

A STUDY OF THE ROLE AND INFLUENCE OF THE MINIMUM DATA SET (MDS)
ON DECISION MAKING IN LONG-TERM CARE FACILITIES IN UTAH

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This is dedicated to my children,
Tac, Marlee, Levi, Cannon and Monet.
Live your dreams.

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ABSTRACT

A STUDY OF THE ROLE AND INFLUENCE OF THE MINIMUM DATA SET (MDS) ON DECISION MAKING IN LONG-TERM CARE FACILITIES IN UTAH

by Cory W. Moss

The objective of this study was to evaluate the decision making process among nursing home leaders in long-term care facilities in Utah once patient data is collected. Medicare and Medicaid regulations require all licensed long-term care facilities to collect and document patient clinical data in a comprehensive assessment called the Minimum Data Set (MDS). The MDS is a multi-disciplinary assessment requiring regular evaluation of patients' current needs and then prescribing orders for the next MDS treatment cycle based on those assessed needs. Collectively, the Administrator, Director of Nursing and MDS Coordinator are expected to lead and guide the interdisciplinary team in making these decisions.

In Utah there are 99 licensed long-term care facilities, many in rural and outlying areas. Based on prior experience, the author of this study questioned how long-term care nurses make patient care planning decisions and whether decision analysis procedures were utilized in long-term care planning in Utah. As a former administrator, the author additionally posited whether administrators at facilities were involved in decision making and guiding that process among the interdisciplinary team.

In conjunction with the Utah Health Care Association, a survey questionnaire was sent out to all licensed long-term care facilities in Utah on behalf of the author of this study and the Association. The sample population was the administrators, directors of

nursing and MDS coordinators at each facility. Respondents answered a 22-question survey focused on the decision making processes in their facility, as well as their own opinions and perceptions of decision capabilities in their own job functions.

Data was collected and analyzed regarding the decision making processes of teams in long-term care facilities in Utah and was organized and presented in this dissertation. One of the key findings of this research was the fact that less than 29% of nurse respondents are certified as an MDS nurse. This finding may have an impact on the respondents feelings of being adequately trained, the perceived available resources for MDS decision making and the efficiency of those MDS decisions.

The data indicated staff is meeting MDS requirements in care planning and facility team members are completing their portions of the MDS. An important data outcome of this study was that staff is adequately trained on the MDS process. This finding is a result of staff reviewing resident preferences in making MDS decisions and as a team, they consider available resources when making those decisions. These findings are significant to any long-term care organization because these could influence the delivery of care and have significant impact on the overall quality and financial viability for long-term care facilities in the state of Utah.

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CHAPTER I

INTRODUCTION

Since implementation of the Omnibus Budget and Reconciliation Act of 1987 and the Balanced Budget Act of 1990, the Minimum Data Set (MDS) in Long-term and Skilled Nursing care has become a mandated tool and quality indicator of nursing home services (Adams-Wendling, Dedonder, Tidwell, Pimple, Schmiot & Okeson, 2007). MDS patient data are collected at regular monthly and quarterly intervals and may include a patient's clinical status change, multiple events, complex systems and uncertainty about the cause and origins of such health changes (Cohen-Mansfield & Lipson, 2003).

In 2009 Dr. Steven A. Levenson, a multi-facility Long-Term Care Medical Director in Baltimore, Maryland authored the first of a four-part article titled "The Basis for Improving and Reforming Long-Term Care." Although the title suggests a review and declaration on long-term healthcare reform, Dr. Levenson focuses more on the issues of decision-making, clinical problem solving and evidence-based care in long-term care and nursing home facilities. The practices of decision analysis and decision making are key skill components each nursing home employee must possess and do not just apply to licensed clinicians and direct care providers (Levenson, 2009). This is one of the main topics Dr. Levenson addresses in his article.

According to Dr. Levenson, nursing home reform has been part of a larger political reform debate for healthcare the last several decades. In 1986 the Institute of Medicine published a study which indicated poor quality of care in long-term care facilities throughout the U.S. (Adams-Wendling et al., 2007). It was from this study

federal nursing home regulations were added to the Omnibus Budget and Reconciliation Act of 1987 and goals and quality standards were identified for long-term care. Under these new federal guidelines, and with oversight of Medicare and Medicaid, the MDS was designed to assess all long-term care resident's functionalities and clinical needs and determine a resident care plan going forward. This dissertation is concerned with how decisions are being made to safely arrive at quality outcomes and ensure patient's clinical needs are met in long-term care facilities in Utah.

Over the last century decision making, as a process, has migrated across various industries from public administration, to private business and into healthcare. Decision is perceived as the end of deliberation and the beginning of action. (Buchanan & O'Connell, 2006). The concept of deliberation, and then action, is why decision making fits so well with and is such a key action in healthcare delivery. The study of decision making is a melting pot of intellectual disciplines including mathematics, sociology, psychology, economics and political science (Buchanan & Connell, 2006). Healthcare encompasses all of these disciplines and all are even more pertinent now relative to the current status of delivery and possible impacts of healthcare reform. Decision research in healthcare stems from a simple and more practical desire to help managers achieve better outcomes. Within healthcare systems there are constant efforts to improve quality, enhance cost-effectiveness and delivery, and to recognize and adopt best practices (Bernabei, Landi, Onder, Liperoti, & Gambassi, 2008).

In the 1930's Chester Barnard authored *The Functions of the Executive* and brought to light the important concepts of decision making. In later years such theorists as Herbert Simon, Henry Mintzberg and James March developed the concepts of

managerial decision making and laid the foundations of other industries adopting this important skill (Buchanan & O'Connell, 2006). In a 1978 lecture in Stockholm, Sweden, Herbert Simon spoke in detail about decision theory and its various parts. Inclusive in his comments were definitions of Normative Decision Theory, Descriptive Theory and the characteristics of Bounded Rationality. While these complimentary theories are important in the overall procedures of decision making, it is not the purpose or intent of this research to better define and apply these theories. This dissertation will focus mainly on the concepts of Normative Decision Theory, centrally concerned "with the ways in which decisions are made, and not just with decision outcomes" (Simon, 1979). Obviously decisions are being made in long-term care facilities in Utah and this dissertation will explore how staff is making decisions at the time of MDS data collection and its effects on patient care planning going forward.

Although there are many definitions, one particular definition of Normative Decision Theory is central to this dissertation. According to Sven Ove Hansson, Professor, Philosopher and Head of the Division of Philosophy at the Royal Institute of Technology in Stockholm, normative decision theory is defined as theory about how decisions should be made (Hansson, 1994). Hansson acknowledges definitions regarding decision theory are not unified (1994; Lauri & Salanterra, 1998) and there are many different ways to theorize about decisions produced by several different research traditions.

In publishing his article in 2009, Dr. Levenson addressed the current issues regarding health care reform in long-term care. With his experience as a long-term care facility Medical Director, Dr. Levenson recognized several significant risks to long-term

care reform, and diligently identified internal issues regarding decision making and staff competency. He posited effective long-term care depends on how well the facility staff and personnel apply basic skills of problem solving and decision making (Levenson, 2009). This perspective called into question the education and training of long-term care staff and clinical practitioners, and their procedures surrounding decision making. If the overall goal is quality care, which it is, then the acceptable level of care for each resident depends on the skill of facility staff and their abilities to identify links between causes and consequences of resident's clinical conditions and issues (Levenson, 2009). "The care delivery process is a set of steps based on philosophical principles related to assessing and managing the causes and consequences of illnesses and impairments in human beings..." (Levenson, 2009). Since effective decision making is the cornerstone of professional nursing, it is crucial we recognize the many factors that influence the staff's ability to perform that care (Benner, 1984; Corcoran, 1986; Marquis & Huston, 1994; Levenson, 2009).

Decisions are difficult simply because of the complexity of situations and risks involved. Normative Decision Theory, including decision analysis, provides effective tools and methods when organizing complex problems into procedures that can be analyzed. This process is part of daily clinical care in long-term care facilities. In his 1986 textbook titled *Making hard decisions, an introduction to decision analysis*, Robert Clemen provides a few reasons why decisions may be hard. Decisions can be difficult because of the inherent risk and uncertainty involved. Although staff may all be working towards one common standard of care, in healthcare there are multiple objectives across

disciplines and different perspectives may lead to different conclusions (Clemen, 1986). Decision making in this context is complex and involves actions available to the individual and states of nature, (Bhaskaran, Parihar & Prakhya, 2008) thus running contrary to decisions based on relevant content and structured networks of information (Lauri & Salantera, 1998; Deber, 1994).

Decision analysis provides structured methods and tools for systematic thinking in complex situations, but does not, however, recommend blindly accepting alternatives. It requires personal judgments and knowledge to arrive at the desired standard and relies on more than just recall or assumptions (Levenson, 2009; Lauri & Salanterra, 1998). In considering Levenson's concerns of staff education and training, it is extremely important to better understand how these decisions are being made in long-term care facilities in Utah and whether these processes facilitate quality care.

Statement of the Problem

Since the study by the Institute of Medicine in 1986 and initial implementation, the MDS has experienced widespread acceptance, but "has yet to become an integral element of nursing home documentation and care delivery" (Kontos, Miller & Mitchell, 2010; Parmelee, Bowen, Ross, Brown & Huff, 2009).

In his articles on long-term care reform, Dr. Levenson lists several questions which are at the forefront of this research;

"What is the status of clinical practice in long-term care?" (Levenson, 2009)

"Are those who currently make clinical decisions qualified to do so?" (Levenson, 2009)

“How do they make decisions?” (Levenson, 2009)

“What differentiates the quality of decision making and problem solving?”

(Levenson, 2009)

Recent research and my own anecdotal observations as a long-term care administrator suggest clinical staff do not make care planning decisions based on consistent processes and communication between staff regarding decision making is lacking. There is evidence of a gap between the planning of care and the delivery of care (Kontos et al., 2010). Additional research indicates MDS care plans do not guide daily care in nursing homes (Dellefield, 2006; Jablonski & Ersek, 2009).

In 1984, authors D. Michael Warner, Don C. Holloway and Kyle L. Grazier published a book titled *Decision Making and Control for Health Administration*. An initial concept discussed in this book is the important distinction between decisions made and actual techniques. Based on repetition and skill set, care providers may become technique-oriented rather than decision-oriented and could develop a natural inclination to use one or the other (Warner, Holloway & Grazier, 1984). This concern with decision orientation versus technique orientation is at the core of Normative Decision theory. As the long-term care population continues to grow and multiple diagnoses affect our senior populations, decisions based on one type of technique or quantitative measure lose objectivity and the ability to consider the best method for treatment (Warner et al., 1984).

There is more to decision making than concepts and techniques (Warner et al., 1984). Every healthcare provider understands that in decision making there must be approaches general and broad enough to apply decisions and yet still be able to control various problems (Warner et al., 1984). In the delivery of long-term care it is critical that

processes are problem-oriented, not just technique-oriented, and assure both are called upon and utilized when they are needed. Like every other industry, long-term care facilities operate according to policies and procedures and should have an established framework for making decisions. Research has shown a need for a cultural change in decision making in long-term care with an emphasis on employee support (White-Chu, Graves, Godfrey, Bonner & Sloane, 2009). Warner, Holloway and Grazier introduced the concept of modeling as a framework to control decision-making and the ability to create structure and process.

Decision analysis and, ultimately, decision models lead to inferences about real scenarios and actual problems and how care providers should make those decisions. Warner, Holloway and Grazier define modeling as a real world structure or process that can be applied and used in different mediums (Warner et al., 1984). The key to modeling and Normative Decision Theory in long-term care is utilizing real world processes, incorporating costs, possible outcomes and alternative choices. Modeling does not make the decisions for the care providers but does allow for more information to be considered by more people prior to making the decision, as well as possible consequences of multiple decisions (Warner et al., 1984; Lawhorne, Ouslander & Parmelee, 2008). The advantage in utilizing modeling is the ability to more precisely predict outcomes and consequences, but should only be used as an aid in the decision process.

Modeling can be broken into two parts or sections, aiding in the decision process. First, it identifies the goals and measures of the system that is being controlled. Second, it specifies the steps and logic which allow the care providers to arrive at expected levels of performance (Warner et al., 1984). Modeling does allow for a particular individual to

be responsible for the decisions being made, however, the process expects measurements and forecasts to be performed by a group of individuals. These measurements and forecasts may either be complex (Lauri & Salanterra, 1998) or simple and can accommodate quick or lengthy decisions.

Over the last several years researchers Sirkka Lauri and Sanna Salantera have conducted multiple studies centered on decision-making in various clinical settings. In 1996 Lauri and Salanterra conducted a study in Finland to identify decision-making models used by nurses in different fields of care. Key to their study was the ability to find out which variables explained the use of certain decision models in rendering care. Through this study decision making in healthcare was better defined into three parts, including; (1) observations to be made in a patient situation, (2) evaluation of data collected and (3) the actions that *should* be taken to achieve desired outcomes (Lauri & Salanterra, 1998). The specific inclusion of considering actions that *should* be taken follows the Normative Decision Theory as defined by Hansson previously.

Lauri and Salanterra's research was important to the research agenda as it reiterated previous research determinants indicating decision making is based on relevant content knowledge in a structured, step-by-step process (Lauri & Salanterra, 1998; Warner et al., 1984). In long-term care there are many variables relative to patient care plans. This study attempted to relate those many variables and their effects on nurses, nursing tasks and relevant content in care planning, most importantly considering nurse's knowledge, experience and ability to cope and adapt with patient change (Lauri & Salanterra, 1998; (Levenson, 2009). The prior research led this dissertation to the following Research Questions.

Research Questions

Research Questions: (1) How do long-term care nurses in Utah make resident care planning decisions? (2) Are decision analysis procedures utilized in long-term care planning in Utah? (3) Do long-term care administrators participate in the care planning process? If so, how?

Need for the Study

Conducting this research may provide the necessary steps in determining whether or not staff decision making processes, once the MDS data is collected, are adequate in long-term care facilities in Utah and, if not, what may be a starting point to improve those processes. In addition to researching decision making processes, decision analysis and evidence-based medicine will be reviewed; however, they will not be the main focus of this dissertation.

