

A CASE STUDY ON HOW THE
APPROACH TO HUMAN ERROR GUIDES
THE INCIDENT REPORTING AMONG
NURSES IN A HOSPITAL SETTING

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ABSTRACT

For over a decade the healthcare industry has attempted to mimic the non-medical industry with the use of incident reporting as one of many tools used to increase patient safety. But often healthcare workers are trained to perfect individual performance and the incident reporting descriptions are frequently weighted with character flaws (Leape, 1997). Human error is viewed as a personal failure instead of a natural course of systemic contribution. This qualitative case study explores how the healthcare systems' approach to human error can influence the nurses' perception of human error and how this influence is manifested in the incident reporting culture. This study also encompasses the nurse manager's view of human error as he/she manages the nurses who self-report or report their peers. And lastly, the *just culture* concept is discussed as it intertwines with the complexity of incident reporting. Two approaches to human error from safety science literature, the 'Old View' vs. 'New View' approaches, are used as a guide to portray the possible differences the two approaches institute themselves in the nurses' understanding of human error. Five registered nurses and three nurse managers were interviewed to explore their depth of knowledge of human error as it establishes into the writing or not writing of incident reports. Key healthcare organizational documents and state laws were analyzed to examine the healthcare systems' approach to human error and incident reporting and their possible influence on nurses' perception of human error.

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INTRODUCTION

The use of incidents in high-risk industries has been an avenue for organizations to learn from weakness and potential hazards in safety. Effective safety systems in high-risk industry, such as chemical processing, offshore oil exploration, nuclear power, and aviation, often use voluntary incident reporting as a tool for safety management (Barach & Small, 2000; Benn, et al., 2009; Wald & Shojania, 2010). Incident reporting represents an opportunity for professional and organizational learning. It helps to keep managers and the blunt-end of organization highly sensitive about work environment and its constraints (Woods, et al., 2010).

In the healthcare system, incident reports are usually based on the self-reporting of front-line staff to offer information regarding an adverse event or a 'near miss' that occur within routine work situations (Benn, et al., 2009). Nurses, for example, are often at the sharp-end of a long string of participation from other providers and processes, such as pharmacists, physicians, radiologists, techs and other professionals. Incident reporting in nursing literature suggests that many systemic factors are involved when errors occurs. For instance, inadequate training, environmental distractions, and staff communication (see Gladstone, 1995; Walker & Lowe, 1998) are listed as systemic factors. Researchers also suggest that these several categories of errors are often out of the individual's control (see Leape, 1997).

Learning in healthcare safety strongly depends on trust and transparency for incident reporting (Leape et al., 2009). Since human error is frequently in the crosshairs of incident reports, previous studies have stressed the necessity of a *just culture* environment to provide the adequate

support for reporting (Dekker, 2007; Reason, 1997). In this sense, understanding the approach to human error in healthcare – whether it is assumed that errors are causes of incidents or symptoms of deeper problems in the system – gives us insights to comprehend the cultural view of incident reporting (Dekker, 2002, 2006; Woods & Cook, 2002). The first approach very often called, the ‘first story’ or “Old View” (OV), while the second approach is called the ‘second story’ or the “New View” (NV).

Nursing literature has discussed a variety of elements associated with incident reporting and the reasons why nurses do not report. Such reasons are very often mentioned to be the fear of consequences (Chiang, Lin, Hsu & Ma, 2010; Wakefield, et al., 1999), the perceptions of the overall organization culture (Throckmorton & Etchegaray, 2007), and ‘self-preservation’ (Walker & Lowe, 1998). Much of these reasons might actually be connected to the way human error is approached in healthcare systems and how organizations, especially nurse managers deal with incident reporting. A positive response from nurse managers can create support and focus on learning outcomes; negative responses can lead to losing professional respect, treating unfairly, and scapegoating (Wakefield et al., 1999).

In this study, we are explaining how the approach to human error in healthcare system guides the nurses’ view of incident reporting. We focus on the nurses’ understanding of human error and what role this understanding plays in the writing or not writing of an incident report. The study also encompasses the nurse manager’s view of human error as he/she manages the nurses who have to self-report or report on their peers. And lastly, how the component of *just culture* fits into the realm of incident reporting and the understanding of ‘human error’.

