yet these staff stated they disagree or were uncertain if video cameras compromise resident rights. Since NF 1 staff strongly believe video cameras do not protect resident rights but uncertain if video cameras compromise resident rights, it appears they are undecided on the subject. Similar to NF 1 staff, some staff, such as Administrators/Director of Nurses, nurses and CNAs, have belief that video cameras protect resident rights but also have belief that it compromises resident rights, so they chose both. Supporting Hypothesis 2, the findings suggest that those staff that have daily contact or more hands on contact with residents tend to be similar in their perceptions towards video cameras.

NF 1 staff do not believe the perceived benefits of electronic monitoring are greater than the perceived risks, which could be explained by their experience with electronic monitoring. However, the majority of staff were conflicted on whether the perceived benefits of electronic monitoring were greater than the perceived risks. Staff perceptions seem anomalous. A possible explanation for the response is due to the term “perceived.” Staff responded to this question based on their awareness of benefits and risks.

Staff from nursing facilities that have prior experience with electronic monitoring, NF 1, NF 2 and the NF 3 (collapsed), do not believe video cameras will complement staffing or improve quality of care compared to NF 4, a nursing facility that does not have electronic

monitoring. Some staff will feel anxiety from being taped, which could hinder them from providing quality care. Anxious staff could cause mistakes such as medication errors resulting from providing quality care. Electronic monitoring causing anxiety is another explanation as to why staff do not agree with the placement of video cameras in resident rooms. Based on UTAUT, job performance does not influence these staff members from accepting video cameras in their facilities.

Administrators/ directors of nurses believe that improving quality of care is important, which explains their focus on risk management. Since their tasks involve improving quality of care and ensuring residents security, video cameras complement these tasks. Therefore, they may be more accepting of electronic monitoring in nursing facilities. Administrators/directors of nurses also believes residents are not willing to have video cameras in their rooms since residents have to bear the costs of the device and installation. These views contrast CNAs views. Administrators have initial contact with residents and their families regarding decisions upon entering the nursing facility which includes costs whereas CNAs are not present at this meeting. The financial aspects are a significant burden on residents since Medicare or Medicaid will not assist with costs. This is a plausible explanation as to why staff believe residents will not be willing to have video cameras in their rooms.

When comparing the family member and staff perceptions, the findings reveal that the family member's fear that video cameras would interfere with the bond between staff and residents is true. Staff, especially those who have been employed longer, also believe that video cameras would interfere with this bond. This is a plausible explanation as to why family members and staff are hesitant to have video cameras in resident rooms.

In support of Hypothesis 2, different types of staff in the same nursing facility seem to

have conflicting views. The task-technology fit model best explains these results. Goodhue and Thompson (1995) developed a measure of task technology fit that consists of 8 factors: quality, locatability, authorization, compatibility, ease of use/training, production timeliness, systems reliability, and relationship with users. At NF 1, administrators/directors of nurses believe that video cameras do not protect resident rights whereas nurses believe that video cameras do protect resident rights. At NF 2, administrators/directors of nurses believe that video cameras do protect resident rights whereas nurses believe that video cameras do not protect resident rights. At NF 4, administrators/directors of nurses and nurses both have mixed perceptions of whether electronic monitoring protects or compromises resident rights.

There are different patterns among staff from different nursing facilities regarding this aspect of the debate. A possible explanation for these results could be due to staff bias. Staff, who are aware of their resident's perceptions of video cameras, those that are not interested in electronic monitoring for personals reasons or the nursing facilities corporate office's influence could alter the results for this study. These results are not strong enough to make a direct link between the type of staff and its perceptions towards whether electronic monitoring protects or compromises resident rights.

In summary, the staff overall agreed that video cameras were necessary in nursing facilities especially in common areas. The findings suggest that video cameras in common areas were appealing due to the extra security and protection it would provide. However, overall staff either disagreed or were neutral regarding video cameras in resident rooms. It appears that staff that have less contact, staff with scheduled appointments or episodic visits, are more accepting of electronic monitoring. These staff members do not share the close relationship with their residents that direct care workers (RN and LVN) share. Consequently, the type of tasks that the

staff perform explain whether they will utilize video cameras. If their tasks complement video cameras, then they will be more willing to accept video cameras. The findings also suggest that staff believe video cameras cause anxiety and interfere with the bond between themselves and staff. Thus, explaining why staff believe video cameras should not be placed in resident rooms. The findings also provide explanations to why staff believe electronic monitoring either protects or compromises resident rights. There appears to be a link between staff member's prior experience with electronic monitoring and their perceptions of electronic monitoring. Those staffs that have exposure and prior experience with video cameras in their nursing facility seem to have a more negative perception of electronic monitoring. Therefore, staff members with prior experience with electronic monitoring are not as willing to accept of electronic monitoring.

CHAPTER 6

CONCLUSION

This final chapter includes a summary of the study, implications and recommendations for future studies. In 2001, Texas became the first state to allow authorized electronic monitoring (AEM). Almost 10 years later, there is still a debate in the media and throughout the nursing home industry about the use of electronic monitoring in nursing facilities in Texas and in other states (Adelman, 2002; Cottle, 2004; Kohl, 2003). Many states are uncertain about the benefits and risks of electronic monitoring. Consequently, electronic monitoring is scarce in many nursing facilities. Since a study has not been conducted nor has there been extensive research on this important issue, it was essential to develop a study to understand the intent and purpose for the use of electronic monitoring, gain an in-dept understanding of the perceptions of those directly affected by the use of electronic monitoring and more specifically explore whether electronic monitoring effects resident rights.

Summary of Findings

This exploratory study examined resident, family member and staff perceptions of electronic monitoring and whether electronic monitoring protects or compromises resident rights. The study also compared resident, family member and staff perceptions of those living, visiting and working in a nursing facility: that utilized video cameras in resident rooms, that utilized video cameras in common areas, and that did not utilize video cameras in the nursing facility.

The convenience sample consisted of (a) 53 nursing facility residents, (b) 104 nursing facility staff members, and (c) 25 family members of residents. Data were collected from

respondents through interviews and survey questionnaires from four nursing facilities in the Dallas Fort Worth metroplex: NF 1, NF 2, NF 3 and NF 4.

The following instruments were used to obtain data:

1. The resident survey, composed of 15 open-ended questions and 5 demographic questions, was developed by the researcher to collect data on resident's perceptions of electronic monitoring.
2. The staff survey, composed of 29 Likert scaled questions and 5 demographic questions, was developed by the researcher to collect data on staff perceptions of electronic monitoring.
3. The family member survey, was composed of 29 Likert scaled questions and 5 demographic questions, was developed by the researcher to collect data on family member's perceptions of electronic monitoring.

The findings of this study revealed that some of the residents', family members' and staffs' perceptions of electronic monitoring are similar. However, they differ in their perceptions of whether electronic monitoring protects or compromises resident rights. Nursing facilities with prior experience with electronic monitoring in resident rooms and in common areas affect residents', family members' and staff members' perceptions of electronic monitoring. Among staff members, nursing facilities with prior experience with electronic monitoring are not more accepting of electronic monitoring. Different types of staff members have different perceptions of electronic monitoring.