CHAPTER II

LITERATURE REVIEW

Medical Considerations of MDS Decision Making

As a result of the study in 1986 by the Institute of Medicine and the publication of statistics indicating poor nursing home quality, the Omnibus and Reconciliation act of 1987 emerged requiring goals for nursing homes to improve their overall quality of care (H.R. 3545, 1987). The Resident Assessment Instrument (RAI) was created as a standardized resident assessment process focused on common clinical problems to aid in developing individualized resident care plans (Adams-Wendling et al., 2007; Kontos et al., 2010; Ignatavicius, 1998). Researchers forecasted using the RAI would provide more accurate information about the resident's needs (Holtkamp, Kerkstra, Ooms, Campen & Ribbe, 2001). Additionally the RAI was expected to help develop individual care plans through communication and improved coordination among clinical disciplines all the while lessening the gap between resident's medical needs and nursing supply (Holtkamp et al., 2001; Hawes, Morris, Phillips, Fries, Murphy & Mor, 1997).

The RAI consists of three essential components; the Utilization Guidelines, the Minimum Data Set (MDS) and the Resident Assessment Protocols (RAPs) (Kontos et al., 2010). The central component of the RAI is the MDS. It contains hundreds of common categories which, when properly assessed by a nurse, provide comprehensive data regarding each resident's functional status. As a clinical tool the RAI was intended to be a clinical instrument focusing attention on a 'snapshot' in time of the resident as a whole and not just one issue or diagnosis, but rather a guide to restorative and rehabilitative care

for each resident (Hawes et al., 1997). Perhaps the most difficult goal of the RAI, which had critics posing many questions, was the need and intent for it to be reliable across many users. Developers of this instrument stressed inter-rater reliability (Hawes et al., 1997) and many have questioned the RAI's ability to cross disciplines and functions, including clinical and financial needs. At the time of Holtkamp's study there appeared to be little research of exactly how the MDS actually met patient needs.

In an effort to facilitate national implementation, the RAI training manual was released as a self-instructional resource (Bernabei, Murphy, Frijters, DuPaquier & Gardent, 1997). Since then national training programs have been organized, attempting to improve the implementation and usage of the MDS. In her 1997 paper on development of the RAI, Catherine Hawes mentioned a commissioned evaluation conducted by the Health Care Financing Administration regarding the RAI. This evaluation was a pre and post-test design to evaluate the longitudinal outcomes of resident care in nursing homes between 1990 and 1993. She listed 5 major findings (Hawes et al., 1997) which appeared to include significant improvements. These included increase in comprehensiveness and accuracy of information in resident medical records, increase in comprehensiveness of care planning, increased involvement of resident families and involvement in care planning, reductions in decline of physical functioning and reductions of patient admissions to hospital. These may be great statistics but they were clearly misleading. Other studies during this time agreed integrating the entire system into the daily practice routines of care delivery teams would clearly require more extensive training and practice (Bernabei et al., 1997).

In 2006 Dr. Vincent Mor conducted a study looking at the measurements of the identified quality indicators as listed by the MDS/RAI. The purpose of his study was to examine the data of quality indicators measured and their usage. Dr. Mor's findings included groups of clinicians who did not feel the existing measures, or processes, captured the important quality measures (Mor, 2007). This finding was important because it either determined the RAI/MDS tool was ineffective or it was not used correctly, both potentially important findings. Regarding the RAI, Dr. Mor's research was one of the initial studies to compare the process of RAI/MDS completion to its actual outcome measures. Dr. Mor posited *how* care is rendered and treatments administered versus their outcomes. This leaves us to question the skill set or capabilities of those developing the care plans and rendering the treatments. The medical considerations of MDS decision making must include the goal to effectively integrate services and interventions to properly achieve the highest physical and functional dimensions of each individual patient (Levenson, 2009).

The RAI is designed to facilitate the understanding between illness, impairment and disabilities for clinicians completing this assessment. However the quality of outcomes depend so much on the capabilities and skills of clinicians identifying those links and causes between issues (Levenson, 2009). In 2009 Dr. Brian Zikmund-Fisher led a study to identify decision prevalence and decision-making processes. One major recognition of this study was new state and federal legislation in 2009 which promoted routine use of decision counseling as well as decision aids (Zikmund-Fisher, Couper, Singer, Levin, Fowler, Ziniel & Fagerlin, 2010). The RAI and MDS are comprehensive in nature and require broad views and perspectives to ensure total and complete care. If

there is a lack of training or if staff are not privy to the most prevalent medical decisions, then the medical considerations of MDS decision making are compromised. Staff must know the decision making process between different types of decisions and how they vary across complex processes (Zikmund-Fisher et al., 2010). Often clinicians are limited in experience to certain medical conditions or are only familiar with certain clinical settings and may be restricted in their capacity (Zikmund-Fisher et al., 2010). In the last few years several researchers have realized this very concern and have well documented the medical considerations versus staff training and skill of MDS decision making. Many have realized the MDS focuses on resident outcomes rather than the organization structure of the nursing home or the processes by which they provide care (Wiener, Freiman & Brown, 2007).

In 2009 a research study led by Patricia Parmelee PhD found the MDS indicators did not accurately reflect the process and quality of care across several facilities (Parmelee et al., 2009). This study found problems with MDS indicators were due to improper use of the assessment and lack of training (Parmelee et al., 2009). The most effective decision making relies on the skill, knowledge and strategies of employees making those decisions (Levenson, 2009) and this principle fact is a focus of this research. Knowing the probabilities of certain conditions and certain situations is a must for effective clinical decision making (Levenson, 2009). Some of the most interesting points of Dr. Levenson's articles were his perspectives on processes and how clinicians arrive at decisions. It is necessary to know how facilities arrive at their outcomes and not be solely concerned with the results themselves, (Levenson, 2009) thus avoiding the RAI being limited and compromised (Levenson, 2010).

System and Process Factors of MDS Decision Making

In 2004, after conducting a study about care-process and delivery John Schnelle and a team of researchers concluded there was a lack of accurate and useful information about the daily implementation of care processes in long-term care (Schnelle, Bates-Jensen, Chu & Simmons, 2004). End result decisions are outcomes of thoughtful processes and their contents are based on knowledge of the decision maker (Lauri, Salantera, Chalmers, Ekman, Kim & Kappeli, 2001). We have seen the evolution of decision making from primitive theories long ago to the rational and science base formulas now used. The emphasis of decision making is a process of choosing a single action from many courses (Gore & Silander, 1959).

For millennia mankind has been making decisions. In pre-history times decisions were made using smoke signals, internal thoughts, and dreams. Religious prophets and seers produced words and actions to guide and direct others. In the 3rd and 4th centuries BC democratic self-government was created in Athens and Aristotle taught of senses and deductive reasoning. In the 9th and 11th centuries Arabic numbering systems allowed the growth of mathematical thinking and paved the development for algebraic calculations. In the 1600's we saw the beginning of inductive reasoning and scientific inquiry, allowing for the structure of probability and development of chance and random events in the 19th century. In the 1930's and 1940's Chester Barnard and Herbert Simon wrote several articles on decision management and management theory which truly created the American framework for decision making in industry.

In the 17th century Pascal introduced the concept of Notional Expected Value (Bhaskaran et al., 2008). Notional Expected Value is the process of evaluating actions

which may lead to varying outcomes (Bhaskaran et al., 2008). This concept is an exact step when considering the system and process factors in making MDS decisions and how they affect patient outcomes (Gazarian, 2008). Decision making can be broken down into two terms; the end, or the standard to be accomplished, and the means to arrive at that standard (Gore & Silander, 1959). We may consider the end to be the result of logical processes, (Gore & Silander, 1959) but when considering this particular research it is obvious there are reported system and process discrepancies and concerns among nursing staff when making MDS decisions. Early philosophers in the 1500's and 1600's, including Descartes, Spinoza and Leibniz, held the notion process and methodological factors can be reduced to very few steps, ensuring consistent results (Bandman & Bandman, 1995). Initially Descartes' process appealed to physicians and nurses but one would now have to question his theories, along with John Dewey's scientific method, of thinking that process can substitute years of accumulated knowledge gained through experience (Bandman & Bandman, 1995; Mitchell & Scott, 1988). Decision process and methods lead to various conclusions, supported by evidence and reasons, not just processing hunches or assumed outcomes (Bandman & Bandman, 1995; Rubenfeld & Scheffer, 1999).

Gore, Silander and Simon caution against making decisions or arriving at decisions that are 'given' (Gore & Silander, 1959; Bhaskaran et al., 2008). These outcomes could be perceived as 'good enough' but do not allow the group or decision makers to arrive at the level of quality and desired outcomes as originally planned. Decisions that are given, or good enough, are unconsciously impressed and influenced by

conditions of past or present organizations. They are not intentional and lack the logical process of analysis, choice and discrimination (Gore & Silander, 1959; Chapman & Sonnenberg, 2000).

In long-term care it is crucial, and mandated, MDS decisions are made as a group, stemming from practical and real data. The practice of isolated and singular problem solving is outdated (Sullivan & Decker, 2001) and staff desire more meaningful involvement in group decisions. With each MDS decision there are certain risks and organizations need to be able manage and calculate those perceived risks (Buchanan & O'Connell, 2006). In 1978 Herbert Simon delivered a lecture in Stockholm, Sweden after he received the Nobel Prize in Economic Science. At the time Simon was the leading academic researcher regarding decision making and its inclusive effects on team processes and organizational behavior. The concepts he discussed in that lecture centered on the psychology of problem solving and organizational decision making. These two important concepts are critical in long-term care when we consider the system and process factors of MDS decision making.

Simon's comments came on the heels of research in the 1960's and 1970's created by Carnegie Scientists, the Massachusetts Institute of Technology and Stanford University, which developed and implemented computer decision-making processes for real people (Buchanan & O'Connell, 2006). These decision support systems targeted specific practices and assisted managers with the planning, coordination and production of services. Shortly after in 1972, the concept of groupthink was created and a mode of engaged thinking by involved, cohesive team members began (Buchanan & O'Connell, 2006). It was clear in this groupthink process members were striving for unanimity and

would often override personal feelings of an alternative, deviating plan or decision.

Herbert Simon may have considered some of these concepts as he prepared his lecture in 1978. After his research and lecture, it was easier to see the evidence of rational decision making, as it was frequently negative evidence, displaying what people *don't* do (Simon, 1979). During this lecture Simon talked of research at the time and discussed evidence of information processing, but recognized it was certainly not enough to touch on the needs of decision processes in organizations (Simon, 1979). Research was lacking at the time and based on this literature review, few studies have been conducted exploring these issues in long-term care since.

In their article “A Brief History of Decision Making”, Buchanan and O’Connell recognize the emergence of instinct and how decisions in industry, including healthcare, are being made by one’s “gut”. They discuss the process of making these types of decisions but also declare very few decision makers ignore information when they have it and trust it (Buchanan & O’Connell, 2006). The concern with these methods is vital information will be missed and there will be too much room for error, especially in healthcare. The level of quality demanded in patient care requires complete and accurate information among all members of the team (Martin, Hinds & Felix, 1999; (Arling, Kane, Mueller, Bershadsky & Degenholtz, 2007). Dr. Steven Levenson addressed these very concerns in his second article in 2009. He recognized the decision making process is not being played out in long-term care and presents risks to those patients. Most nursing home patients have multiple diagnoses and their illnesses are too complex to allow immediate clarification of issues and problem resolution (Levenson, 2009). According to Dr. Levenson, the clinical decision making processes need always occur and should not

be constrained in extent or duration. Additionally he pointed out the obvious stating intrusive treatments are more harmful than less intrusive procedures and based on his research, clinical decision processes can assist in avoiding these risks (Levenson, 2009).

In the last twenty years a small group of researchers have conducted several studies on decision making processes in long-term care. These studies focused on the system and process factors of decision making and how they fit in to long-term care. In 2001 authors Crombie, Davies and Crombie wrote an article considering the outcomes of healthcare versus the process measures and how those are correlated. They believed the processes of healthcare decisions were neglected and industry personnel were focusing solely on outcomes. According to them some healthcare organizations perceived process less valuable than outcomes (Crombie, Davies & Crombie, 1998; Alemi & Gustafson, 2007). But we all know there must naturally be a link between the two. This article brought to light important procedural questions such as; what was done? Was it justified? Did we obtain the right outcomes and what else can be done (Crombie et al., 1998)?

That same year Sirkka Lauri led an exploratory study of clinical decision making. The importance of this research assisted in identifying both analytical and intuitive decision processes. Her research further solidified the belief from the 1990's which recognized decision making in healthcare is both rational and analytical (Lauri et al., 2001). All of these researchers recognized at the time the complexities of medical decision processes and how multiple symptoms and many events may impact decisions in long-term care (Cohen-Mansfield & Lipson, 2003). Prior to Dr. Levenson's landmark articles, researcher Linda Adams-Wendling studied 96 residents in 10 Midwestern

nursing homes in 2008. Her findings were significant as they substantiated the research questions and hypotheses of this dissertation. One of her initial questions addressed ways in which written care plans guide staff in directing hands-on patient care (Adams-Wendling, Piamjariyakul, Bott & Taunton, 2008). Her greatest finding was the dynamics of communicating patient needs daily among staff was disrupted by the processes of planning and delivery (Adams-Wendling et al., 2008). Additionally, she concluded patient charts and documentation for delivery of care were fragmented geographically inside the facilities and were often unavailable at the time of rendering care. Staff also reported not knowing what was on the resident's individual care plans (Adams-Wendling et al., 2008). Both of these findings indicate a lack of teamwork and essential communication among care providers in decision making.

It is important to note one particular subject that is indirectly part of this research. Prior to his publications in 2009, Dr. Levenson studied at length the concepts of evidence based medicine. His research on this subject, at the time, asked questions regarding specific processes and their exact outcomes of those treatments. If the outcomes were good, Dr. Levenson looked for repetition of these "best practices" and whether they were based on evidence, or simply procedural tradition (Levenson & Morley, 2007). One of his major concerns was the fact physicians may not request or receive patient information quickly enough in long-term care (Levenson & Morley, 2007), thus impeding the process and altering care plans and outcomes. How does this affect the system and process factors of decision making in long term care? Levenson and Morley concluded the whole of the team in making decisions is always greater than their parts (2007) and treatment

decisions must be based on the proper context and evidence of such decisions (2007). All of these have provided further motivation and need in conducting this study.

Staff Knowledge and Resident Autonomy When Making MDS Decisions

One of the most interesting findings in conducting this literature review was the amount of prior research, and remaining concerns, surrounding staff knowledge and resident autonomy when making clinical decisions. This is an especially important issue and concern in long-term care as the MDS mandates group involvement by team members as well as patients. In 2002 while conducting a literature review of clinical problem solving and diagnostic decision making, professors Arthur Elstein and Alan Schwarz of the University of Illinois recognized a lack of skill among practitioners in this specific area. They concluded problem solving varies between clinicians and the level of that skill depends on the mastery of their particular area of practice (Elstein & Schwarz, 2002; Rashotte & Carnevale, 2004; Elstein, 1999). Elstein and Schwarz recognized the importance of decision making models and indicated few use these resources in daily practice, yet other research indicated decision aids reduced decisional conflict and improved staff knowledge (Murtha, 2007). This inability to properly use individual knowledge and resources contributed to ongoing and recurrent dilemmas among clinicians (Wurzbach, 1995). Decision making, as Dr. Levenson previously indicated, is not evidence-based (Rashotte & Carnevale, 2004).