LITERATURE REVIEW

Human error

A significant goal in the report of *To Err in Human: Building a safer system* (Kohn, Corrigan, Donaldson, McKay, and Pike, 2000) was to decrease blame of the caregiver and find another approach to human error, one in which the systemic components play a role in the caregiver's socio-technical view. To see "error" with some value instead of an erroneous act could change the course of the way the human component is viewed within the healthcare system (Cook & Nemeth, 2010). But finding a newer approach, one that did not place blame in today's healthcare system has been difficult. McIntyre and Popper (as cited in Leape, 1997) state, "the blaming approach to medical error creates strong pressure on individuals to cover up mistakes and even if punishment is not overt, colleagues will be regarded as incompetent" (p. 214). Taking a look at the two approaches to human error is significant in understanding the differences in how the approach of human error plays out within a system.

The old view approach to human error

To start we will look at the "Old View"(OV) approach of human error. The OV approach believes that erratic people degrade an otherwise safe system. Dekker, (2006) suggests, this view trusts complex systems are basically safe, humans are unreliable, and who undermine defenses, rules and regulations. And to make the system safe again, restrictions need to be tighter (Preface xi). The OV or what Woods and Cook (2002) call the "first story", explains that this approach

is based on 'outcome' and is overly simplified accounts for the apparent 'cause' of the undesired outcome" (p. 137). This view believes that humans are inherently unreliable and the greatest threat to a basically safe system (Dekker, 2002).

Looking at the OV, Dekker (2006) states, " 'Bad Apples' or 'bad people' have negative attitudes toward safety, which adversely affects their behavior and systems are basically safe with carefully constructed policies and procedures which are undermined by erratic people" (p. 2). Woods and Cook (2002) found "if one were to look back into a story, hindsight bias could narrow and distort ones view of practice to a type of 'after-the-fact' mentality" (p. 137). The confidence in the OV approach is that through selection, proceduralization, automation, training and discipline progress in safety can be made by protecting these systems from unreliable humans (Dekker, 2002). And as Woods, et al., (2010) claim, "human error in the 'old view', is not well defined and attributing error to the actions of some person, team or organization is a social and psychological process, not an objective and technical one" (Preface). In conclusion, Dekker (2006) suggests, to the OV, "human error is the cause of a mishap such as a violation, regulatory shortcoming, and managerial deficiencies. And someone must find these inaccurate judgments, and the wrong decisions" (Preface xiv).

The new view approach to human error

The "New View"(NV) is that people create safety at all levels of the social-technical system by learning and adapting to information about how we can all contribute to success and failure (Woods, et al., 2010). And Dekker (2006) stated, "human error is not the cause of failure but a symptom of deeper trouble, It is not random but systematically connected to features of people's

tools, tasks and operating environment and it is not the conclusion of an investigation but the starting point” (p.15). Woods, et al. (2010) “indicates the story behind ‘human error’ is markedly complex” (p.5). Examples of this complexity state the incident usually is contextual, involving technology interface creating new forms of error, and most error involves interactions of others. The NV or the ‘second story’ approach by Woods and Cook (2002) believe to understand error is to,

“ look underneath the surface to discover multiple contributors to error, escape hindsight bias, understand work at the sharp-end, search for systemic vulnerabilities, underlying patterns, examine how change will produce new vulnerabilities, use of technology to support human expertise and tame complexity through new forms of feedback”, (p. 137).

In conclusion to the NV approach is that “it is insightful within complex systems and the sources of error are structural, not personal, and error and accidents are only remotely related, not a result of a breakdown of a well functioning system” (Dekker, 2006, p. 17).