The major findings of the study:

1. The majority of nursing home residents agree there are many benefits to electronic monitoring in nursing facilities such as alerting to abuse and improving quality of care. While

the majority of residents are interested in having video cameras in common areas, the majority of residents are not interested in having video cameras in their rooms at this stage in their life. A large number of residents believe video cameras violate their resident rights, specifically privacy. However, if they develop a cognitive impairment and not able to express themselves, they are likely to consider electronic monitoring in their rooms regardless of the risk to invasion of privacy or loss of dignity. The utilitarian theory explains that video cameras can minimize potential harm during this stage in their life so residents are more accepting of video cameras. The unified theory of acceptance and use of technology explain that some of residents' usage intentions are linked to their attitudes towards video cameras.

2. Resident's perceptions of electronic monitoring were different based on the type of nursing facility they resided in. NF 1 residents and NF 4 residents both believe that video cameras violate resident rights. The UTAUT's construct of anxiety explains these residents' perceptions. However, residents from NF 2 were evenly split between whether video cameras protect or violate resident rights. While residents from the NF 3 believe that video cameras both protect and violate resident rights. There appears to be a link between type of exposure, video cameras in common rooms, and residents' acceptance of electronic monitoring. The UTAUT construct self-efficacy explains these findings.

3. A majority of family members prefer if video cameras were in nursing facilities, specifically in common areas. A large majority of family members believe there are many benefits to electronic monitoring and that it is necessary for security purposes. Furthermore, more than half of family members believe video cameras protect resident rights. However, family members fear that electronic monitoring may cause resident's anxiety and interfere with

the bond between resident and staff. Therefore, a majority of family members do not prefer video cameras in resident rooms. The UTAUT construct self-efficacy explains these findings.

4. A large majority of staff prefer if video cameras were in nursing facilities, specifically in common areas. The UTAUT construct job performance is linked to quality of care, which influences staff members to accept video cameras in common areas. However, those staff members who have prior experience with electronic monitoring prefer not to have video cameras in resident rooms. This finding does not support Hypothesis 1. Overall, staff fear electronic monitoring will invade privacy, cause anxiety, and interfere with the bond between themselves and residents.

5. Staff perceptions of electronic monitoring were different based on the type of nursing facility they were employed at. NF 1 and NF 2 staff do not prefer video cameras in resident rooms while NF 3 and NF 4 staff are uncertain if video cameras should be placed in resident rooms. NF 1 staff, most experience with electronic monitoring, do not believe the perceived benefits of electronic monitoring are greater than the perceived risks. These results do not support Hypothesis 1. While NF 4 staff, do not have any experience with electronic monitoring, believe video cameras can protect resident rights. Those staff members with prior experience with electronic monitoring, NF 1, NF 2 and NF 3 (collapsed) and those who have been employed longer, do not think video cameras protect resident rights. Consequently, those staff with prior experience with electronic monitoring and those who have been employed longer have more negative perceptions of electronic monitoring. Furthermore, those staff members with prior experience with electronic monitoring are not more accepting of electronic monitoring. These results do not support Hypothesis 1.

6. In support of Hypothesis 2, different types of staff have contrasting perceptions of electronic monitoring. The Task-Technology Fit model explains these findings. Administrators and director of nurses make decisions regarding care based on risk management. Nurses believe that electronic monitoring may cause anxiety. It appears that those staff members that are more involved in care are less accepting of video cameras because they are more aware of resident's negative perceptions of video cameras. Other staff members, consisting of activity directors/social services, rehabilitation therapy, medical technician and maintenance director/security, believe that video cameras do not compromise resident rights and believe that residents will have more control or leverage by using video cameras. Both beliefs are contrasting to CNAs' beliefs. It appears that those staff who have less contact, less involved with residents, and spend less time in resident rooms are more accepting of electronic monitoring. These staff members do not have the type of close relationship with their residents.

Implications

The study findings suggest there are some practical implications to address. Residents, family members and staff are aware of the potential benefits of electronic monitoring in nursing facilities. While they are hesitant to have electronic monitoring in resident rooms, they are interested in electronic monitoring in common areas of the nursing facility. It appears that the majority of the respondents believe that video cameras invade all of their privacy. Consequently, they are reluctant to agree that video cameras should be placed in resident rooms. One suggestion would be to place video cameras outside each resident's room to at least indicate who enters and exits the resident's rooms. It would be a barrier to theft, abuse, mistreatment, neglect etc. Along with the other sanctions in the Double G Policy, video cameras placement in nursing facilities

could be a requirement for those nursing facilities in which residents have been repeatedly harmed.

The cost of video cameras is another deterrent from residents having video cameras. Video cameras can be costly and residents are not willing to pay an additional fee for it. Video cameras are essentially a safety precaution. If Medicare/Medicaid considered the costs to be included in their budget for nursing home care, it would greatly benefit the residents.

Resident rooms are resident's homes. Video cameras can be unsightly, obtrusive objects in their home. Technology companies need to be aware of their consumer's opinions. If technology companies developed a small video camera or sensor that was easy to use, residents may be more inclined to consider video cameras in their rooms. Since nursing facilities in Texas require a sign to be posted outside of the resident room if a video camera is present, the size of the video camera would not matter. Technology companies also need to consider adding an access code for residents to turn their video camera on or off at their choosing to ensure others cannot manipulate the video camera. In order to market appropriately to the nursing facility residents, it is important to highlight the attributes of video cameras. Studies need to be conducted to provide evidence of the potential benefits of video cameras.

The most difficult challenge of this study was locating nursing facilities that had video cameras in their facility or residents that had video cameras in their rooms and recruiting nursing facilities to participate in this study. Even though video cameras are allowed in nursing facilities, these facilities were reluctant to participate because they did not want any video cameras in their facilities. There may have been a fear that this study would influence residents to want video cameras in their facility. Interestingly, most residents that participated in this study had forgotten or were not aware they could have video cameras in their rooms. Even though nursing facilities

are required to inform their residents about authorized electronic monitoring, staff members' influences may deter residents from wanting or utilizing electronic monitoring.

Recommendations for Future Studies

After conducting this exploratory study and reviewing the results, questions have risen that need to be examined in future studies to enhance this research.

Further research studies are needed:

- Replicate the study using a larger sample of residents, family members and staff so the sample is more representative (ie. gender, ethnic origin, rural and urban areas).
- Replicate the study using a larger variety of nursing facilities in Texas (ie. different types of nursing facilities, nursing facilities located in rural and urban areas, nursing facilities cited for abuse, neglect etc.)
- Replicate the study 6 months later and 1 year later to determine if perceptions of electronic monitoring have changed based on need.
- Further explore resident's perceptions by including residents that utilize video cameras in their rooms.
- Further explore perceptions by using a qualitative approach for staff and family members.
- On the survey instrument, present case studies with different situations in which electronic monitoring may be used to determine if EM is necessary, determine if residents rights are protected or compromised, determine which resident rights are at risk etc.
- On the staff and family member survey instrument, remove the term "perceived" from a question, "I agree that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks," to determine if the results would be different.
- Further investigate authorized electronic monitoring and guidelines in other states. Compare and contrast Texas AEM guidelines with other states. Develop one set of AEM guidelines so other states consider AEM in their nursing facilities.