It is important to note most research studies related to clinical decision making reported a need to improve and add skills to clinicians. This is obvious in the literature beginning around the year 2000. Studies showed knowledge utilization by healthcare

practitioners who implemented decisions was vague and inexpressible (Rashotte & Carnevale, 2004) and many states now provide decision making models as part of their regulatory bodies in an effort to improve (Reeves, 2008). Additionally, many of the studies previously conducted focused primarily on the role of physicians in decision making, not staff (Lopez, 2009). This was an important change in the research as clinical decision making in nursing homes differs from the traditional doctor-patient model in acute care (Lopez, 2009). The MDS driven requirements forced studies to consider team effects on decision making in nursing homes and how knowledge of staff contributed to overall care quality. One of the most interesting findings was concluded from a study in 1994 by Dr. Raisa Deber at the Department of Health Administration at the University of Toronto. She determined physicians are often poor judges of what patients need to know regarding their care (Deber, 1994) and this model of communication frequently disrupted patient care in acute settings. In long-term care the physician is usually away from the patients and facility and typically requires nursing assessments to be the eyes and ears regarding treatment orders. Clinical competency obviously came to the forefront reflected in these studies as the MDS developed and the need for well trained and well educated staff was a big concern for the nursing home industry (Reeves, 2008).

One important question was asked in 2001 in an exploratory study by researchers Lauri and Salanterä, “What kind of knowledge do you use when defining clients’ health problems?” This emphasis on competency appeared to redirect the focus and direction of clinical decision making in long-term care throughout the world. Providers created specialized education and training for some nursing activities (Reeves, 2008) and when skills and competencies were not met, nurses were prevented from carrying out certain

nursing procedures. The specialized education allowed a more collaborative environment in nursing homes and created a team concept in delivery of care, involving more team decision making on more levels. Although the medical chart was the primary source of communication and reference between all staff (Martin et al., 1999), new team procedures were implemented and the interdisciplinary team was created. Team organization is not always a formal effort (Benner, 1984; Benner, Hooper-Kyriakidis & Stannard, 1999) and initially, the interdisciplinary team was planned and created in long term care. Nursing homes as an industry allows employees to self-report through documentation and interactions individually with patients. Such activities must implement independent audits (Schnelle et al., 2004) and the interdisciplinary team provides such audits, allowing the structure and level of care needed.

Interpersonal collaboration began utilizing equal relationships in long-term facilities, with the belief of better delivery of care in these more complex environments (Miller, Reeves, Zwarenstein, Beales, Kenaszchuk & Conn, 2008). This collaboration empowered nurses who appeared to be more open in the sharing of patient information (Miller et al., 2008). This change was not without concern though and many still had concerns regarding staff knowledge when making clinical decisions in long-term care.

As nurses became empowered in decision making in long-term care, they adopted the role as “middleman”. Researcher Ruth Lopez concluded nurses learned to lead doctors through coded language, carefully chosen words and disclosure of particular information to arrive at certain treatment orders (2009). Not only was this dangerous but it also infringed on certain resident rights and their need for autonomy in making their own decisions (Lopez, 2009). Instead of finding decisions through responsible reflective

discernment (Rashotte & Carnevale, 2004), nurses began playing the middleman satisfying multiple competing views, disallowing resident autonomy and decision making (Lopez, 2009). Decision making is key in providing leadership (Gore & Silander, 1959), not playing the middleman. Clinicians quickly realized the importance of the order of information being communicated to physicians and how that had an effect on the decisions made (Bergus, Chapman, Gjerde & Elstein, 1995).

A hugely important question in their article *A Biographical Essay on Decision Making*, authors Gore and Silander postulated whether decision making is separate from the structure of the group (1959). This is an important consideration as it discusses the time and structure of decisions (Gore & Silander, 1959) and from what basis decisions are made. Decision authority should be guided by premises provided by another person (Stewart, 1988) and could be made over time, rather than a single episode (Deber, 1994; Nichols, 2006). Freeman and Sweeney (2001) acknowledged evidence, or decisions, are not displayed in a simple or linear way, but evolve in process. Such structure should eliminate intuition and allow decision processes which are logically defensible and analytical (Lauri & Salanterra, 2002; Nichols, 2006).

In their text *Decision Analysis for Healthcare Managers* authors Farrokh Alemi and David Gustafson define analysis as the separation of a whole into component parts (2007). Regarding decision analysis these authors define it as the separating of the decision into parts, then through specified formulas reconstituting a decision, from those parts. This is obviously a strategic process defined by policy, formulas or other instructional concepts and is contrary to automatic thinking or experience. Decision thinking or reasoning is often not discussed, and frequently overlooked, simply because

of the practice and duration of such skills in expert practitioners that it appears to be automatic and simplistic in application (Rubenfeld & Scheffer, 1999). Skilled practitioners find it difficult to verbally describe the experiences and internal skills which assist them in decision making. However, this is no excuse for not providing adequate training and decision models to all staff. A remaining question is why nursing decisions vary so much, even at different levels?

Critical thinking has become an integral part of staff knowledge and resident autonomy when making MDS decisions and may include, in long term care, phronesis, or practical wisdom (Morley, 2009). The value of each decision depends largely on the accuracy of information and how critically and analytically that decision came about (Chapman & Sonnenberg, 2000). The concept above was addressed in a textbook published in 2001 by Eleanor J. Sullivan and Phillip J. Decker. In chapter 10 of their text titled *Effective leadership and management in nursing*, the concepts of critical thinking are addressed. According to these authors critical thinking is defined as a process of examining underlying assumptions, interpreting, imagining, exploring alternatives and developing reflective criticism for the purpose of reaching a justifiable conclusion (2001). In providing care critical thinking is used to resolve problems, identify, analyze and question evidence and understand the implications of problems. It is an important component to decision-making. In his first and second papers Dr. Levenson alluded to this skill and ability to think critically stating that providing care should be consistent with understanding causal, well-defined relationships amongst illnesses and staff are

required to optimize care (2009). The ability to think critically is a cognitive process that requires higher-level performance and includes problem solving (Baker, 1983), decision-making and creativity.

In their diagram below authors Eleanor Sullivan and Philip Decker illustrate and break down the critical thinking model into parts (2001).

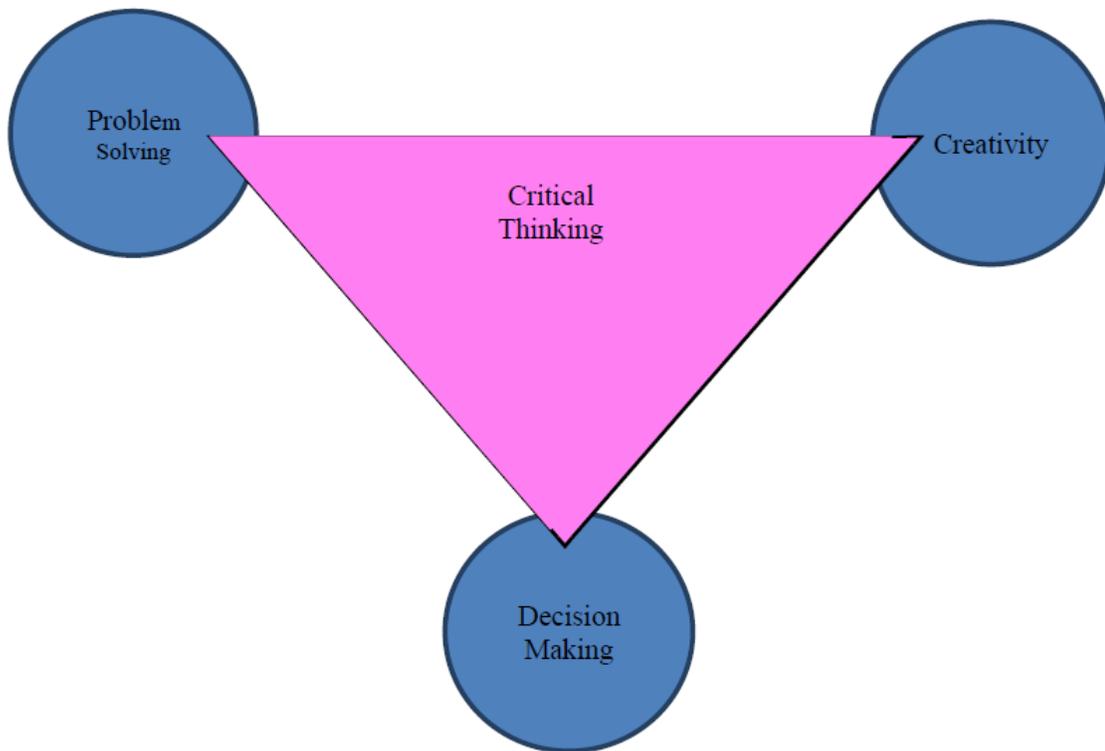


Figure 1. Break Down of Critical Thinking Model into Parts

The ability to work with these parts as clinical staff and providers is often related to specific patient populations (Benner et al., 1999). It is important to note while the organization, or rather the interdisciplinary team, becomes more and more interdependent, the parts continue to behave independently (Gharajedaghi, 1999; Barry, Brannon & Mor, 2005). Staff knowledge should operate independently and interdependently, thus allowing more information and greater communication

(Gharajedaghi, 1999; Doran, Sidani, Keatings & Doidge, 2002). Although staff knowledge is important to success when making MDS decisions, individual employee and personal factors, as well as facility interactions (Gharajedaghi, 1999), are at the core of successful decision making in long-term care. The skill set and need for competent staff knowledge when making MDS decisions has not been present in the research of this literature review. This absence adds credence to the need for this study, and this dissertation.

Staff and Personal Factors of MDS Decision Making

In compiling research for his 2009 publication Dr. Levenson concluded education and training of staff in nursing homes must include key concepts unilaterally accepted and implemented across the industry (Levenson, 2009). These included defined care delivery processes, links between causes and consequences of patient illnesses, ability to identify symptoms and others. These simple necessities, according to Dr. Levenson, are necessary for the effectiveness and quality of long-term care. He laid out full considerations of important staff, personal and individual employee factors which have an impact on MDS decision making in nursing homes.

In this research Dr. Levenson noted effective clinicians simply do not rely on just recall or assumptions, but rather use processes and learned rationale for performing their duties (Levenson, 2009). This was an important declaration because recent research showed some staff in nursing homes reported they believed they knew what to do in providing patient care without looking at the patients care plan (Dellefield, 2007). This type of clinical behavior is not typical nursing policy and is against the OBRA guidelines

for MDS assessment and completion by nursing staff. A major strength of the MDS is reliance on routine observations by staff (Hendrix, Sakauye, Karabatsos, & Daigle, 2003; Raterink, 2005), thus indicating a daily review of MDS care plans.

In the fall of 2009 researchers Susan Flannery Wainwright and Patricia Quinn McGinnis published a study on factors that influence decision making in long-term care. The importance of their study added not only to this literature review, but also to this dissertation research tool as well. Portions of the research tool developed and used by Wainwright and McGinnis were also used in this dissertation to find out what tools and resources were used in making decisions. In their research Wainwright and McGinnis concluded three themes were present in understanding, contextually, how clinicians made decisions; sources of information used in decision process, decision making based on patient centered goals and the clinicians role as a decision maker (Wainwright & McGinnis, 2009). These three themes aided survey participants to report prior experience and patient behaviors as the primary sources of information for them in making decisions. These things were critical in understanding staff and personal factors of MDS decision making in this particular study.

In order to function successfully in healthcare decision making, clinicians need both education and experience (Call, 1995) and inclusive elements of intuition, knowledge and risk are embedded in clinical practice (Call, 1995; Taylor, 2003). When the aforementioned parts of clinical decision making are not present potential adverse events occur and safety and quality suffer. Researchers conducted surveys exploring decision making in the processes of care delivery when nurses identified adverse events (Gazarian, 2008) and concluded the process helped determine what was being done and

how well staff, personally, rendered care (Gazarian, 2008). Often times clinicians are tasked with collection of additional information and lose track of responsibility or accountability and the MDS requires accuracy, which is not always assigned to a particular member of the IDT (Dellefield, 2007; Achterberg, Holtkamp, Kerkstra, Pot, Ooms & Ribbe, 2001). This is a crucial issue because the educational understanding and experience related to the MDS process is about the accuracy of patient information exchange and the competency and role of the clinician gathering that information (Dellefield, 2007).

In long-term care staff function mostly independent throughout their shifts and organizations should consider employee empowerment (Barry et al., 2005) when looking at staff and personal factors of MDS decision making. Staff can influence and improve organizational effectiveness by focusing on things within their control (Barry et al., 2005). This empowerment structure includes opportunities, resources, information and support (Barry et al., 2005) and most report they want the opportunity to be included in the care planning process (Caspar & O'Rourke, 2008). Perhaps one of the biggest concerns of staff working independently in long-term care is the current industry model of physician practice (Levy, Palat & Kramer, 2007). This model has the physician at the head of the care process, but not usually present at the facility. More research and studies need to be conducted to determine the effects of this physician model and how it impacts the levels of care in nursing homes (Cohen-Mansfield & Jensen, 2008).

When employees are empowered they must be capable of self-reflection and individual assessment. Regardless of any organizational or physician practice model in long-term care, employees must be skilled and competent as clinicians. It is critical staff

encompass the personal and professional development standards which allow them to question some of their own methods. Staff must question before they gain answers (Orest, 1995), which appears to be a recent staff and personal factor among healthcare personnel (Orest, 1995). Throughout this literature review research has vetted out the goal of staff is to facilitate coordinated, asynchronous actions between multiple persons (Alexander, 2008) that identify and describe the situation, that identify and describe different possible alternatives, that assess those alternatives and decide (Bolmsjo, Sandman & Andersson, 2006). These industry goals have led to a few research questions of my own and created the need and premise for this study.