Incident reporting and to human error in the healthcare system

A few studies have previously explored incident reporting. Barach and Small (2000), for example, used a literature search to discuss lessons learned from non-medical near miss incident reporting systems and how a balance of incentives over barriers can help manage incident reporting. Leape (1997) explains a variety of methods to be used for a more systemic approach to error in healthcare, one being a non-punitive approach to incident reporting joined with a trusting culture to increase an affective safety program. This study is followed by four research studies particularly related to medication incident reporting from 1995- 2010 (see Chiang, Lin Hsu &

Ma, 2010; Gladstone, 1995; Wakefield et al., 1999; Walker & Lowe, 1998). Along side these studies is a study on factors affecting incident reporting among registered nurses (Throckmorton & Etchegaray, 2007) and lastly, a study related to the nurses response to errors and how they cope with errors in a system which is supportive in comparison to a non-supportive system (Karga, Kiekkas, Aretha & Lemonidou, 2011).

These studies appear to elaborate about the approach to human error within the healthcare system. For example, Gladstone, (1995) states that in the hospital setting there are many individuals along the path of medication delivery and administration but often it is the nurse who is held accountable for errors and its consequences. Chiang, Lin, Hsu and Ma, (2010) reveal their findings suggested, “the nurses’ attitude, judgments toward reporting self and co-worker were major deterrents. These attitudes were imperative to learn from error and improving safety” (p.24). The understanding of what human error is and why an error occurred is often mirrored in the act of an incident report. The barriers to which the nurses have to overcome reflect the complexity of self-reporting. Some significant barriers brought out in these studies are understanding what constituted an error (Gladstone, 1995; Wakefield, et al. 1999), the belief the nurse would be reprimanded, fear of peer confidence, manager reaction, and patient harm (Gladstone, 1995; Hewitt, 2010; Wakefield, et. al, 1999; Walker & Lowe, 1998) And as Gladstone (1995) discusses, nurse managers are often guided by their own approach to error, although they desire a more uniform approach and would glean from education, it is often replicated in their responses.

Looking at a few lessons learned on near miss incident reporting from non-medical systems, Barach and Small (2000) write an analysis through a literature search to identify incident

reporting systems. Using multiple databases from 1966-99 they reviewed relevant journals, abstracts, dissertations, theses, and book chapters. Using this as a basis they identified directors and designers for semi-structured interviews. Identifying 25 non-medical incident reporting systems, in which they reviewed twelve from aviation, nuclear engineering, petrochemical processing, and NASA. Seven of the twelve were implemented by the federal government and had voluntary participation. Ten systems were confidential and two anonymous. Some offered legal immunity to reporters as long as data was submitted quickly. The aim of the study was to provide a resource about near miss incident reporting systems and lessons on safety that could possibly transferable to healthcare. The authors found each system had barriers and incentives for reporting which encompassed the individual, the organization and society. Looking at the individual barriers, there was fear of reprisals and lack of trust but when an incentive was provided such as confidentiality and immunity the reporting was better utilized. They concluded, “healthcare reporting systems must provide incentives to promote voluntary reporting, completely confidential and objective” (p.763).

How to transform healthcare’s current blame and resistance to one of learning and safety is to understand the balance of barriers and incentive to reporting and introduce a normalcy of learning, in non-punitive safety reporting cultures we will turn to Leape (1997). Leape (1997) uses the extensive examination by a quantitative Harvard Medical Practice Study reviewing iatrogenic (medical) injury in New York patients in 1984 in his article, *A system analysis approach to medical error*. The discovery of the Harvard study revealed, “approximately 4% of patients suffered an injury that prolonged their hospital stay or resulted in a measurable disability. This equaled to 98, 609 patients in 1984” (Leape, 1997, pp. 213-4). Leape discusses “cognitive psychologist’s research has revealed human error is common and most generally beyond the

individual's control" (p. 214). These attributions to error can be latent such as inappropriate work schedules, poor training, excessive time pressures and cognitive processes. He suggested that relying on self-reporting has not worked in healthcare due to healthcare's tendency to punish people who report, which causes a lack of reporting creating an environment where the massive amount of errors continue to be unknown. Leape suggests how extensive and costly it would be to focus on all systemic failures continually but suggests, "methods to assist in detection of error such as direct observation, chart reviews, computer screening, focus groups and voluntary (spontaneous) reporting" (p. 217). Once these methods were studied a process design could be implemented. Leape classifies design failures of processes into three categories, process design, task design and equipment design. He suggest several strategic guidance through Lucian Leape Institute such as: transformation of the vision to a more open, transparent culture centered around teamwork, integrate care platforms across all venues of inpatient, outpatient and residential care, partner with the patient and lastly to find 'joy and meaning in work'.