APPENDIX A

DEMOGRAPHIC DATA, FREQUENCIES, CROSS TABULATIONS AND LOGISTIC REGRESSION

Table A.1

*Residents Demographic Data (*n = *53)*

Variable		*n*	%
Gender	Female	41	77
	Male	12	23
Age	60-69	6	11
	70-79	14	26
	80-89	24	45
	90 Plus	9	17
Ethnic Origin	Caucasian	51	96
	African American	1	2
	Other	1	2
Education	High School Diploma	27	50
	College Degree	15	29
	Graduate Degree	11	21
Months Residing in NF Range (mean)		1-216 (33)	

Table A.2

Nursing Facilities 1-4 ResidentsDemographic Data

Variable		NF 1 (*n* = 13)		NF 2 (*n* = 17)		NF 3 (*n* = 14)		NF 4 (*n* = 9)	
Age Range (years)		69- 98		70- 100		64- 92		65-94	
Months Residing at NF (mean)		1-216 (29)		12-216 (49)		4-64 (30)		1-72 (30)	
		n	%	*n*	%	*n*	%	*n*	%
Gender	Female	10	77	10	60	9	64	7	78
	Male	3	23	7	40	5	36	2	22
Ethnic Origin	Caucasian	12	92	17	100	8	57	8	89
	African American	0	—	0	—	5	36	1	11
	Other	1	8	0	—	1	7	0	—
Education	High School Degree	5	38	4	23	8	57	7	78
	College Degree	5	38	7	42	5	36	1	11
	Graduate Degree	3	24	6	35	1	7	1	11

Table A.3

*Staff Demographic Data (*n = *104)*

Variable		Data	
Age Range (years)		21-72	
Length of Employment Range (months)		1-360	
		n	%
Gender	Female	90	86
	Male	14	14
Ethnic Origin	Caucasian	53	51
	African American	27	26
	Other	24	23
Position at NF	Administrator	6	6
	Director of Nurses	4	4
	Registered Nurses	13	12
	Licensed Vocational Nurses	13	12
	Certified Nurse Aides	41	39
	Activity Director/Wellness Director	10	10
	Rehabilitation Therapist	12	12
	Social Worker	2	2
	Medical Technician	1	1
	Maintenance Director	2	2

Table A.4

*NF 1 Staff Demographic Data (*n = *37)*

Variable		Data	
Age Range (years)		21-64	
Length of Employment Range (months)		1-307	
		n	%
Gender	Female	29	78
	Male	8	22
Ethnic Origin	Caucasian	10	27
	African American	22	59
	Other	5	14
Position at NF	Administrator	3	8
	Director of Nurses	0	—
	Registered Nurses	5	13
	Licensed Vocational Nurses	5	13
	Certified Nurse Aides	18	49
	Activity Director/Wellness Director	3	8
	Rehabilitation Therapist	1	3
	Social Worker	1	3
	Medical Technician	1	3
	Maintenance Director	0	—

Table A.5

*NF 2 Staff Demographic Data (*n = *31)*

Variable		Data	
Age Range (years)		21-64	
Length of Employment Range (months)		1-360	
		n	%
Gender	Female	29	93
	Male	2	7
Ethnic Origin	Caucasian	20	64
	African American	3	10
	Other	8	26
Position at NF	Administrator	1	3
	Director of Nurses	2	7
	Registered Nurses	5	16
	Licensed Vocational Nurses	5	16
	Certified Nurse Aides	11	35
	Activity Director/Wellness Director	0	20
	Rehabilitation Therapist	0	—
	Social Worker	0	—
	Medical Technician	0	—
	Maintenance Director	1	3

Table A.6

*NF 3 Staff Demographic Data (*n = *17)*

Variable		Data	
Age Range (years)		22-72	
Length of Employment Range (months)		1-285	
		n	%
Gender	Female	16	94
	Male	1	6
Ethnic Origin	Caucasian	12	71
	African American	1	6
	Other	4	23
Position at NF	Administrator	1	6
	Director of Nurses	1	6
	Registered Nurses	0	—
	Licensed Vocational Nurses	2	12
	Certified Nurse Aides	3	17
	Activity Director/Wellness Director	1	6
	Rehabilitation Therapist	8	47
	Social Worker	1	6
	Medical Technician	0	—
	Maintenance Director	0	—

Table A.7

*NF 4 Staff Demographic Data (*n *= 19)*

Variable		Data	
Age Range (years)		21-57	
Length of Employment Range (months)		1-360	
		n	%
Gender	Female	16	84
	Male	3	16
Ethnic Origin	Caucasian	11	58
	African American	1	5
	Other	7	37
Position at NF	Administrator	1	5
	Director of Nurses	1	5
	Registered Nurses	4	21
	Licensed Vocational Nurses	1	5
	Certified Nurse Aides	8	42
	Activity Director/Wellness Director	0	—
	Rehabilitation Therapist	3	17
	Social Worker	0	—
	Medical Technician	0	—
	Maintenance Director	1	5

Table A.8

*Family Members Demographic Data (*n *= 25)*

Variable		Data	
Age Range (years)		23-74	
		n	%
Gender	Female	16	64
	Male	9	36
Ethnic Origin	Caucasian	16	64
	African American	4	16
	Other	5	20
Relation to Resident	Wife	3	13
	Husband	1	4
	Daughter	11	49
	Son	6	25
	Niece	1	3
	Granddaughter	1	3
	Grandson	1	3
Visit Frequency	Weekly	16	64
	Monthly	9	36
Distribution among NFs	NF1	9	36
	NF2	7	28
	NF3	5	20
	NF4	4	16