CHAPTER III

METHODS

This study investigated the outcomes of a cross-sectional survey administered to the nursing home Administrators, Directors of Nursing and MDS Coordinators in the state of Utah regarding decision making and the MDS. In conjunction with, and support of the Utah Health Care Association, a link to an online survey questionnaire was sent out by email from the Association to all licensed long-term care facilities in Utah. The survey was designed from a combination of two prior research studies conducted in 2003 and 2008, as well as specific input and questions developed in assistance with the Utah Health Care Association staff.

Participants

There are 99 licensed long-term care facilities in Utah. These facilities are licensed as either Medicare or Medicaid certified facilities, or both. As a licensed nursing home facility, all are required to use and report MDS data if being reimbursed by Medicare or Medicaid. All licensed facilities considered for this study currently use the MDS as a mandated clinical assessment tool. Each facility is required by regulation to have at least one Administrator and one Director of Nursing, not being the same person. Federal and State long-term guidelines allow the Director of Nursing and MDS Coordinator to be the same person under certain criteria and based on individual facility capacity and census, otherwise most facilities employ an MDS Coordinator who is not

also the current Director of Nursing. There were only two facilities that participated in the survey in which the Director of Nursing and MDS Coordinator was the same individual.

Sampling Design

The population of participants in this study was two hundred and ninety-five. This study used a simple random sample of the population through email and phone requests allowing each person in the population the same chance of being included in the survey. Participants were located for this study through the Utah Health Care Association and were identified through facility licensure on the CMS.gov website and the Utah Health Care Association membership records. This study included facilities throughout the state of Utah, regardless of location and proximity to the Utah Health Care Association. Both urban and rural facilities were included with urban areas defined by U.S. Census Bureau as a central city of 50,000 or more and its adjacent suburbs. This was an important inclusion because the Utah Health Care Association was interested in rural versus urban data and the difference of geography when considering this research topic.

Research Instrument

The research instrument used for this study was created and adapted from two important prior studies in the field of decision making and decision research in long-term care, as well as additional content suggested and developed by the Utah Health Care Association. In 2003 researchers Jiska Cohen-Mansfield and Steven Lipson used a medical decision-making questionnaire to collect data from physicians ascertaining their

personal opinions relating to patient care, patient status changes, decision processes and evaluation of the decisions. Cohen-Mansfield and Lipson provided this study with foundational content questions of respondent familiarity of patients care plans, group involvement of decisions made, and quality and effectiveness of care decisions.

In 2009 researchers Susan Flannery Wainwright and Patricia Quinn McGinnis published a study of factors that influenced clinicians and their respective decision making in long-term care. The purpose of their particular study was to evaluate the clinical reasoning of practicing clinicians and explore what exactly influenced them in the development of their decision making skills. This study by Wainwright and McGinnis was a qualitative study with data collection through semi-structured interviews with participants. For this research the most important part of Wainwright and McGinnis' study was the questions posed in those interviews. Their questions centered on how clinicians made decisions, what the basis was for such decisional reasoning, past experiences in developing decisions and the individual roles of decision makers. These types of questions worked with the research questions for this study and provided a solid foundation for creating this research instrument.

With the information and foundation of these two prior studies, the Utah Health Care Association was contacted and a meeting was set with the Executive Director and Director of Clinical Services. Researcher felt it would be important to receive the support and approval from the Association leaders who could assist in announcing the survey and encouraging all Administrators, Directors of Nursing and MDS Coordinators to participate in the survey questionnaire. One of the initial main concerns was whether or not respondents would answer survey questions honestly. This was a major discussion

during construction of the research instrument and a point well discussed with several current administrators, past Utah Health Care Association directors and Association leaders. It was determined by researcher and these other local LTC leaders that respondent anonymity and answering the survey online, from any computer, would ensure a level of acceptable honesty by respondents.

Appropriateness of Research Instrument

A developmental committee was formed prior to instrument creation with the goal of determining appropriateness of the survey and survey content. This committee included the Executive Director of the Utah Health Care Association, the immediate past president of the Utah Health Care Association, the director of clinical services of the Utah Health Care Association, the resident assessment manager of the Utah Department of Health, the project coordinator for our local Medicare Quality Initiative Organization (QIO) and the Utah Health Care Association quality improvement committee chair. This committee helped design survey questions and discussed content of the research instrument.

Beyond the simple answers of “yes” and “no”, or answers for the various demographic questions, it was determined a Likert scale would be used for the survey questions. This was purposefully done to allow respondents some range in their responses and ability to provide the best picture of both good and bad situations relative to their experiences outlined in each question. Answers were based on a seven-point Likert scale and included the answers of never, almost never, rarely, sometimes, often, almost always and always. The survey consisted of several demographic questions

relating to respondent gender, years employed, years working with the MDS, job title and perceived role as a decision maker in their current job. The remaining fourteen questions were broken down into four different categories which were vetted out by the literature review and prior research. Those categories are Medical Considerations of MDS decision-making, System and Process Factors of MDS decision-making, Resident Autonomy when making MDS decisions, and Personal Factors when making MDS decisions.

In preparing this research study there were four key categories in the long-term care setting which had not previously been identified and specific research of this content and nature was absent in the industry. When researcher met with leaders of the Utah Healthcare Association it was agreed these areas of research were perfect for the long-term care employee population in Utah and the potential information in this study would be valuable. Copies of this instrument, as well as those used by researchers Jiska Cohen-Mansfield and Steven Lipson in 2003 and Susan Flannery Wainwright and Patricia Quinn McGinnis in 2009 can be found in Appendix A and B.

Data Collection and Procedures

Once the survey was developed and approved researcher worked with the Executive Director of the Utah Health Care Association to disseminate the link to the questionnaire on SurveyMonkey to all of the long-term facility Administrators, Directors of Nursing and MDS Coordinators in Utah by email announcement. Additionally, researcher attended, in person, three monthly meetings with the Utah Health Care Association leaders and facility personnel to promote survey and research. The Utah

Health Care Association has on file email addresses for all of the long-term care Administrators and Directors of Nursing and all were introduced to the research and were provided a direct link to the survey online. A copy of the official email sent out from the Executive Director of the Association is included in Appendix C.

The survey questionnaire opened officially in April 2012 and concluded in June 2012. During that time period two additional follow-up emails were sent out by the Association as reminders to study participants and all facilities were contacted by phone to remind them of the survey. The adult consent form was part of the actual survey questionnaire on SurveyMonkey and was readily visible by all participants at the beginning of the survey. Content of the consent form can be seen in Appendix D. Collection of primary data will be the focus of this instrument and descriptive statistics will organize, analyze and present the descriptive the survey data.

Limitations and Delimitations

There were two explicit delimitations imposed on this study. First, study participants were limited to just the three job categories of Administrators, Directors of Nursing and MDS Coordinators, even though other LTC facility personnel currently assist in MDS decision making. Other LTC employees assist in MDS decision making and they include social workers, rehab therapists, dietary personnel and activities directors. The Utah Health Care Association did not have contact information for these persons throughout all facilities in Utah and these job classifications receive much less instruction on MDS decision making and have less influence on the MDS outcomes. Second, several of the questions in the survey were two-part questions that could have

been partially met by each respondent, but the answers were written in an all or nothing format. That was done intentionally by researcher and the Utah Health Care Association personnel based on current Utah Department of Health regulations and compliance standards. Several of the state regulations are ambiguous and broadly written and do not always allow for focused response and compliance. The responses to these questions were of particular interest to the Association.

Limitations of the study included the location and geography of where the respondents accessed and completed the survey. The survey was promoted and discussed in a work environment and many respondents probably completed the survey while at work, from a work related computer. This could have created bias on behalf of the respondent and even though the survey was anonymous there may be possible errors in completing this survey in a work location.

CHAPTER IV

RESULTS

Based on the 99 licensed long-term care facilities in Utah, the population for this study was 295 persons. There were a total of 140 respondents of this survey; 47 were Administrators, 49 were Directors of Nursing and 44 were MDS Coordinators. Of the two respondents who were both Directors of Nursing and MDS Coordinators, they completed the survey under the title of Director of Nursing. Gender was an interesting statistic in this survey with 39 male and 101 female respondents respectively. Ninety-five respondents were from urban areas and 45 reported as being from rural facilities. More than 92%, or 129 respondents, reported having greater than 4 years working experience in long-term care, yet nearly 44%, or 61 respondents have worked for their current employer three years or less.

Three of the demographic statistics in this study present some valuable information regarding MDS decision making in long-term care in Utah. Of the 140 respondents nearly 37% have worked with the MDS less than four years. However, more than 31% of respondents reported having worked with the MDS for more than ten years. When asked if they were a certified MDS Nurse only 25 of the 87 qualified respondents answered yes. That means that less than 29% of the nurses who took this survey have attained an MDS certification through a course of study. Perhaps the most interesting statistic reported was more than 79% of respondents know their role as a decision maker when completing the MDS and it is part of their written job description.

In completing the literature review four key topics regarding MDS decision making emerged and created the framework of the survey as a research instrument, as stated previously. Respondents answered fourteen questions centered on those key topics and the data results, based on each survey questions, are in the figures that follow.

Medical Considerations of MDS Decision Making

At the time of MDS recertification, members of the inter-disciplinary team know and understand the resident's previous plan of care.

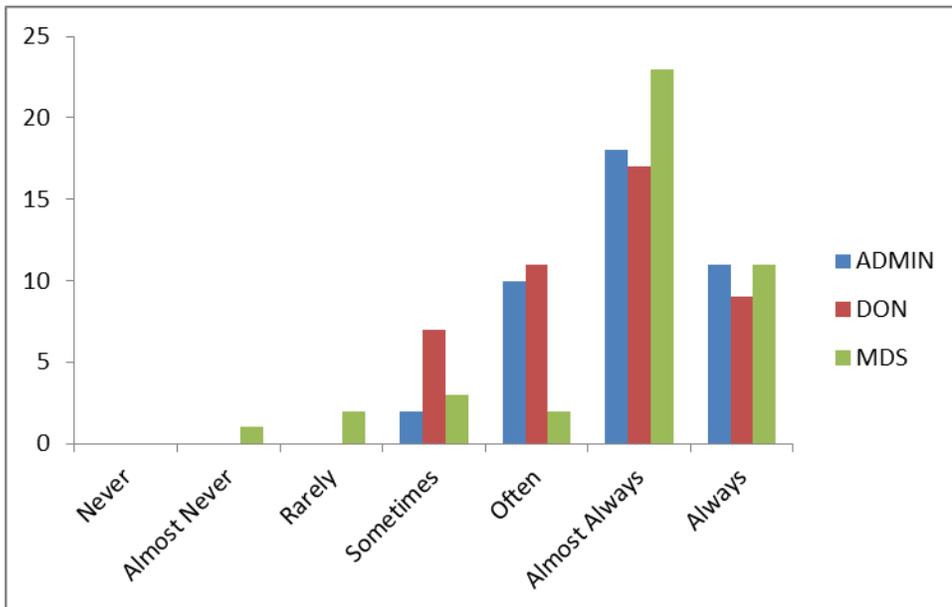


Figure 2. Inter-disciplinary Team Knowledge and Understanding of Previous Plan of Care

At the time of MDS recertification, staff evaluate the quality, effectiveness and outcomes of the previous plan of care.

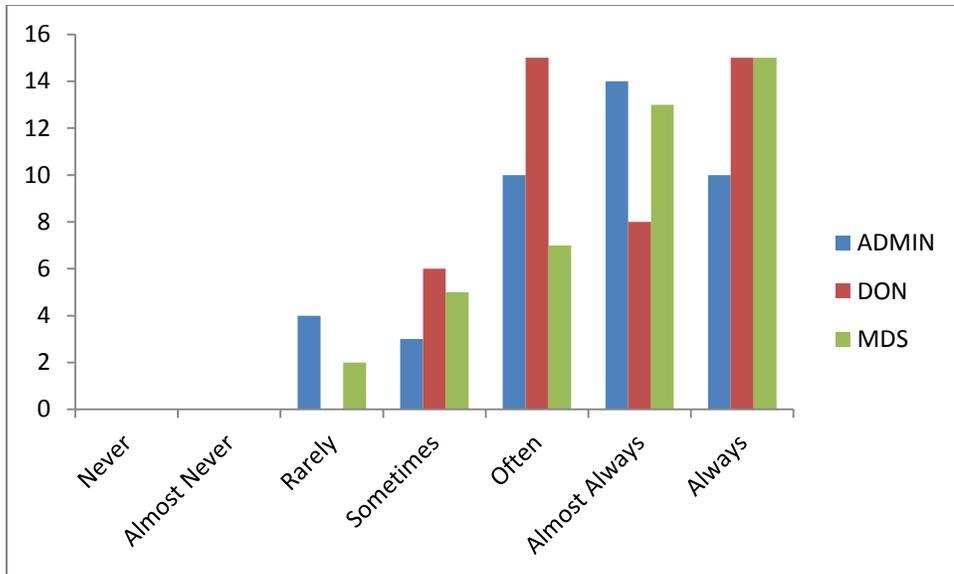


Figure 3. Staff Evaluate the Quality, Effectiveness and Outcomes of Previous Care Plan

At the time of MDS recertification, resident assessments are completed by each practitioner involved in completing the MDS.

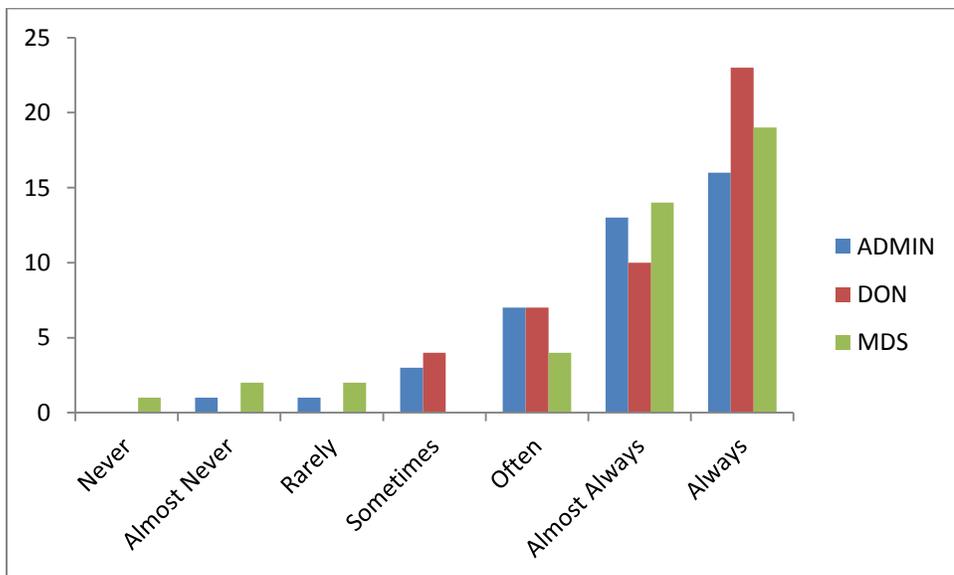


Figure 4. Resident Assessments Completed by Each Practitioner

At the time of MDS recertification, alternative treatment options are considered to ensure the best individual plan of care for each resident.