And as Leape (1997) states, human error is commonly out of the hands of the individual due to the way our systems function and providing a culture which understands the human fallibility and encourages individuals to report error will be a turning point for healthcare systems. This is the very discussion Weiner, Hobgood and Lewis (2008) discuss in their article of *The meaning of justice in safety incident reporting*. Their definition of a just culture is "one in which the beliefs, assumptions, and expectations that govern behavior in an organization conform to generally held principles of moral conduct" (p. 404). Not believing that a 'one size fits all' approach can be implemented, the authors developed a conceptual model based on organizational justice, referring to people's perception of fairness in the workplace (Greenberg, cited in Weiner, Hobgood & Lewis 2008). By dividing up justice perceptions into four dimensions, distributive,

procedural, interpersonal and informational justice, they explain each one of these constructs link to different conditions and outcomes. This multilevel view of justice is much different than a single view of distributive justice, where the “ the disciplinary action depends on the level of perceived culpability” (p.408). The authors believe organizational justice research attributes people’s justice perceptions are linked to affective behavioral reactions such as decision/outcome satisfaction, job satisfaction, trust in supervisors and perceived organizational support and commitment lead to usefulness of this theory in healthcare incident reporting systems.

Gladstone (1995) conducted one of the first significant research studies on medication error and underlying factors involving medication error (Hewitt, 2010, p.160). The study was conducted in a general hospital setting in southwest England. . A mixed method descriptive study was used which reviewed incident reports, surveyed nurses who had made (drug) errors, and the nurse managers responsible for those nurses; and some of the nurses participated in semi-structured interviews. Gladstone concluded that many underlying factors create an environment to which nurses are set up for failure. These factors include the uncertainty of what constitutes a drug error, lack of mathematical skills, poor staffing, and heavy workload. The study revealed that individual nurses had a fear of reporting to the nurse manager and less confidence in their professional work. Only one nurse in Gladstone’s research emerged with a positive outlook from her experience due to her support from her manager and team. But most others indicated that they were treated like criminals and very reluctant to report errors again. The nurses’ answers in the semi-structured interviews disclosed their fears of guilt and the possible effects (of their error) on the patient. Nearly all nurses in Gladstone’s study had a severe loss in confidence in their clinical ability.

Gladstone's findings on incident reporting were confirmed by Walter and Lowe's (1998) study. This Australian hospital project used a qualitative approach by descriptive data collection methods of a self-reporting questionnaire and focus group discussions for hospital unit nurses. The questionnaire was used to ask nurses which events they would more likely self report as an incident. The results indicated that nurses report incidents that are life threatening to the patient and do not want any collective data about themselves. The focus groups revealed deeper information regarding 'self preservation' and 'it depends' attitudes. Evidence of the theme analysis of the nurse focus groups stated phrases of "'self preservation' in terms as: past experience of 'getting into trouble...', 'it's the way your treated after an incident'...'people need to know they are not going to get into trouble...'" (p.99). The other reoccurring theme suggested the nurses believe that the self-reporting of an error depended on what type of error and if they could fix the problem themselves. The conclusion to the study suggested the unpleasant disciplinary experiences in the past and belief that an error is not worthy of reporting unless it is life threatening to the patient. The monitoring the medication incidents relies mainly on the self report of nursing staff with much of the focus on the individual and not the process causing genuine fear of reprimand.

Just a year later, Wakefield, et al. (1999) used 29 acute care hospitals in Iowa to complete a research study based on the understanding the reasons medications errors may or may not be voluntarily reported by nursing supervisors and nursing staff. Using a non-random convenience sample to over 1300 nurses, this study explained the understanding of a four-step process by which nurses have to overcome barriers in order to report a medication administration error. The nurse had to recognize there was an error made. If the perceived error was important enough, for example, a missed vitamin over a miscalculation of an intravenous drip then the

nurse had to decide whether or not to report it. An effort by the nurse to count the cost of reporting the error, such as, fear of being seen as incompetent. And lastly, the administrative response could act as a constraint to the act of reporting since the individual nurses' performance could be in question. Using a factor analysis they analyzed the responses of these four steps and found that it was not just one particular reason nurses did not voluntarily report but a combination of all the steps. Overall, there was a high level of agreement between nursing and nursing supervisors that the combination of fear and administrative response were significant indicators a nurse would not voluntarily report a medication error.