Table A.9

Family Members: Perceptions of Electronic Monitoring

Perceptions of Electronic Monitoring		Strongly Agree	%	Agree	%	Neutral	%	Disagree	%	Strongly Disagree	%
Preferences	I would prefer if video cameras were placed in resident rooms	2	8	5	20	6	24	7	28	5	20
	I would prefer if video cameras were in common rooms	17	68	6	24	1	4	1	4	0	—
	I would prefer not to have any video cameras in the NF	0	0	2	8	1	4	6	24	16	64
	I believe residents want a video camera only under certain circumstances	8	32	9	36	2	80	5	20	1	4
Possible Advantages and Disadvantages	I think video cameras will improve a resident's quality of care	3	12	11	44	6	24	5	20	0	—
	I believe that a video camera can minimize neglect	6	24	14	56	1	4	4	16	0	—
	I believe a video camera is necessary for security purposes	11	44	10	40	3	12	1	4	0	—
	I think video cameras will complement staffing	1	4	13	52	7	28	4	16	0	—
	I agree that the perceived benefits are greater than the risks	1	4	14	56	6	24	4	16	0	—
	A reason residents may not utilize video cameras is due to cost	6	24	9	36	6	24	4	16	0	—
	EM may cause anxiety	0	—	14	56	5	20	6	24	0	—
	EM may interfere with the bond between residents and staff	0	—	13	52	7	28	4	16	1	4
	I agree that the perceived risks are greater than the benefits	0	—	4	16	8	32	12	48	1	4
Resident Rights Most at Risk	Resident Right most at risk when using a video camera is privacy	10	40	12	48	1	4	2	8	0	—
	Resident Right most at risk when using a video camera is dignity	6	24	14	56	2	8	3	12	0	—
	Resident Right most at risk when using a video camera is confidentiality	4	16	8	32	8	32	5	20	0	—
Video Cameras Effect on Resident Rights	I believe a video camera will protect resident rights	6	24	10	40	4	16	4	16	1	4
	I believe a video camera will compromise resident rights	2	8	7	28	5	20	11	44	0	—

Table A.10

Staff Perceptions of Electronic Monitoring, in % (n = *104)*

Perceptions of EM	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I would prefer if video cameras were placed in Resident Rooms	3 (3)	15 (15)	36 (37)	30 (31)	17 (18)
I would prefer if video cameras were placed in common rooms	33 (34)	34 (35)	22 (23)	7 (7)	5 (5)
I would prefer not to have any video cameras in the NF	6 (6)	10 (10)	22 (23)	44 (46)	18 (19)
I agree that the perceived benefits in using EM are greater than the risks	5 (5)	32 (33)	40 (42)	18 (19)	5 (5)
I believe a video camera will protect resident rights	17 (18)	26 (27)	25 (26)	26 (27)	6 (6)
I believe a video camera will compromise resident rights	13 (14)	19 (20)	30 (31)	35 (36)	3 (3)

Note. (Number in Parentheses) = Frequency

Table A.11

NF 1 Staff Perceptions of Electronic Monitoring, in % (n = *37)*

Perceptions of EM	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I would prefer if video cameras were placed in Resident Rooms	8 (3)	14 (5)	30 (11)	24 (9)	24 (9)
I would prefer if video cameras were placed in common rooms	24 (9)	43 (16)	16 (6)	8 (3)	8 (3)
I would prefer not to have any video cameras in the NF	8 (3)	22 (8)	19 (7)	30 (11)	22 (8)
I agree that the perceived benefits in using EM are greater than the risks	5 (2)	16 (12)	32 (14)	38 (3)	8 (3)
I believe a video camera will protect resident rights	14 (5)	19 (8)	22 (8)	38 (14)	8 (3)
I believe a video camera will compromise resident rights	8 (3)	22 (8)	27 (10)	43 (16)	— (0)

Note. (Number in Parentheses) = Frequency

Table A.12

*NF 2 Staff Perceptions of Electronic Monitoring, in % (*n = *31)*

Perceptions of EM	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I would prefer if video cameras were placed in Resident Rooms	— (0)	19 (6)	23 (7)	42 (13)	16 (5)
I would prefer if video cameras were placed in common rooms	42 (13)	35 (11)	13 (4)	6 (2)	3 (1)
I would prefer not to have any video cameras in the NF	6 (2)	6 (2)	13 (4)	52 (16)	23 (7)
I agree that the perceived benefits in using EM are greater than the risks	10 (3)	32(10)	48 (15)	6 (2)	3 (1)
I believe a video camera will protect resident rights	16 (5)	16 (5)	32 (10)	32 (10)	3 (1)
I believe a video camera will compromise resident rights	29 (9)	23 (6)	19 (6)	26 (8)	3 (1)

Note. (Number in Parentheses) = Frequency

Table A.13

*NF 3 Staff Perceptions of Electronic Monitoring, in % (*n = *17)*

Perceptions of EM	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I would prefer if video cameras were placed in Resident Rooms	— (0)	6 (1)	59 (10)	29 (5)	6 (1)
I would prefer if video cameras were placed in common rooms	29 (5)	24 (4)	35(6)	6 (1)	6 (1)
I would prefer not to have any video cameras in the NF	6 (1)	— (0)	47 (8)	35 (6)	12 (2)
I agree that the perceived benefits in using EM are greater than the risks	— (0)	47 (8)	35 (6)	18 (3)	— (0)
I believe a video camera will protect resident rights	18 (3)	35 (6)	24 (4)	18 (3)	6 (1)
I believe a video camera will compromise resident rights	6 (1)	— (0)	65 (11)	29 (5)	— (0)

Note. (Number in Parentheses) = Frequency

Table A.14

*NF 4 Staff Perceptions of Electronic Monitoring in % (*n = *19)*

Perceptions of EM	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I would prefer if video cameras were placed in Resident Rooms	— (0)	16 (3)	47 (9)	21 (4)	16 (19)
I would prefer if video cameras were placed in common rooms	37 (7)	21 (4)	37 (7)	5 (1)	— (0)
I would prefer not to have any video cameras in the NF	— (0)	— (0)	21 (4)	68 (13)	11 (2)
I agree that the perceived benefits in using EM are greater than the risks	— (0)	47 (9)	47(9)	— (0)	5 (1)
I believe a video camera will protect resident rights	26 (5)	47 (9)	16 (3)	— (0)	11 (2)
I believe a video camera will compromise resident rights	5 (1)	26 (5)	21 (4)	37 (7)	11 (2)

Note. (Number in Parentheses) = Frequency

Table A.15(a)

Cross Tabulation: Staff Type and Electronic Monitoring Protects Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	10 (1)	20 (2)	30 (3)	40 (4)	— (0)	10
RN/LVN	7 (2)	26 (7)	22 (6)	33 (9)	11 (3)	27
CNA	7 (2)	30 (12)	25 (10)	10 (4)	28 (11)	40
Activity Director/Social Services	— (0)	33 (4)	25 (3)	17 (2)	25 (3)	12
Other	— (0)	13 (2)	26 (4)	53 (8)	7 (1)	15
Totals	6	27	26	27	18	104

Note. (Number in Parentheses) = Frequency

Table A.15(b)

Cross Tabulation: Staff Type and Electronic Monitoring Compromises Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	40 (4)	20 (2)	40 (4)	— (0)	10
RN/LVN	— (0)	26 (7)	30 (8)	25 (7)	19 (5)	27
CNA	3 (1)	35 (14)	25 (10)	15 (6)	22 (9)	40
Activity Director/Social Services	8 (1)	33 (4)	33 (4)	25 (3)	— (0)	12
Other	7 (1)	47 (7)	47 (7)	— (0)	— (0)	15
Totals	3	36	31	20	14	104