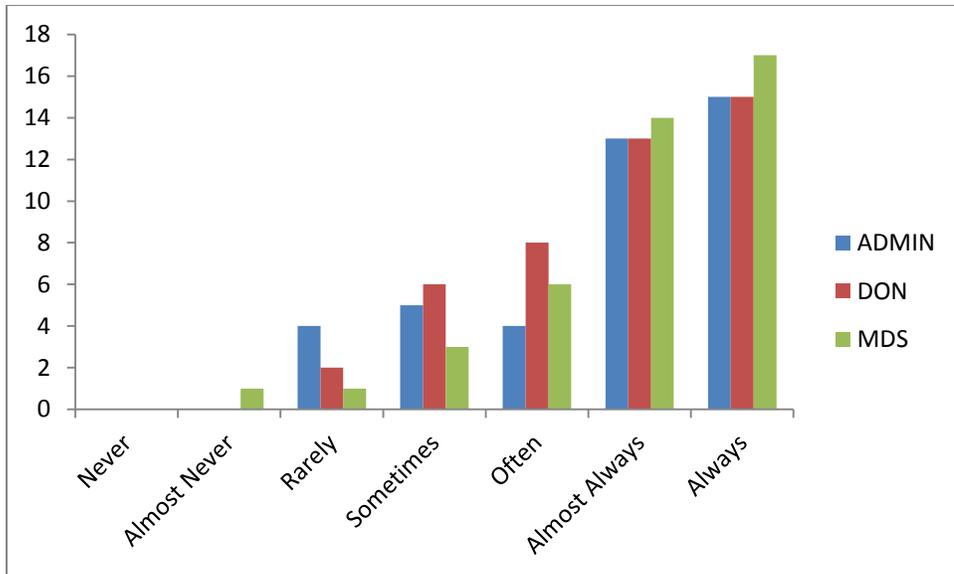


Figure 5. Alternative Treatment Options Considered for Each Resident

Once MDS data is collected, decisions regarding individual resident care plans are made by a group or team of clinicians.

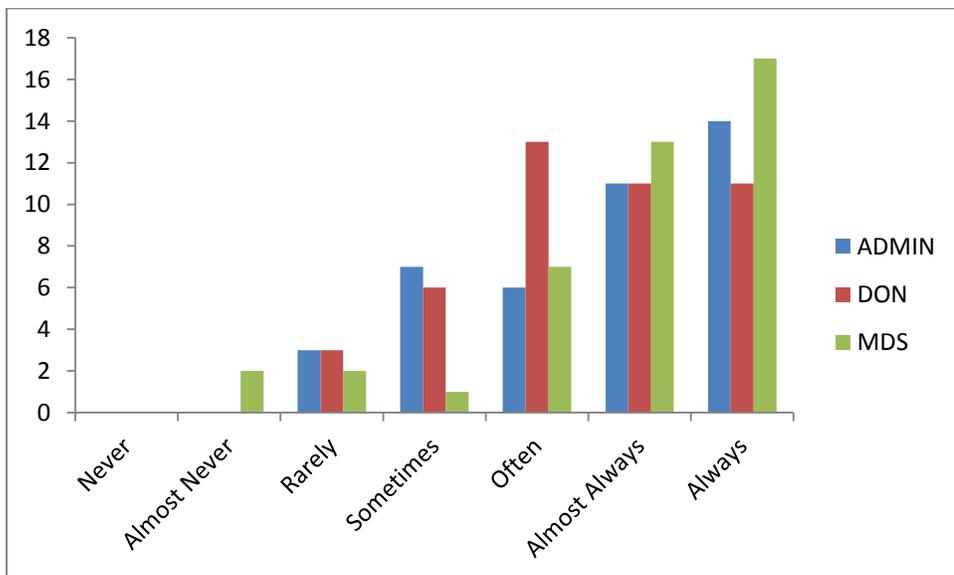


Figure 6. Decisions Regarding Individual Care Plans are Made by a Group

System and Process Factors of MDS Decision Making

Once the MDS data is collected, the efficiency of the care plan and resources ordered by the attending physician for the next MDS Certification period are considered.

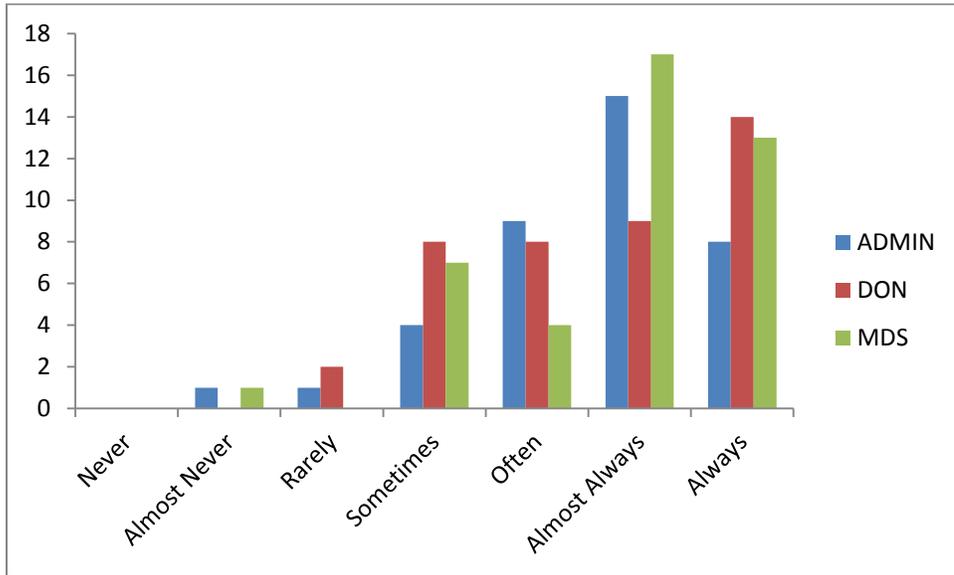


Figure 7. Efficiency of Care Plan and Resources Ordered are Considered

Once the MDS data is collected, standard procedures and facility policies are followed in developing the individual resident care plan.

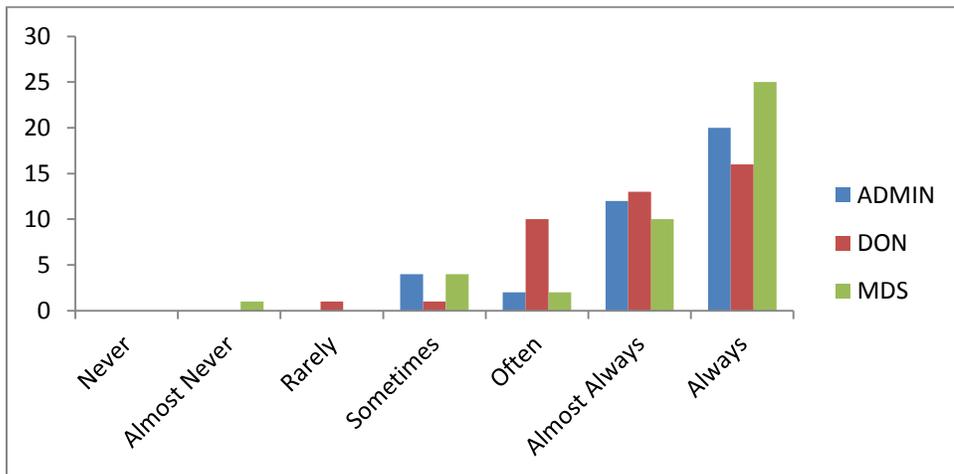


Figure 8. Standard Procedures and Policies are Followed in Developing Care Plan

Resident Autonomy when Making MDS Decisions

When completing the MDS, individual resident preferences and the resident's customary routines have been identified and are included in the care planning process.

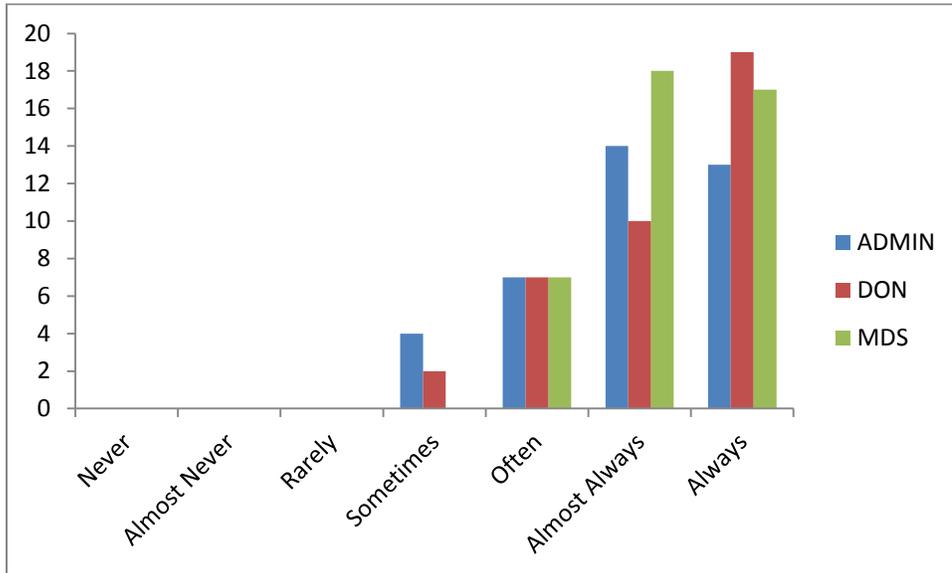


Figure 9. Individual Resident Preferences and Customary Routines are Included in Care Plan

When completing the MDS, the resident's wishes have been identified and are included in the planning process.

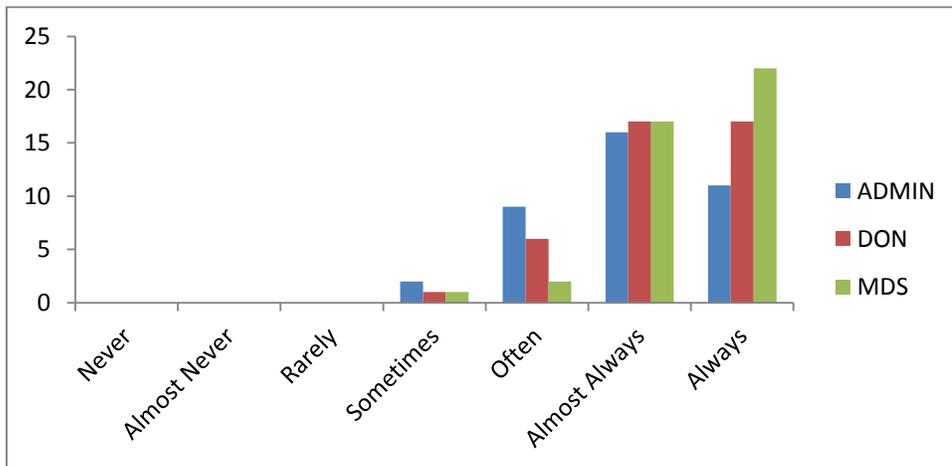


Figure 10. Resident's Wishes Identified and Included in Planning Process

When completing the MDS, family wishes have been identified and are included in the planning process for incompetent residents.

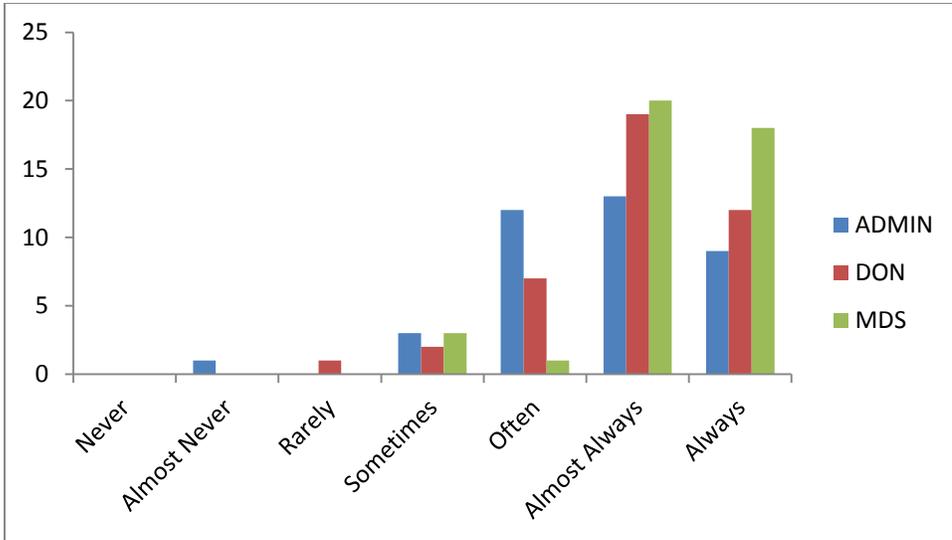


Figure 11. Family Wishes Identified and Included in Planning for Incompetent Residents

When completing the MDS, advance directives are reviewed for each resident and are included in the care plan.

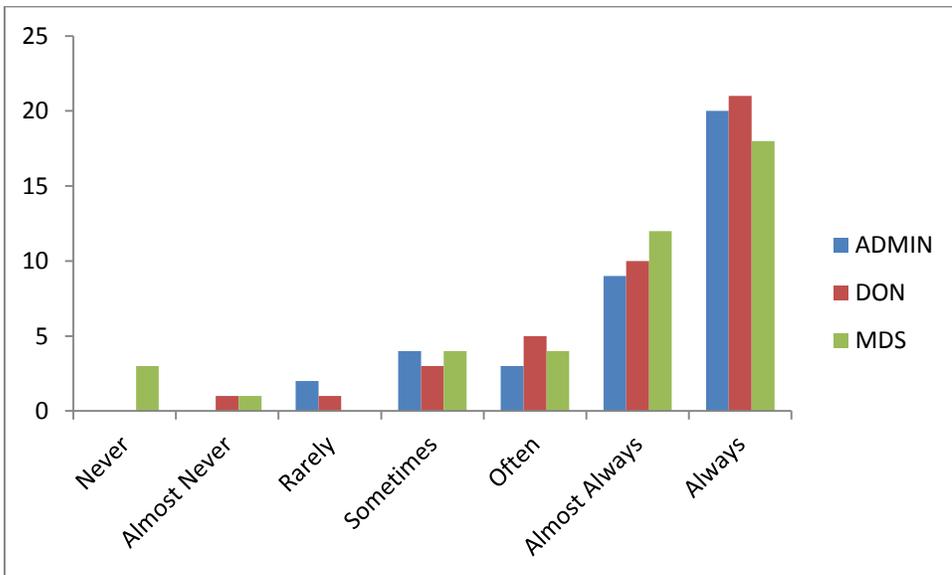


Figure 12. Advance Directives are Reviewed and Included in Care Plan

Personal Factors when Making MDS Decisions

I feel qualified and receive adequate training to keep current and updated on the MDS process.