Moving ahead to 2007, Throckmorton and Etchegaray (2007) conducted a study in the state of Texas using mail survey to randomly selected registered nurses to understand the willingness of nurses to report errors of various degrees of severity and to establish if knowledge of the Texas Nurse Practice Act was significant to the willingness to report, and if demographics played a role in intent to report. Out of 411 respondents, the results of the study concluded the nurses perceived the environment to be neutral, neither punitive nor non-punitive. But they believed the perception of the environment to influence whether they reported or not reported. It was found the nurses had a fairly good knowledge of the requirements of the state law regarding nursing practices. The nurses were willing to report errors resulting in 'no harm' to 'death of a patient' across the continuum equally. And tenured licensed nurse were more likely to report. The limitations to the study were found that most respondents, (53.5%) belonged to nursing associations where the national average in only 10%, concluding this could be an over-representation.

In Taiwan a research study was conducted by Chiang, Lin, Hsu and Ma (2010) surveyed factors that determined hospital nurses' failure to report medication errors. This cross-sectional design used a self-administered questionnaires study, which was conducted, in five tertiary hospitals in southern Taiwan with over 838 direct patient care nurses, excluding any managerial staff. The study revealed the over half of the nurses had made a medication administration error. They also noted that the Taiwanese nurses had a substantial different attitude to report themselves than a co-worker and would less likely report the co-worker. Secondly, fear of peer and manager reactions was the most discussed barrier in the lack of reporting from among 95% of the respondents. The last reason of lack of reporting medication errors was many nurses understand most medications that are given are not life threatening, thus they may verbally discuss the error but do not write a incident report placing the outcome as their basis for not reporting. This study reveals the nurse's personal perception of responsibility of a medication administration error are stronger than a view of the systemic process flaws creating an environment for error and inability to learn from the error made.

Hewitt (2010) writes a literature review about nurses' perceptions of the causes of medication error. Using a Cumulative Index of Nursing and Allied Health Literature (CINAHL), Hewitt found that only five articles were published before the Institute of Medicine's (IOM) publication *To Err is Human: Building a Safer Health System* in 1999 (Kohn, et al. 2000). Since 2002 – 2008 an increase in research regarding safer healthcare revealed there were 394 articles published. After criteria for exclusion and inclusion occurred, Hewitt found a total of nine articles related to nurses and medication errors. The literature review noted medication administration involved multiple provider levels such as pharmacists, pharmacy techs, physicians, and nurses, but most of the consequences of a medication error lay at the feet of the nurse giving the medication.

Common themes through out the literature of why errors occurred stated by Hewitt (2010) were: “distractions, failure to follow the five rights of medication administration, (right patient, right drug, right route, right time, right dose); failure to follow protocols, fatigue or exhaustion, poor physician handwriting, drug look alike confusion with similar packaging, and miss-calculations” (p. 160). The reasons why nurses did not report these errors from these studies suggested several barriers, confusion on the definition of an error, the nurse’s reputation among their peers, loss of professional confidence and fear of the manager’s reactions to the medication error. Hewitt’s conclusion to the literature review stated the medication delivery system is complex and broad. Nurses play only one figure in this role and leader collaboration in healthcare need to address a nonpunitive approach to encourage incident reporting to create safer systems.

And lastly, taking a slightly different angle, Karga, et al. (2010) discusses the affects of nurses coping with errors made in their study. The purpose of this research article was written to look at nurse’s response to error in Greek hospitals. Using an adapted questionnaire from Meurier, Vincent and Parmar (1998) and Wu, Folkman & McPhee (1993), the study revealed high workload and inexperience were the leading error causes. The researchers divided the affects into internal and external emotional responses. High percentages of emotional responses discovered the nurses felt depressed, angry with themselves, inadequate and embarrassed. A slightly lower rated of external emotional responses of feeling angry with others, fearful of the patient’s clinical course, repercussions from the error, and fear of losing colleagues’ trusts. Those that accepted responsibility appeared to learn better from their errors than those who blamed outside sources but they too suffered from anxiety, incompetence and guilt. They found a correlation of how management handled the error to be of more significance toward a positive or negative change.