Note. (Number in Parentheses) = Frequency

Table A.16

Cross Tabulation: Staff Type and Perceived Benefits Outweigh Perceived Risks, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	40 (4)	20 (2)	30 (3)	10 (1)	10
RN/LVN	15 (4)	7 (2)	40 (11)	37 (10)	— (0)	27
CNA	3 (1)	23 (9)	50 (20)	20 (8)	5 (2)	40
Activity Director/Social Services	— (0)	17 (2)	42 (5)	25 (3)	17 (2)	12
Other	— (0)	13 (2)	27 (4)	60 (9)	— (0)	15
Totals	5	19	42	33	5	104

Note. (Number in Parentheses) = Frequency

Table A.17(a)

NF 1 Staff: Staff Type and Electronic Monitoring Protects Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	33 (1)	33 (1)	33 (1)	— (0)	— (0)	3
RN/LVN	10 (1)	10 (1)	30 (3)	40 (4)	10 (1)	10
CNA	6 (1)	50 (9)	11 (2)	11 (2)	22 (4)	18
Activity Director/Social Services	— (0)	75 (3)	25 (1)	— (0)	— (0)	4
Other	— (0)	— (0)	50 (1)	50 (1)	— (0)	2
Totals	3	14	8	7	5	37

Note. (Number in Parentheses) = Frequency

Table A.17(b)

NF 1 Staff: Staff Type and Electronic Monitoring Compromises Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	33 (1)	— (0)	66 (2)	— (0)	3
RN/LVN	— (0)	40 (4)	30 (3)	10 (1)	20 (2)	10
CNA	— (0)	50 (9)	27 (5)	16 (3)	6 (1)	18
Activity Director/Social Services	— (0)	25 (1)	25 (1)	50 (2)	— (0)	4
Other	— (0)	50 (1)	50 (1)	— (0)	— (0)	2
Totals	0	16	10	8	3	37

Note. (Number in Parentheses) = Frequency

Table A.18(a)

NF 2 Staff: Staff Type and Electronic Monitoring Protects Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	— (0)	34 (1)	66 (2)	— (0)	3
RN/LVN	— (0)	60 (6)	20 (2)	20 (2)	— (0)	10
CNA	9 (1)	27 (3)	35 (4)	— (0)	27 (3)	11
Activity Director/Social Services	— (0)	16 (1)	33 (2)	16 (1)	33 (6)	10
Other	— (0)	— (0)	100 (1)	— (0)	— (0)	1
Totals	1	10	10	5	5	31

Note. (Number in Parentheses) = Frequency

Table A.18(b)

NF 2 Staff: Staff Type and Electronic Monitoring Compromises Resident Right, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	67 (2)	33 (1)	— (0)	— (0)	3
RN/LVN	— (0)	10 (1)	20 (2)	50 (5)	20 (2)	10
CNA	3 (1)	35 (14)	25 (10)	15 (6)	22 (9)	11
Activity Director/Social Services	8 (1)	33 (4)	33 (4)	25 (3)	— (0)	6
Other	7 (1)	47 (7)	47 (7)	— (0)	— (0)	15
Totals	1	8	6	7	9	31

Note. (Number in Parentheses) = Frequency

Table A.19(a)

NF 3 Staff: Staff Type and Electronic Monitoring Protects Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	50 (1)	50 (1)	— (0)	— (0)	2
RN/LVN	— (0)	— (0)	50 (1)	— (0)	50 (1)	2
CNA	— (0)	— (0)	33 (1)	33 (1)	33 (1)	3
Activity Director/Social Services	— (0)	— (0)	— (0)	50 (1)	50 (1)	2
Other	— (0)	25 (2)	25 (2)	4 (0)	— (0)	8
Totals	0	3	5	6	3	17

Note. (Number in Parentheses) = Frequency

Table A.19(b)

NF 3 Staff: Staff Type and Electronic Monitoring Compromises Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	50% (1)	50% (1)	— (0)	— (0)	2
RN/LVN	— (0)	— (0)	100% (2)	— (0)	— (0)	2
CNA	— (0)	— (0)	66% (2)	— (0)	33% (1)	3
Activity Director/Social Services	— (0)	— (0)	100% (2)	— (0)	— (0)	2
Other	— (0)	50% (4)	50% (4)	— (0)	— (0)	8
Totals	0	5	11	0	1	17

Note. (Number in Parentheses) = Frequency

Table A.20(a)

NF 4 Staff: Staff Type and Electronic Monitoring Protects Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	— (0)	— (0)	100 (2)	— (0)	2
RN/LVN	20 (1)	— (0)	— (0)	60 (3)	20 (1)	5
CNA	13 (1)	— (0)	38 (3)	12 (1)	38 (8)	8
Activity Director/Social Services	— (0)	— (0)	— (0)	— (0)	— (0)	0
Other	— (0)	— (0)	— (0)	75 (3)	25 (1)	4
Totals	2	0	3	9	5	19

Note. (Number in Parentheses) = Frequency

Table A.20(b)

NF 4 Staff: Staff Type and Electronic Monitoring Compromises Resident Rights, in %

Staff Type	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Total
Administrator/DON	— (0)	— (0)	— (0)	100 (2)	— (0)	2
RN/LVN	— (0)	40 (2)	20 (1)	20 (1)	20 (1)	5
CNA	12 (1)	38 (3)	25 (2)	25 (2)	— (0)	8
Activity Director/Social Services	— (0)	— (0)	— (0)	— (0)	— (0)	0
Other	25 (1)	50 (2)	25 (1)	— (0)	— (0)	4
Totals	2	7	4	5	1	19

Note. (Number in Parentheses) = Frequency

Table A.21

Logistic Regression Analysis: Staff Perceptions of Electronic Monitoring

	EM Protects Resident Rights			EM Compromises Resident Rights		
	Odds Ratio	Lower	Upper	Odds Ratio	Lower	Upper
Length of Employment	0.996*	0.991	1.002	0.999	0.993	1.004
Admin/DON	0.746	0.212	2.629	0.650	0.182	2.318
RN/LVN	1.105	0.452	2.701	1.205	0.491	2.953
Other	1.357	0.551	3.341	0.272*	0.105	0.708
NF 1 (RR)	0.243**	0.086	0.683	1.268	0.454	3.548
Good Sam/ NF 3 (CR)	0.422*	0.156	1.138	2.923*	1.056	8.905
	Chi-Square: 11.45			Chi-Square: 12.27		
	df = 6			*df* = 6		
	Wald: 10.76			Wald: 12.34		

*Significant at the .05 level; **Significant at the .01 level; ***Significant at the .001 level