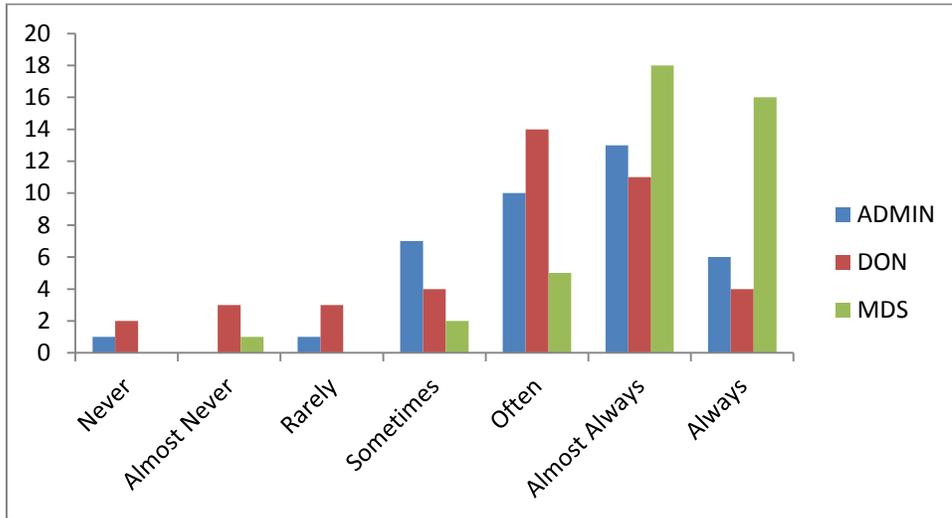


Figure 13. I feel Qualified and Receive Adequate Training on MDS Process

In completing the MDS process, care planning decisions are made and documented to meet resident goals.

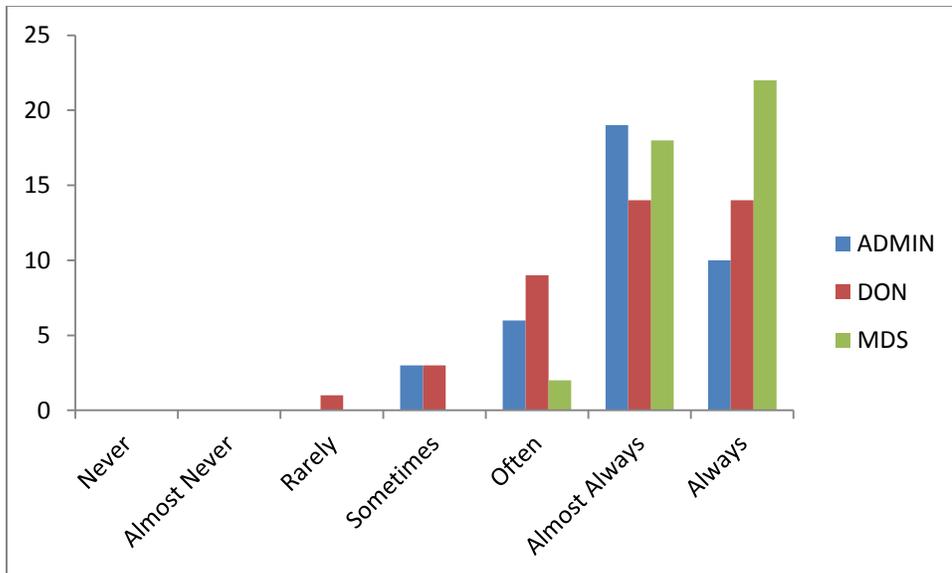


Figure 14. Care Planning Decisions are Made to Meet Resident Goals

Sufficient resources (such as the state LTC office, your facility nurse consultant, CMS.gov and YouTube) are available for decision-making in completing the MDS process.

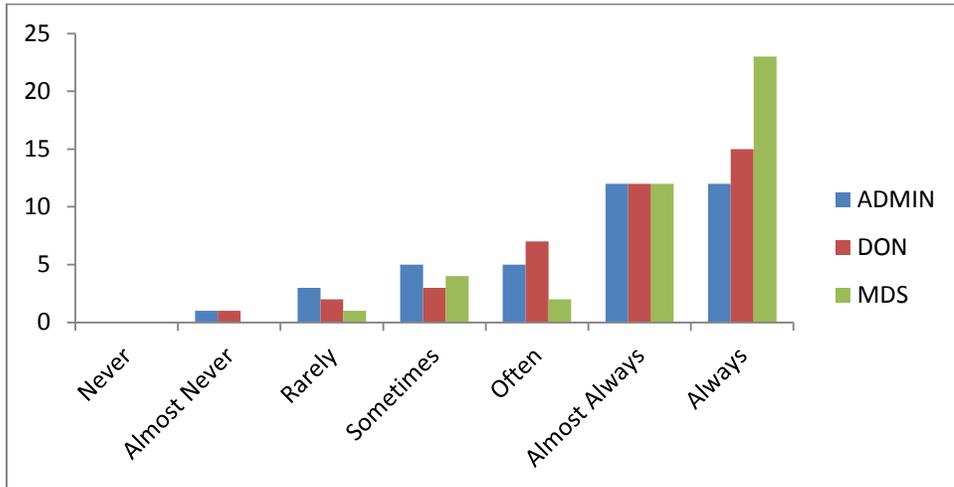


Figure 15. Sufficient Resources are Available for Completing the MDS Process

CHAPTER V

DISCUSSION

Overview of Findings

Findings from this study indicate decision making is influenced and impacted by the collection of MDS data. Nearly 71% of long-term care nurses in Utah have not received an MDS certification. As a former administrator, researcher knows how critical this can be to the success and viability of each nursing home and these inclusive statistics can have a bearing on the quality of each organization. It is important to consider the research questions to determine the proper usage and implementation of these outcomes.

Research Questions

This study evolved through a few research questions that were stated previously in the introduction chapter. From the literature review those research questions were developed and a survey was conducted. Based on the data collected these research questions were directly answered with important findings. The research question “how do long-term care nurses in Utah make resident care planning decisions” may be answered by a number of questions in the survey. By combining these questions and looking at the responses one may draw an overwhelmingly positive conclusion of how care planning decisions are made. Eight specific questions in the survey addressed this issue and they included questions 9a, 9b, 9c, 9d, 9e, 11a, 11b and 12c. Each of these questions included measures of *how* decisions are made from reviewing prior decisions, to identifying patient’s wishes, to contacting various resources, to available alternative treatments. All of these questions had at least 80% of the total respondents indicating

they often, almost always, or always perform that action when participating in MDS decision making. That is a hugely positive response rate indicating a behavior conducted by a large majority of survey respondents. Based on these outcomes, decision making is influenced, and impacted, by the collection of MDS data.

As stated previously MDS data collection procedures are mandated and audited by the local department of health and are part of compliance measures of every Medicare and Medicaid certified facility. The questions listed above contained specific compliance measures and procedures that when asked, answers by respondents indicated specific actions that were performed. For example, in question 9c, 89% (n=114) of respondents indicated each team member completes their individual portions of the MDS assessments and are involved in the recertification process. Likewise, question 11a reported 95% (n=116) of respondents considered and reviewed each residents preferences and customary routines in the care planning process. The research question “how do long-term care nurses in Utah make resident care planning decisions” must be answered, according to this data, by practice and compliance of state and federal standards.

The second research question related to this study was whether decision analysis procedures are utilized in long-term care facilities in Utah. This question was formed from researchers own experiences as a licensed long-term care administrator, as well as evidence vetted out in this study’s literature review. Specific responses to questions 10a, 10b, 11c, 11d, 12a and 12b of this survey indicate greater than 80% of respondents often, almost always, or always perform that action when participating in MDS decision making. These questions in this portion of the survey addressed both procedural and compliance related behaviors to solicit responses as to whether or not staff was using

decision analysis in MDS care planning. For example, 80% (n=98) of respondents answering question 10a indicated they often, almost always, or always consider the efficiency and resources ordered by the attending physician for the next MDS certification period. This question includes concepts of critical thinking and assessment of various resources that can improve the care planning process, thus provoking and prompting staff to use decision analysis procedures when considering the residents future MDS care plan.

Two additional questions were directly related to the second research question; “are decision analysis procedures utilized in long-term care planning in Utah?” Questions 11d and 12a contain specific content related to clinical licensure and continuing education of staff, as well as state mandated policies for advance directives. These questions include legal content of completing advance directives on behalf of residents and continuing educational credit requirements for staff credentials. For question 11d, 84% (n=103) of respondents indicated they often, almost always, or always review residents advance directives and include those in the MDS care plan. Ensuring residents end of life wishes is a major part of MDS care planning and based on the compliance measures of the industry, one can assume decision analysis procedures are driving that behavior. Question 12a had 80% (n=98) of the respondents indicate they often, almost always, or always receive adequate training and keep current on the MDS process. Based on these outcomes decision analysis procedures are being utilized in long-term care planning in Utah facilities.

Originally it was hoped this research would reveal the level of involvement of administrators on MDS care planning here in the state of Utah. However, of the 47

administrators that responded to the survey, none of them, zero responded to question 7 which stated “my role as a decision maker is clear in completing the MDS process and is part of my written job description.” Researcher was somewhat surprised by this statistic and the lack of response to this question by the administrators. Thirty-seven of the 47 administrator respondents went on to fill out the remainder of the survey after skipping question 7 and 90% (n=37) of them responded quite favorably to the remaining questions on MDS care planning. This was a troubling statistic. None of them responded to question 7 indicating either they don’t see the clarity of their role in MDS decision making or it may not be part of their job description, but 37 of the administrators had favorable responses to MDS decision making in the remaining questions. Of the remaining questions after question 7, all of them are specific towards behaviors and actions related to the MDS process. Ninety percent of the administrators responded favorably to those questions, including members of the IDT know the previous plan of care, resident assessments are completed by each team member, facility policies and procedures are followed in completing care plans and care planning decisions are made in the MDS process. These questions ask whether specific behaviors are being conducted, yet none of the administrators recognized clarity and job duty specifications in their own process of MDS completion.

Control for Bias and Determining Significance

Bias is a consistent threat to any research process. Regarding this dissertation it is important to note the prior career and current experience of the researcher as a long-term care administrator. Measures must be implemented to control for bias in any study to

ensure the validity of results and research design (Vogt, 2005) (Shenton, 2004). In order to control for bias in this study a few procedures were put into place. First, according to Shenton, there must be an early familiarity with the participating organizations and their cultural structure (2004). This initial control was implemented and adopted early in the research through the developmental committee and bias was discussed as a threat to any possible data or outcomes. Second, the assurance of random sampling among all licensed long-term care facilities in Utah helped to minimize any potential bias and, according to Shenton, assisted to ensure that possible influences on the data were distributed evenly within the results (2004). Thirdly, the concept of triangulation was used (Vogt, 2005) (Shenton, 2004) in working with the developmental committee, clinical committee meetings with the Association and observations by the researcher.

Determining significance, or referring to significant findings in reporting descriptive statistics may be difficult. Such was the case with this study and this is an important issue of the validity of this research. Once the data were collected and the results of the descriptive statistics revealed themselves, several key points appeared to be significant. The definition of significant results was based on the fact this study followed consistent methods that were already established (Shenton, 2004) in prior research studies and it incorporated correct procedures in data collection and analysis. Once data were collected there were frequent debriefing sessions among researcher and members of the developmental committee, discussing how they would define data as being significant, or not significant. Additionally, it is important to note the background, experience in long-term care and qualifications of the researcher regarding this study topic.

Limitations

This survey instrument of this study was too narrow and failed to produce adequate responses resembling a pattern of normal distribution. One of the main concerns was the skewed data pattern with the vast majority of responses indicating higher perceived values of MDS procedures in their current facility. This may in fact be true however most studies indicate self-report statistics are often reported more positively, or higher, by the sample than they really are. An additional limitation was the definitions of answers within the likert scale responses were not explicitly defined for survey respondents. For example, answer categories of “never” or “often” were self-defined by each participant and may have different meanings for each respondent.

The most problematic limitation of this research was the survey instrument questions. There were not enough questions asked to solicit a normal distribution among respondent answers. This made it difficult to see exact impacts and influences on the data and research questions. Additionally, the questions often contained two separate parts, which could have been confusing to the respondents. This decision was a judgment call and was discussed during survey development and planning with the committee and members of the Utah Health Care Association. It was decided to keep the questions as they were because they were in compliance with actual state regulations and in the end, data would indicate whether or not respondents knew, and complied with, those specific regulations.

Contribution to Literature and Further Research

This research identified a significant concern in the fact that less than 30% of the respondent nurses are MDS certified. This issue is critical to any long-term care organization because it could mean the difference of being financially viable as a facility, as well as rendering better levels of care. Additional research in this area, along with more defined and properly worded research questions, could better define those needs for long-term care facilities.

Findings of this study indicate staff members are meeting the requirements of MDS planning and that team members complete their portions of the MDS assessment. Further research in this area could better define those requirements and asking more questions that are directly worded with the compliance regulations could determine exactly the proficiency at which long-term care facilities are meeting this standard. Administrators are involved with the MDS process, yet it is clearly not part of their job description here in Utah. Further research could include more questions geared specifically towards administrators to find out their exact involvement in the MDS process, the expectations of involvement based on job descriptions and how can integrate themselves into this clinical assessment. Once the administrators are more involved, a recommendation for further study must include the financial implications of this research. The role of the administrator, as well as the financial impact of the MDS on reimbursement, could be an important consideration in building upon this study. This research has shown the two issues are tied together and when decision making is done correctly, there may be greater financial rewards, greater financial viability and better overall care rendered on long-term care.