NF 4: Reference category
CNA: Reference category

Table A.22

Logistic Regression Analysis: Staff Perceptions of Electronic Monitoring

	Perceived Benefits of EM are Greater than the Perceived Risks of EM			EM can Increase Quality of Care		
	Odds Ratio	Lower	Upper	Odds Ratio	Lower	Upper
Length of Employment	1.003	0.998	1.009	0.999*	0.994	1.005
Admin/DON	0.957	0.263	3.487	0.742	0.208	2.644
RN/LVN	1.194	0.417	2.628	0.638	0.257	1.582
Other	2.214	0.861	5.696	1.476	0.590	3.693
NF 1 (RR)	0.205**	0.070	0.602	0.248**	0.086	0.717
Good Sam/ NF 3 (CR)	0.735	0.266	2.030	0.244**	0.086	0.690
	Chi-Square: 15.25			Chi-Square: 11.36		
	df = 6			*df* = 6		
	Wald: 16.71			Wald: 10.99		

*Significant at the .05 level; **Significant at the .01 level; ***Significant at the .001 level

NF 4: Reference category; CNA: Reference category

Table A.23

Logistic Regression Analysis: Staff Perceptions of Electronic Monitoring

	EM Complements Staffing			EM Protects from Abuse		
	Odds Ratio	Lower	Upper	Odds Ratio	Lower	Upper
Length of Employment	1.007*	1.001	1.012	0.996*	0.991	1.002
Admin/DON	0.581	0.162	2.077	0.302	0.084	1.082
RN/LVN	0.630	0.252	1.571	0.490	0.197	1.220
Other	1.655	0.653	4.192	0.616	0.246	1.544
NF 1 (RR)	0.152***	0.051	0.456	0.327	0.114	0.937
Good Sam/ NF 3 (CR)	0.230**	0.080	0.662	0.396	0.142	1.106
	Chi-Square: 16.39			Chi-Square: 10.32		
	df = 6			*df* = 6		
	Wald: 16.61			Wald: 11.44		

*Significant at the .05 level; **Significant at the .01 level; ***Significant at the .001 level

NF 4: Reference category; CNA: Reference category

Table A.24

Logistic Regression Analysis: Staff Perceptions of Electronic Monitoring

	EM May Interfere with Bond between Staff and Resident			EM May Cause Anxiety		
	Odds Ratio	Lower	Upper	Odds Ratio	Lower	Upper
Length of Employment	1.006*	1.000	1.012	1.001	0.995	1.006
Admin/DON	0.979	0.275	3.480	2.600	0.704	9.602
RN/LVN	1.450	0.583	3.603	3.134*	1.221	8.040
Other	0.658	0.265	1.632	1.387	0.554	3.470
NF 1 (RR)	0.716	0.259	1.981	1.254	0.454	3.463
Good Sam/ NF 3 (CR)	0.505	0.186	1.368	2.406	0.878	6.589
	Chi-Square: 9.80			Chi-Square: 11.98		
	df = 6			*df* = 6		
	Wald: 9.06			Wald: 11.13		

*Significant at the .05 level; **Significant at the .01 level; ***Significant at the .001 level

NF 4: Reference category; CNA: Reference category

Table A.25

Logistic Regression Analysis: Staff Perceptions of Electronic Monitoring

	More Control or Leverage by Utilizing EM			Residents Will Feel More Empowered by Utilizing EM		
	Odds Ratio	Lower	Upper	Odds Ratio	Lower	Upper
Length of Employment	0.997	0.991	1.003	1.001	0.995	1.007
Admin/DON	1.604	0.425	6.059	0.453	0.118	1.738
RN/LVN	1.392	0.540	3.588	0.989	0.380	2.570
Other	3.975**	1.473	10.725	2.062	0.772	5.506
NF 1 (RR)	0.292*	0.099	0.867	0.145**	0.046	0.455
Good Sam/ NF 3 (CR)	1.101	0.389	3.120	0.396	0.150	1.274
	Chi-Square: 20.65			Chi-Square: 15.80		
	df = 6			*df* = 6		
	Wald: 19.93			Wald: 16.44		

*Significant at the .05 level; **Significant at the .01 level; ***Significant at the .001 level

NF 4: Reference category; CNA: Reference category

Table A.26

Logistic Regression Analysis: Staff Perceptions of Electronic Monitoring

	Residents Do Not Utilize Video Cameras Due to Cost		
	Odds Ratio	Lower	Upper
Length of Employment	0.999	0.993	1.004
Admin/DON	4.66*	1.261	17.260
RN/LVN	2.026	0.817	5.025
Other	1.418	0.573	3.512
NF 1 (RR)	0.492	0.177	1.362
Good Sam/ NF 3 (CR)	0.558	0.206	1.507
		Chi-Square: 6.95	
		df = 6	
		Wald: 8.16	

*Significant at the .05 level; **Significant at the .01 level; ***Significant at the .001 level

NF 4: Reference category; CNA: Reference category

APPENDIX B

INFORMED CONSENT

University of North Texas Institutional Review Board

Informed Consent Form

Before agreeing to participate in this research study, it is important that you understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: resident rights and Electronic Monitoring

Principal Investigator: Shilpa Shashidhara, Graduate Student at the University of North Texas (UNT) in the Department of Applied Gerontology/Sociology.

Purpose of the Study: The purpose of this study is to determine whether authorized electronic monitoring (video cameras) should be used in nursing facilities and if electronic monitoring affects a Resident's Rights. You are being asked to participate in a research study which involves residents of nursing facilities, family members of residents and nursing facility staff, because the opinions of those who could be directly affected by the use of electronic monitoring is important.

Study Procedures: You will be asked to answer several demographic questions as well as questions about your opinion of electronic monitoring (video cameras) in nursing facilities. It will take about 10 to 15 minutes of your time. You will also be asked to allow us to contact a family member to interview. If you will allow this, you will be asked to provide a name and contact information. If you do not allow us to contact a family member, you can still participate in this study.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: This study is not expected to be of any direct benefit to you. However, this study may benefit others in the future and may contribute to my field of study by understanding if electronic monitoring (video cameras) affects a Resident's Rights. The results from this study may assist in resolving the debate of whether electronic monitoring is appropriate and if they should be utilized in nursing facilities. IRB studies cannot guarantee results.

Procedures for Maintaining Confidentiality of Research Records: Specific methods will be taken to protect your confidentiality/anonymity, such as maintaining signed consent forms and interview responses in locked cabinets in separate locations. No individual responses will be reported to anyone since the data will be reported on a group basis only. All answers are

completely confidential. The confidentiality of your individual information will be maintained in any publications or presentations regarding this study.

Questions about the Study: If you have any questions about the study, you may contact Shilpa Shashidhara or faculty advisor, Dr. James Swan, of the University of North Texas Department of Applied Gerontology/Sociology at telephone number (940) 565-2000.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights:
Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Shilpa Shashidhara has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

Contacting a Family Member:

Please check the box that applies:

☐ May contact a family member

☐ May not contact family member

If you allow us to contact a family member, please provide a name and contact information.

_____

Printed Name of Participant

_____ _____

Signature of Participant Date

For the Principal Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

_____ _____

Signature of Principal Investigator or Designer Date

University of North Texas Institutional Review Board
Informed Consent Form

Before agreeing to participate in this research study, it is important that you read and understand the following explanation of the purpose, benefits and risks of the study and how it will be conducted.

Title of Study: resident rights and Electronic Monitoring

Principal Investigator: Shilpa Shashidhara, University of North Texas (UNT) Department of Applied Gerontology/Sociology.

Purpose of the Study: The purpose of this study is to determine whether authorized electronic monitoring (video cameras) should be used in nursing facilities and if electronic monitoring affects a Resident's Rights. You are being asked to participate in a research study which involves residents of nursing facilities, family members of residents and nursing facility staff because the opinions of those who could be directly affected by the use of electronic monitoring is essential.

Study Procedures: You will be given a self-administered survey questionnaire to complete. The questionnaire consists of demographic questions and questions about your opinion of electronic monitoring (video cameras) in nursing facilities. Apart from the demographic questions, all of other questions can be answered using a 5-point scale. Specifically, 5 represents the highest level of agreement while 1 represents the lowest level of agreement. It will take about 10 to 15 minutes of your time.

Foreseeable Risks: No foreseeable risks are involved in this study.

Benefits to the Subjects or Others: This study is not expected to be of any direct benefit to you. However, this study may benefit others in the future and may contribute to my field of study by understanding if electronic monitoring (video cameras) affects a Resident's Rights. The results from this study may assist in resolving the debate of whether electronic monitoring is appropriate and if they should be utilized in nursing facilities. IRB studies cannot guarantee results.

Procedures for Maintaining Confidentiality of Research Records: Specific methods will be taken to protect your confidentiality/anonymity, such as maintaining signed consent forms and interview responses in locked cabinets in separate locations. No individual responses will be reported to anyone since the data will be reported on a group basis only. All answers are

completely confidential. The confidentiality of your individual information will be maintained in any publications or presentations regarding this study.

Questions about the Study: If you have any questions about the study, you may contact Shilpa Shashidhara or faculty advisor, Dr. James Swan, of the University of North Texas Department of Applied Gerontology/Sociology at telephone number (940) 565-2000.

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Research Participants' Rights:

Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- Shilpa Shashidhara has explained the study to you and answered all of your questions. You have been told the possible benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to take part in this study, and your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as a research participant and you voluntarily consent to participate in this study.
- You have been told you will receive a copy of this form.

_____

Printed Name of Participant

_____ _____

Signature of Participant Date

For the Principal Investigator or Designee:

I certify that I have reviewed the contents of this form with the subject signing above. I have explained the possible benefits and the potential risks and/or discomforts of the study. It is my opinion that the participant understood the explanation.

_____ _____

Signature of Principal Investigator of Designee Date

University of North Texas Institutional Review Board

Informed Consent Notice

[*The following is read to each respondent before beginning the interview. The respondent must agree to continue the interview after the following is read to him or her.]*

Hello, my name is Shilpa Shashidhara. I am a doctoral student at the University of North Texas. I am conducting a survey to determine whether authorized electronic monitoring (video cameras) should be used in nursing facilities and if electronic monitoring affects a Resident's Rights. This study involves residents of nursing facilities, family members of residents and nursing facility staff because the opinions of those who could be directly affected by the use of electronic monitoring is essential.

The interview will take about 10 to 15 minutes of your time. You will be read a questionnaire which consists of general demographic questions and questions related to electronic monitoring. Apart from the demographic questions, all of other questions can be answered using a 5 point scale. Specifically, 5 represents the highest level of agreement while 1 represents the lowest level of agreement. Your contact information was given to me by a relative residing in a nursing facility.

No foreseeable risks are involved in this study. This study is not expected to be of any direct benefit to you. However, this study may benefit others in the future and may contribute to my field of study of whether electronic monitoring is appropriate and whether it protects or compromises a Resident's Rights.

You give consent by answering the questions. Participation is strictly voluntary. You do not have to answer questions if you choose not to do so. Your refusal to participate or your decision to withdraw will involve no penalty or loss of rights or benefits.

Any information you provide will be maintained in a secure manner. No individual responses will be reported to anyone since the data will be reported on a group basis only. All answers are completely confidential.

If you have any questions about the study, you can ask me or contact the faculty advisor, Dr. James Swan, of the University of North Texas Department of Applied Gerontology/Sociology at telephone number (940) 565-2000.

This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted at (940) 565-3940 with any questions regarding the rights of research subjects.

Would you be interested and willing to participate in this study?

I attest that the aforementioned written consent has been orally presented to the human subject and the human subject provided me with an oral assurance of their willingness to participate in the research.

_____ _____

Signature of Principal Investigator Date

APPENDIX C

SURVEYS

Resident Interview Questions

Six Item Screener to Identify Cognitive Impairment

Temporal Orientation: Day of the week, Month, Year

3 Item Word Recall: House, Apple, Quarter

Score:

Open Ended Questions

1. Are you familiar with your resident rights? Y/N

2. Which resident rights are the most important to you?

3. Did you know that if you wanted a video camera in your room and were willing to pay for it, TX laws will allow you to put a video camera in your room? Y/N

4. What do you think are some benefits to having a video camera in your room?

5. What do you think are some negative aspects to having a video camera in your room?

6. Would you want a video camera in your room? Y/N

7. If you could turn the video camera on or off at anytime, would you want a video camera in your room?

8. Would you want a video camera in your room if there was only video but no audio?

9. Would you want a video camera in your room if there was only audio but no video?

10. Would you mind a video camera in the common areas or throughout the building?

11. Do you think a video camera would give you more control or less control? Why?

12. Do you think video cameras can improve your quality of care? How or why?

13. If you were not happy with your care, do you think video cameras will improve your quality of care?

14. Which types of resident rights are most at risk when using a video camera?

15. Overall, do you think a video camera will protect or violate your resident rights?

Demographic Questions

16. Sex: _____

17. Age: _____

18. Race (circle one): A. White B. Black C. Other _____

19. Highest level of Education: _____

20. Number of months or years living in a nursing facility: _____

Thank you for your help and cooperation with this study.

Caregivers Survey

Please rate each item on the scale shown below to indicate your level of agreement.

5----------4----------3----------2----------1

Agree Strongly Agree Neutral Disagree Strongly Disagree

_____1. I believe all of our residents are familiar with their resident rights

_____2. Most residents do not want a camera in their room.

_____3. I believe residents want a camera only under certain circumstances.

_____4. I think residents would prefer real time feed compared to tape.

_____5. I think cameras will improve resident's quality of care.

_____6. I think a video camera in the room should only have video but no audio.

_____7. I think a video camera in the room should only have audio but no video.

_____8. I think a video camera in a room is a good way to protect residents from abuse.

_____9. I believe a video camera will protect resident rights.

_____10. resident rights most at risk when using a video camera is privacy.

_____11. resident rights most at risk when using a video camera is dignity.

_____12. resident rights most at risk when using a video camera is confidentiality.

_____13. I believe a video camera will compromise resident rights.

_____14. I believe that a video camera can increase quality of care.

_____15. I believe that a video camera can minimize neglect.

_____16. I believe a video camera is necessary for security purposes.

_____17. I would prefer if video cameras were in common areas.

Please rate each item on the scale shown below to indicate your level of agreement.