Although this study asked respondents to provide information regarding their perspective of decision making and the MDS, it would be best to know whether the actual resident charts and medical records reflect the same conclusions. Further research in determining the comparative similarities, or lack thereof, between respondent answers and actual documentation would be a great research study to substantiate the level of care in long-term care facilities in Utah.

APPENDICES

APPENDIX A

MEDICAL DECISION-MAKING DURING A STATUS CHANGE EVENT
QUESTIONNAIRE
(© JISKA COHEN-MANSFIELD)

[Note to users: When Printing questionnaire, provide additional lines for space to elaborate after each question.]

Background

Physician Name: _____

Dr. A Dr. B Dr. C Dr. D Dr. E Dr. F

NP A NP B NP C

Physician's Characteristics

Gender: Male Female

Years of experience in geriatrics: _____

Years at this nursing home: _____

Research Assistant name: _____

Resident name: _____ ID# _____

Unit: _____ Date: _____

1. Is this your resident?
Yes No
2. If yes, then how long have you been treating the resident? _____

Please rate how familiar you are with each of the following items.

3. How familiar are you with the family's wishes concerning the resident's care?
Not familiar Somewhat familiar Familiar Very Familiar
4. How familiar are you with the resident's wishes concerning care?
Not familiar Somewhat familiar Familiar Very Familiar

Nature and severity of status change event

5. What occurred in the recent event?
Infection CVA Aspiration/pneumonia Trouble swallowing Fracture
Trouble breathing Not eating/weight loss Passed out Chest pain Other
(specify in 5a)

5a. _____

6. Before the acute event, would you have estimated the resident's life expectancy to be less than 3 months? Yes No Don't Know

7. Is/Was the change acutely life threatening? **note this question was deleted from the questionnaire pertaining to residents who died by the time of the interview.
Yes No Don't Know
8. Does the resident have a history of medical problems related to this event/change?
Yes No Don't Know

Decision-making process

9. What options did you consider for treating this situation?
Medication Comfort Care Rehabilitation Observation Diagnostic Tests
Hospitalization Surgery IV Amputation Dialysis Blood Transfusion
Radiation Other (specify in 9a.)

9a. _____

10. What options did you consider for treating this situation?
Medication Comfort Care Rehabilitation Observation Diagnostic Tests
Hospitalization Surgery IV Amputation Dialysis Blood Transfusion
Radiation Other (specify in 10a.)

10a. _____

11. Who else was involved in making the care decision regarding this resident?

- | | |
|-----------------|------------------------|
| Nurse | 11a. specify who _____ |
| Social worker | 11b. specify who _____ |
| Other physician | 11c. specify who _____ |
| Family member | 11d. specify who _____ |
| Other | 11e. specify who _____ |
| No one | |

Considerations in making treatment decisions

12. Why did you choose the above treatments?

Please rate how important the following considerations were in your treatment decisions, using the following scale.

Relative effectiveness/ futility of treatment options

Not important at all Somewhat important Important Very Important

Potential liability issues

Not important at all Somewhat important Important Very Important

General treatment practice for this condition
Not important at all Somewhat important Important Very Important

Cost of alternative treatments
Not important at all Somewhat important Important Very Important

Resident's quality of life
Not important at all Somewhat important Important Very Important

Family's wishes
Not important at all Somewhat important Important Very Important

Resident's wishes
Not important at all Somewhat important Important Very Important

Prolongation of resident's life
Not important at all Somewhat important Important Very Important

Resident's advance directive **note: this question was added to the questionnaire late,
and thus is not addressed in this paper
Not important at all Somewhat important Important Very Important

Your own preference if you were in the resident's place
Not important at all Somewhat important Important Very Important

Other (specify in 12a.)
Not important at all Somewhat important Important Very Important

12a. _____

Evaluation of the decision

13. What is the likelihood that this treatment will improve the patient's condition as compared to the patient's condition immediately after the status change event?
Likely to improve Likely to limit deterioration Unsure Not likely to make any difference Other (specify in 13a.)

13a. _____

**note: for the questionnaire pertaining to residents who died, the previous question was changed to:

13. Was the patient's death caused by the:
Status change event Treatment Both Neither Chronic illness
Lack of treatment Don't Know

14. How does the family feel about the decision?

Very Positive Positive Comfortable Indifferent Somewhat negative
Very negative Don't know

15. How do you feel about the decision?

Very Positive Positive Comfortable Indifferent Somewhat negative
Very negative Don't know

16. If the patient could tell you, what do you think he/she would want as his/her treatment?

17. If you were this patient (in his/her condition and age), what treatment option would you most want attempted?

(This was coded as: less treatment, same, more treatment, other treatment)

18. Additional Comments

Note: CVA=cerebrovascular accident; IV= intravenous.

APPENDIX B

QUESTIONS FOR THE SEMISTRUCTURED INTERVIEWS

Clinical Decision-making Questions

- What are you doing in this portion of the videotape? For what purpose?
- What about this patient indicated that this would be an effective intervention?
- How did you come to know this? Where/from whom did you learn this?
- I would like to move on to another segment of the videotape. (Repeat the questions above.)
- How does what's happening in this segment compare to what happened in the previous segment?
- When do you opt to _____ as compared to _____?
- Is this treatment session indicative of a "typical" treatment session? If not, what was different about this treatment session?
- Is there anything else you would like to tell me about the treatment sessions and how you make clinical decisions?
- Tell me what you think clinical reasoning is. How would you describe your clinical reasoning processes? How have these thought processes evolved?
- What do you think reflection is? How is clinical reasoning tied to reflection?
- Tell me about an instance when you used reflection to assess your clinical decision-making through patient management.

Resume Sort

I have placed each item on your resume on a separate card. I would like you to place each card in one of three piles:

- Those experiences that have been **most important** in developing your clinical decision making abilities.
- Those experiences that have been **somewhat important** in developing your clinical decision making abilities.
- Those experiences that have been **least important** in your clinical decision making abilities.

1. You have identified _____ experiences as being the most important in developing your clinical decision making abilities.

- 1.1 How were your clinical decision making abilities developed during each of these experiences?

- 1.2 What similarities were there between these experiences that you identified as being most important? What differences?
2. You have identified _____ experiences as being somewhat important in developing your clinical decision making abilities. Repeat A and B.
3. You have identified _____ experiences as being least important in developing your clinical decision making abilities. Repeat A and B.

Professional Roles/Professional Development Questions

- How do you view your role(s) as clinician in this environment?
- How is this similar/different to the roles of other team members?
- How has working here influenced your decision-making?
- Do you perceive any barriers in developing your clinical decision-making abilities?
- What would foster or enhance your personal goals for professional development?
- What would you tell a coworker who is thinking of taking this job with the goal of improving clinical decision-making and reflection skills?
- Is there anything else you want to tell me about your role as a therapist in this setting? Your clinical decision-making skills?

APPENDIX C

EMAIL ANNOUNCEMENT TO PARTICIPANTS

Dear Colleagues,

We would like to announce important research being conducted here in Utah and for our LTC industry. Over the last several months Association members and leaders have been working with Cory Moss, a Doctoral Student and Adjunct Instructor at Weber State University. Mr. Moss is researching Decision-Making Processes and Decision Analysis in Long-Term Care as it relates to the MDS and resident care planning. Gary Kelso, President/CEO of Mission Health Services and immediate Past President of UHCA and Carolyn Reese, Director of Clinical Services/ICF-ID Specialist for UHCA have been integral in assisting Mr. Moss in the development and implementation of this survey research. We strongly encourage you to take the following very short confidential survey before **APRIL 16, 2012**. Your participation will provide excellent data for our Association to assist in improving resident outcomes. We support this research and appreciate your willingness to participate. We request all Administrators, DON's and MDS Coordinators at each facility to click on the following link (or copy and paste address in browser) and complete this short survey;

<https://www.surveymonkey.com/s/FX6KJT9>

Thank you for your participation.

Sincerely,

Dirk Anjewierden, Executive Director UHCA

Gary Kelso, President/CEO of Mission Health Services, Immediate Past President UHCA

Carolyn Reese, Director of Clinical Services/ ICF-ID Specialist UHCA

Gayle Monks, Resident Assessment RN, Manager, Department of Health

Michelle Carlson, SSW, Project Coordinator, HealthInsight

Pete Zeigler, Executive Director Kindred Transitional Care and Rehab-Federal Heights

APPENDIX D

ADULT CONSENT FORM

Study Title: The Role and Influence of the Minimum Data Set (MDS) on Decision Making in Long-Term Care in Utah

Research Investigators: Cory Moss (Student)
Dr Kerr (Advisor)

Contact information:

(Student) phone (801) 540-5177 email- moss1cw@cmich.edu

(Advisor) phone (989) 774-1351 email- kerr1bj@cmich.edu

Introductory Statement

This study is examining the decision making processes in long-term care facilities in Utah. Facility Administrators, Director's of Nursing and MDS Coordinators will be surveyed regarding their involvement with and knowledge of the MDS process and resident care planning. We invite only Administrators, Director's of Nursing and MDS Coordinators to participate in this research and read the following information which provides details of this study. Feel free to contact me if you have any questions about this project.

What is the purpose of this study?

This study involves research that will capture the information and data of how individual facility teams make decisions once the MDS data is collected. The purpose of this study is to determine if decision making processes are being utilized in long-term care facilities in Utah.

What will I do in this study?

An online survey will be administered to specific facility personnel; the Administrator, Director of Nursing and MDS Coordinator. The purpose of the survey is to gather data from these persons.

How long will it take me to do this?

The survey will take approximately 10 minutes to complete and is submitted online.

Are there any risks of participating in the study?

None.

What are the benefits of participating in the study?

Pertinent data and information will be collected and analyzed to improve quality in resident care planning in long-term care facilities in Utah.

Will anyone know what I do or say in this study (Confidentiality)? No. The survey is completely anonymous and confidential and only the research investigators will see submission of the survey data. There are no identifiable factors or questions in the survey other than gender and employment title related questions. The data collected will be disclosed in the form of a dissertation with departmental personnel at Central Michigan University. All information will be kept anonymous and will remain strictly confidential, except for purposes of completing a required dissertation project.

Will I receive any compensation for participation? No.

Is there a different way for me to receive this compensation or the benefits of this study? N/A

Who can I contact for information about this study? Cory Moss (801) 540-5177

You are free to refuse to participate in this research project or to withdraw your consent and discontinue participation in the project at any time without penalty or loss of benefits to which you are otherwise entitled. Your participation will not affect your relationship with the institution(s) involved in this research project.

If you are not satisfied with the manner in which this study is being conducted, you may report (anonymously if you so choose) any complaints to the Institutional Review Board by calling 989-774-6777, or addressing a letter to the Institutional Review Board, 251 Foust Hall Central Michigan University, Mt. Pleasant, MI 48859.

By continuing with this survey, you agree with the consent requirements above.

REFERENCES

- Achterberg, W. P., Holtkamp, C. M., Kerkstra, A., Pot, A., Ooms, M. E., & Ribbe, M. W. (2001). Improvements in the quality of co-ordination of nursing care following implementation of the Resident Assessment Instrument in Dutch nursing homes. *Journal of Advanced Nursing*, 35(2), 268-275. doi:10.1046/j.1365-2648.2001.01843.x
- Adams-Wendling, L., DeDonder, J., Tidwell, S., Pimple, C., Schmiot, L., & Okeson, D. (2007). Budgeting nursing workload for required minimum data set assessments. *Journal of Nursing Management*, 15(4), 442-448. doi:10.1111/j.1365-2834.2007.00685.x.
- Adams-Wendling, L., Piamjariyakul, U., Bott, M., & Taunton, R. (2008). Strategies for translating the resident care plan into daily practice. *Journal of Gerontological Nursing*, 34(8), 50-56. Retrieved from EBSCOhost.
- Alemi, F. & Gustafson, D. H. (2007). Decision analysis for healthcare. Washington, D.C.: Health Administration Press.
- Alexander, G. (2008). A descriptive analysis of a nursing home clinical information system with decision support. *Perspectives In Health Information Management / AHIMA, American Health Information Management Association*, 512. Retrieved from EBSCOhost.
- Arling, G., Kane, R., Mueller, C., Bershadsky, J., & Degenholtz, H. (2007). Nursing effort and quality of care for nursing home residents. *Gerontologist*, 47(5), 672-682.
- Baker, M. W. (1983). *Overcoming judgment and decision error in long-term care assessment and service selection*. Brandeis University, The Florence Heller Graduate School for Advanced Studies in Social Welfare). *ProQuest Dissertations and Theses*, 284-284 p. Retrieved from <http://0-search.proquest.com/catalog.lib.cmich.edu/docview/303281908?accountid=10181> (303281908).
- Bandman, E. L., & Bandman, B. (1995). *Critical thinking in nursing*. (2nd ed.). Norwalk, CT: Appleton & Lange.
- Barry, T., Brannon, D., & Mor, V. (2005). Nurse Aide Empowerment Strategies and Staff Stability: Effects on Nursing Home Resident Outcomes. *Gerontologist*, 45(3), 309. Retrieved from EBSCOhost.
- Benner, P. E. (1984). *From novice to expert: Excellence and power in clinical nursing practice*. Menlo Park, Calif: Addison-Wesley Pub. Co., Nursing Division.

- Benner, P., Hooper-Kyriakidis, P., & Stannard, D. (1999). *Clinical wisdom and interventions in critical care: A thinking-in-action approach*. Philadelphia, PA: W.B. Saunders Company.
- Bergus, G., Chapman, G., Gjerde, C., & Elstein, A. (1995). Clinical reasoning about new symptoms despite preexisting disease: sources of error and order effects. *Family Medicine*, 27(5), 314-320.
- Bernabei, R., Murphy, K., Frijters, D., DuPaquier, J., & Gardent, H. (1997). Variation in training programmes for Resident Assessment Instrument implementation. *Age & Ageing*, 2631-35. Retrieved from EBSCOhost.
- Bernabei, R., Landi, F., Onder, G., Liperoti, R., & Gambassi, G. (2008). Second and third generation assessment instruments: the birth of standardization in geriatric care. *Journals of Gerontology Series A: Biological Sciences & Medical Sciences*, 63A(3), 308-313. Retrieved from CINAHL database.
- Bhaskaran, A., Parihar, R., & Prakhya, S. (2008). Approaches to Decision Making Under Uncertainty. *IIMB Management Review (Indian Institute of Management Bangalore)*, 20(2), 228-239. Retrieved from EBSCOhost.
- Bolmsjö, I., Sandman, L., & Andersson, E. (2006). Everyday ethics in the care of elderly people. *Nursing Ethics*, 13(3), 249-263. Retrieved from CINAHL database.
- Buchanan, L., & O'Connell, A. (2006). A brief history of decision making. *Harvard Business Review*, 84(1), 32-41. Retrieved from EBSCOhost.
- Call, J. C. (1995). *Clinical decision making within the nursing process among Utah nurses*. University of Utah College of Nursing). *ProQuest Dissertations and Theses*, 77-77 p. Retrieved from <http://0-search.proquest.com/catalog.lib.cmich.edu/docview/304275959?accountid=10181>. (304275959).
- Caspar, S., & O'Rourke, N. (2008). The influence of care provider access to structural empowerment on individualized care in long-term-care facilities. *Journals of Gerontology Series B: Psychological Sciences & Social Sciences*, 63B(4), S255-65. Retrieved from EBSCOhost.
- Chapman, G.B. and Sonnenberg, F. A. (2000) *Decision making in health care: Theory, psychology, and applications*. New York, NY: Cambridge Press.
- Clemen, R.T. (1986). *Making hard decisions an introduction to decision analysis*. Belmont, CA: Duxbury Press.