5----------4----------3----------2----------1

Agree Strongly Agree Neutral Disagree Strongly Disagree

_____18. I would prefer if video cameras were placed in resident rooms.

_____19. I would prefer not to have any video cameras in the facility.

_____20. I think residents will have more control or leverage by utilizing video cameras.

_____21. I think residents will feel empowered by utilizing video cameras.

_____22. I think video cameras will complement staffing.

_____23. I fear that video cameras will be a substitute for staffing.

_____24. A reason residents may not utilize video cameras is due to cost.

_____25. Family members prefer residents have video cameras in their rooms.

_____26. Electronic monitoring may cause anxiety.

_____27. Electronic monitoring may interfere with the bond between residents and staff.

_____28. I agree that the perceived risks in using electronic monitoring in nursing homes are greater than the benefits.

_____29. I agree that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks.

_____30. Sex: _____

_____31. Age: _____

_____32. Race (circle one): A. White B. Black C. Other = _____

_____33. Position at Nursing Facility: _____

_____34. How long have you worked at this facility: years _____months _____

Thank you for your help and cooperation with this study.

Family Member Survey

Please rate each item on the scale shown below to indicate your level of agreement.

5----------4----------3----------2----------1

Agree Strongly Agree Neutral Disagree Strongly Disagree

_____1. I believe all residents are familiar with their resident rights

_____2. Most residents do not want a camera in their room.

_____3. I believe residents want a camera only under certain circumstances.

_____4. I think residents would prefer real time feed compared to tape.

_____5. I think cameras will improve resident's quality of care.

_____6. I think a video camera in the room should only have video but no audio.

_____7. I think a video camera in the room should only have audio but no video.

_____8. I think a video camera in a room is a good way to protect residents from abuse.

_____9. I believe a video camera will protect resident rights.

_____10. resident rights most at risk when using a video camera is privacy.

_____11. resident rights most at risk when using a video camera is dignity.

_____12. resident rights most at risk when using a video camera is confidentiality.

_____13. I believe a video camera will compromise resident rights.

_____14. I believe that a video camera can increase quality of care.

_____15. I believe that a video camera can minimize neglect.

_____16. I believe a video camera is necessary for security purposes.

_____17. I would prefer if video cameras were in common areas.

Please rate each item on the scale shown below to indicate your level of agreement.

5----------4----------3----------2----------1

Agree Strongly Agree Neutral Disagree Strongly Disagree

_____18. I would prefer if video cameras were placed in resident rooms.

_____19. I would prefer not to have any video cameras in the facility.

_____20. I think residents will have more control or leverage by utilizing video cameras.

_____21. I think residents will feel empowered by utilizing video cameras.

_____22. I think video cameras will complement staffing.

_____23. I fear that video cameras will be a substitute for staffing.

_____24. A reason residents may not utilize video cameras is due to cost.

_____25. Family members prefer residents have video cameras in their rooms.

_____26. Electronic monitoring may cause anxiety.

_____27. Electronic monitoring may interfere with the bond between residents and staff.

_____28. I agree that the perceived risks in using electronic monitoring in nursing homes are greater than the benefits.

_____29. I agree that the perceived benefits in using electronic monitoring in nursing homes are greater than the risks.

_____30. Sex: _____

_____31. Age: _____

_____32. Race (circle one): A. White B. Black C. Other = _____

_____33. Relation to Resident: _____

_____34. On average, how many times do you visit the nursing facility (circle one):

A. Weekly B. Monthly C. Yearly

APPENDIX D

RESIDENT RIGHTS

Texas Health & Safety Code - Section 242.501. Resident's Rights

RESIDENT'S RIGHTS (a) The department by rule shall adopt a statement of the rights of a resident. The statement must be consistent with Chapter 102, Human Resources Code, but shall reflect the unique circumstances of a resident at an institution.

At a minimum, the statement of the rights of a resident must address the resident's constitutional, civil, and legal rights and the resident's right:

(1) to be free from abuse and exploitation;

(2) to safe, decent, and clean conditions;

(3) to be treated with courtesy, consideration, and respect;

(4) to not be subjected to discrimination based on age, race, religion, sex, nationality, or disability and to practice the resident's own religious beliefs;

(5) to place in the resident's room an electronic monitoring device that is owned and operated by the resident or provided by the resident's guardian or legal representative;

(6) to privacy, including privacy during visits and telephone calls;

(7) to complain about the institution and to organize or participate in any program that presents residents' concerns to the administrator of the institution;

(8) to have information about the resident in the possession of the institution maintained as confidential;

(9) to retain the services of a physician the resident chooses, at the resident's own expense or through a health care plan, and to have a physician explain to the resident, in language that the resident understands, the resident's complete medical condition, the recommended treatment, and the expected results of the treatment, including reasonably expected effects, side effects, and risks associated with psychoactive medications;

(10) to participate in developing a plan of care, to refuse treatment, and to refuse to participate in experimental research;

(11) to a written statement or admission agreement describing the services provided by the institution and the related charges;

(12) to manage the resident's own finances or to delegate that responsibility to another person;

(13) to access money and property that the resident has deposited with the institution and to an accounting of the resident's money and property that are deposited with the institution and of all financial transactions made with or on behalf of the resident;

(14) to keep and use personal property, secure from theft or loss;

(15) to not be relocated within the institution, except in accordance with standards adopted by the department under Section 242.403;

(16) to receive visitors;

(17) to receive unopened mail and to receive assistance in reading or writing correspondence;

(18) to participate in activities inside and outside the institution;

(19) to wear the resident's own clothes;

(20) to discharge himself or herself from the institution unless the resident is an adjudicated mental incompetent;

(21) to not be discharged from the institution except as provided in the standards adopted by the department under Section 242.403;

(22) to be free from any physical or chemical restraints imposed for the purposes of discipline or convenience, and not required to treat the resident's medical symptoms; and

(23) to receive information about prescribed psychoactive medication from the person prescribing the medication or that person's designee, to have any psychoactive medications prescribed and administered in a responsible manner, as mandated by Section 242.505, and to refuse to consent to the prescription of psychoactive medications.

(b) A right of a resident may be restricted only to the extent necessary to protect:

(1) a right of another resident, particularly a right of the other resident relating to privacy and confidentiality; or

(2) the resident or another person from danger or harm.

(c) The department may adopt rights of residents in addition to those required by Subsection (a) and may consider additional rights applicable to residents in other jurisdictions.

Added by Acts 1997, 75th Leg., ch. 1159, § 1.30, eff. Sept. 1, 1997. Amended by Acts 2001, 77th Leg., ch. 919, § 1, eff. June 14, 2001; Acts 2001, 77th Leg., ch. 1224, § 2, eff. June 15, 2001; Acts 2003, 78th Leg., ch. 1276, § 10.004, eff. Sept. 1, 2003.

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