- Cohen-Mansfield, J., & Jensen, B. (2008). Physicians' perceptions of care in the nursing home and of strategies for improvement in a survey on treatment of behavior problems. *Journal Of The American Medical Directors Association*, 9(9), 633-640.
- Cohen-Mansfield, J., & Lipson, S. (2003). Medical Staff's Decision-Making Process in the Nursing Home. *Journals of Gerontology Series A: Biological Sciences & Medical Sciences*, 58A(3), 271. Retrieved from Academic Search Premier database.
- Corcoran, S. (1986). Decision analysis: a step-by-step guide for making clinical decisions. *Nursing & health care: official publication of the National League for Nursing*, 7(3), 148.
- Crombie, Davies, & Crombie. (1998). Beyond health outcomes: the advantages of measuring process. *Journal Of Evaluation In Clinical Practice*, 4(1), 31-38.
- Deber, R. (1994). Physicians in health care management: 8. The patient-physician partnership: decision making, problem solving and the desire to participate. *CMAJ: Canadian Medical Association Journal = Journal De L'association Medicale Canadienne*, 151(4), 423-427.
- Dellefield, M. (2006). Interdisciplinary care planning and the written care plan in nursing homes: a critical review. *Gerontologist*, 46(1), 128-133. Retrieved from EBSCOhost.
- Dellefield, M. (2007). Implementation of the Resident Assessment Instrument/Minimum Data Set in the nursing home as organization: implications for quality improvement in RN clinical assessment. *Geriatric Nursing*, 28(6), 377-386. Retrieved from EBSCOhost.
- Doran, D., Sidani, S., Keatings, M., & Doidge, D. (2002). An empirical test of the Nursing Role Effectiveness Model. *Journal Of Advanced Nursing*, 38(1), 29-39. doi:<http://dx.doi.org/10.1046/j.1365-2648.2002.02143.x>
- Elstein, A. (1999). Heuristics and biases: selected errors in clinical reasoning. *Academic Medicine: Journal Of The Association Of American Medical Colleges*, 74(7), 791-794.
- Elstein, A. S., & Schwarz, A. (2002). Evidence base of clinical diagnosis: Clinical problem solving and diagnostic decision making: Selective review of the cognitive literature. *BMJ*, 324(7339), 729-732. Retrieved from EBSCOhost.

- Freeman, A., & Sweeney, K. (2001). Why general practitioners do not implement evidence: qualitative study. *BMJ: British Medical Journal (International Edition)*, 323(7321), 1100-1102. doi:<http://dx.doi.org/10.1136/bmj.323.7321.1100>
- Gazarian, P. K. (2008). *Nurse decision making and the prevention of adverse events*. University of Massachusetts Amherst). *ProQuest Dissertations and Theses*, 144-n/a. Retrieved from <http://0-search.proquest.com.catalog.lib.cmich.edu/docview/304567324?accountid=10181>. (304567324).
- Gharajedaghi, J. (1999). *Systems thinking: managing chaos and complexity*. Burlington, MA: Butterworth Heinemann.
- Gore, W. J., & Silander, F. S. (1959). A Bibliographical Essay on Decision Making. *Administrative Science Quarterly*, 4(1), 97-121. Retrieved from EBSCOhost.
- Hawes, C., Morris, J., Phillips, C., Fries, B., Murphy, K., & Mor, V. (1997). Development of the nursing home Resident Assessment Instrument in the USA. *Age & Ageing*, 2619-25.
- Hendrix, C., Sakauye, K., Karabatsos, G., & Daigle, D. (2003). The use of the Minimum Data Set to identify depression in the elderly. *Journal Of The American Medical Directors Association*, 4(6), 308-312.
- Holtkamp, C., Kerkstra, A., Ooms, M., van Campen, C., & Ribbe, M. (2001). Effects of the implementation of the Resident Assessment Instrument on gaps between perceived needs and nursing care supply for nursing home residents in the Netherlands. *International Journal of Nursing Studies*, 38(6), 619-628. Retrieved from EBSCOhost.
- H.R. 3545--100th Congress: Omnibus Budget Reconciliation Act of 1987. (1987). In www.GovTrack.us. Retrieved February 21, 2013, from <http://www.govtrack.us/congress/bills/100/hr3545>
- Hansson, S. O. (1994). *Decision theory; a brief introduction*. Stockholm: KTH
- Ignatavicius, D. D. (1998). *Introduction to long term care nursing: principles and practice*. Philadelphia, PA: F.A. Davis Company.
- Jablonski, A., & Ersek, M. (2009). Nursing home staff adherence to evidence-based pain management practices. *Journal Of Gerontological Nursing*, 35(7), 28-34. doi:<http://dx.doi.org/10.3928/00989134-20090701-02>

- Kontos, P. C., Miller, K., & Mitchell, G. J. (2010). Neglecting the importance of the decision making and care regimes of personal support workers: A critique of standardization of care planning through the RAI/MDS. *The Gerontologist*, 50(3), 352-362. doi:10.1093/geront/gnp165
- Lauri, S., & Salanterä, S. (1998). Decision-making models in different fields of nursing. *Research in Nursing & Health*, 21(5), 443-452. Retrieved from CINAHL database.
- Lauri, S., & Salanterä, S. (2002). Developing an instrument to measure and describe clinical decision making in different nursing fields. *Journal of Professional Nursing*, 18(2), 93-100. Retrieved from CINAHL database.
- Lauri, S., Salanterä, S., Chalmers, K., Ekman, S., Kim, H., Käppeli, S. (2001). An exploratory study of clinical decision-making in five countries. *Journal of Nursing Scholarship*, 33(1), 83-90. doi:10.1111/j.1547-5069.2001.00083.x.
- Lawhorne, L., Ouslander, J., & Parmelee, P. (2008). Clinical practice guidelines, process improvement teams, and performance on a quality indicator for urinary incontinence: a pilot study. *Journal Of The American Medical Directors Association*, 9(7), 504-508.
- Levenson, S. (2009). The Basis for Improving and Reforming Long-Term Care, Part 1: The Foundation. *Journal of the American Medical Directors Association*, 10(7), 459-465. doi:10.1016/j.jamda.2009.04.011.
- Levenson, S. (2009). The Basis for Improving and Reforming Long-Term Care, Part 2: Clinical Problem Solving and Evidence-Based Care. *Journal of the American Medical Directors Association*, 10(8), 520-529. doi:10.1016/j.jamda.2009.05.002.
- Levenson, S. (2009). The Basis for Improving and Reforming Long-Term Care. Part 3: Essential Elements for Quality Care. *Journal of the American Medical Directors Association*, 10(9), 597-606. doi:10.1016/j.jamda.2009.08.012.
- Levenson, S. (2010). The Basis For Improving and Reforming Long-Term Care. Part 4: Identifying Meaningful Improvement Approaches (Segment 1). *Journal of the American Medical Directors Association*, 11(2), 84-91. doi:10.1016/j.jamda.2009.11.009.
- Levenson, S., & Morley, J. (2007). Evidence rocks in long-term care, but does it roll? *Journal of The American Medical Directors Association*, 8(8), 493-501.
- Levy, C., Palat, S., & Kramer, A. (2007). Physician practice patterns in nursing homes. *Journal Of The American Medical Directors Association*, 8(9), 558-567.

- Lopez, R. (2009). Decision-making for acutely ill nursing home residents: Nurses in the middle. *Journal of Advanced Nursing*, 65(5), 1001-1009. doi:10.1111/j.1365-2648.2008.04958.x.
- Marquis, B. L., & Huston, C. J. (1994). *Management decision making for nurses*. (2nd ed.). Philadelphia, PA: J.B. Lippincott Company.
- Martin, A., Hinds, C., & Felix, M. (1999). Documentation practices of nurses in long-term care. *Journal of Clinical Nursing*, 8(4), 345-352. Retrieved from EBSCOhost.
- Miller, K., Reeves, S., Zwarenstein, M., Beales, J., Kenaszchuk, C., & Conn, L. (2008). Nursing emotion work and interprofessional collaboration in general internal medicine wards: a qualitative study. *Journal of Advanced Nursing*, 64(4), 332-343. Retrieved from EBSCOhost.
- Mitchell, T. R., & Scott, W. G. (1988). The Barnard-Simon contribution: a vanished legacy. *Public Administration Quarterly*, 12(3), 348-368. Retrieved from EBSCOhost.
- Mor, V. (2007). Defining and measuring quality outcomes in long-term care. *Journal Of The American Medical Directors Association*, 8(3 Suppl 2), e129-e137.
- Morley, J. (2009). Phronesis and the medical director. *Journal Of The American Medical Directors Association*, 10(3), 149-152. doi:http://dx.doi.org/10.1016/j.jamda.2008.10.009
- Murtha, P. J. (2007). *Identifying strategies that enable shared decision-making authority for inpatients*. Central Michigan University. *ProQuest Dissertations and Theses*, 88-n/a. Retrieved from http://0-search.proquest.com.catalog.lib.cmich.edu/docview/304708267?accountid=10181.(304708267).
- Nichols, J. (2006). Balancing Intuition and Reason: Tuning in to Indecision. *Journal of Rehabilitation*, 72(4), 40-48. Retrieved from Academic Search Premier database.
- Orest, M. R. (1995). Clinicians' perceptions of self-assessment in clinical practice. *Physical Therapy*, 75(9), 824-829.
- Parmelee, P., Bowen, S., Ross, A., Brown, H., & Huff, J. (2009). "Sometimes people don't fit in boxes": attitudes toward the minimum data set among clinical leadership in VA nursing homes. *Journal Of The American Medical Directors Association*, 10(2), 98-106. doi:http://dx.doi.org/10.1016/j.jamda.2008.08.004

- Rashotte, J., & Carnevale, F. (2004). Medical and nursing clinical decision making: a comparative epistemological analysis. *Nursing Philosophy*, 5(2), 160-174. Retrieved from CINAHL database.
- Raterink, V. J. (2005). *Definitions of and reported enhancer and barriers to critical thinking by nurses working in long term care facilities*. The University of Tennessee Health Science Center). *ProQuest Dissertations and Theses*, 187-187 p. Retrieved from <http://0-search.proquest.com.catalog.lib.cmich.edu/docview/305371680?accountid=10181>. (305371680).
- Reeves, K. (2008). Decision-Making Models Help Define Nursing Practice. *MEDSURG Nursing*, 17(2), 74. Retrieved from Academic Search Premier database.
- Rubinfeld, M. G., & Scheffer, B. K. (1999). *Critical thinking in nursing: An interactive approach*. (2nd ed.). Philadelphia, PA: Lippincott Williams & Wilkins.
- Schnelle, J., Bates-Jensen, B., Chu, L., & Simmons, S. (2004). Accuracy of nursing home medical record information about care-process delivery: implications for staff management and improvement. *Journal of The American Geriatrics Society*, 52(8), 1378-1383. doi:<http://dx.doi.org/10.1111/j.1532-5415.2004.52372.x>
- Shenton, A.K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63-75. Retrieved from EBSCOhost.
- Simon, H. A. (1979). Rational decision making in business organization. *American Economic Review*, 69(4), 493-513. Retrieved from EBSCOhost.
- Stewart, D. W. (1988). The decision premise: a basic tool for analyzing the ethical content of an organizational behavior. *Public Administration Quarterly*, 12(3), 315-328. Retrieved from EBSCOhost.
- Sullivan, E. J., & Decker, P. J. (2001). *Effective leadership and management in nursing*. (5th ed.). Upper Saddle River, NJ: Prentice-Hall, Inc.
- Taylor, B. J. (2003). *Risk in community care: Professional decision making on the long-term care of older people*. Queen's University of Belfast (United Kingdom)). *ProQuest Dissertations and Theses*, 249-249 p. Retrieved from <http://0-search.proquest.com.catalog.lib.cmich.edu/docview/305272166?accountid=10181>. (305272166).
- Vogt, W. P. (2005). *Dictionary of statistics & methodology*. (3rd ed.). Thousand Oaks, CA: Sage.

- Wainwright, S., & McGinnis, P. (2009). Factors that influence the clinical decision-making of rehabilitation professionals in long-term care settings. *Journal of Allied Health*, 38(3), 143-151. Retrieved from PsycINFO database.
- Warner, D.M., Holloway, D.C., and Grazier, K.L. (1984). *Decision making and control for health administration: The management of quantitative analysis*. 2nd Ed. Ann Arbor, MI: Health Administration Press.
- White-Chu, E., Graves, W., Godfrey, S., Bonner, A., & Sloane, P. (2009). Beyond the medical model: the culture change revolution in long-term care. *Journal of The American Medical Directors Association*, 10(6), 370-378. doi:10.1016/j.jamda.2009.04.004
- Wiener, J. M., Freiman, M. P., & Brown, D. (2007). *Nursing home care quality: twenty years after the omnibus budget reconciliation Act of 1987*. Henry J. Kaiser Family Foundation.
- Wurzbach, M. (1995). Long-term care nurses' moral convictions. *Journal of Advanced Nursing*, 21(6), 1059-1064. doi:10.1046/j.1365-2648.1995.21061059.x.
- Zikmund-Fisher, B., Couper, M., Singer, E., Levin, C., Fowler, F., Ziniel, S., & ... Fagerlin, A. (2010). The DECISIONS Study: A Nationwide Survey of United States Adults Regarding 9 Common Medical Decisions. *Medical Decision Making*, 30(5S), 20S-34s. doi:http://dx.doi.org/10.1177/0272989X09353792