Summary and comments

In conclusion, as Cook and Nemeth (2010) state, human error needs to show some value instead of a focus of an erroneous act. And the significance of the error should not be directed into a 'blame approach' (Leape, 1997), which creates pressures to cover up events. The blame approach takes light in what Dekker (2006) calls the 'Old View', explaining that erratic people degrade an otherwise safe system. And a 'New View' approach depicts that error is not random by systemically connects features to people, tools, task and operating systems. Looking at the use of voluntary reporting in industry it is an impetrative learning opportunity for healthcare systems to appreciate the weaknesses in the processes and improve patient safety. And as Barach and Small (2000) explained, other non-medical industry has learned to improve the reporting of error by balancing the initiatives over the barriers. The studies on medication incident reporting give light to the complexity of the multiple barriers nurses have to overcome in order to report an error and it gives awareness that, self preservation, fear of peer rejection and manager reprimand has a great impact on the decision to report of an error, consequently, how the nurses' view human error has a large impact on what is being reported and why. The nurse manager responses to human error acts as catalyst to project support or non-support within the realm of incident reporting creating a cyclical effect on the safety continuum. The healthcare systems view on human error continues to want a 'just culture' but lacks the execution of the theory as the inconsistencies continue to appear in the nurse and nurse manager's view in incident reporting. The role of the nurse as a messenger of the end result of an error needs to be acknowledged with support and understanding of systemic ailments within the system not to blame 'the messenger'.

RESEARCH METHOD

In this research we adopted a qualitative and exploratory case study approach (Blaxter, Hughes & Tight, 2010; Udod & Care, 2012; Rowley, 2012). As Cohen, et al. (apud in Blaxter, Hughes and Tight, 2010) suggests some advantages of a case study are that it draws on people's experience and practices, allows the researcher to show the complexity of social life and can build on actual practice and experience.

Data collection

The sampling collection came from a major research academic hospital that employs over 10,000 employees and includes more than 40 hospital care areas, a large research center and multiple community clinics. The sampling data gathered from interviews was compared to documents published by various healthcare organizations and nursing state laws

Interviews

Interview procedures

Three nurse managers participants and five inpatient acute care nurse participants were chosen to participate in this research study to understand nurse's experience, value, and opinions (Rowley, 2012) related to human error and incident reporting. This sampling from the academic hospital setting was completed in three phases.

The first phase completed was to identify the three hospital care units with the highest rate of incident reporting and three hospital care units with the lowest rate of reporting.

This was accomplished by running a report from the incident reporting tool, DATIX/UHC SafetyIntelligence, Inc., of all the hospital care unit locations and the amount of incident reports for the last twelve months excluding the laboratory events. (The exclusion is due to the year long project by the Pathology Department to have any type of laboratory event place into the incident reporting tool- this is exclusively done by the laboratory technicians and does not involve the voluntary incident reporting by the nursing staff).

The second phase completed was the recruitment of three nurse managers out of the six hospital care areas.

And the third phase consisted of identifying five nurses from the same identified units. Asking the nurse manager for two or three suggested candidates from his/her unit for the research study during the interview process and randomly choosing five nurse participants completed this portion.

Inclusionary criteria: The nurse managers were from hospital care units. The nurse managers had more than or equal to 4 years experience as a manager. The registered nurses were from the same hospital care units as the nurse managers and had more than or equal to one year of experience. This gave us enough data for what is essentially a pilot study of an extremely complex problem.

Ten semi-structured open-ended questions were used in this study and began with collecting demographic information on each participant including age, gender, educational background,

length of time as a registered nurse and what type of nursing unit (see Appendix A for the interview questions). The interviews consist of an average of approximately 60-minute. The interviews took place at a location the participants and researcher mutually agree. The interview guideline for all participants began after signing the consent and a short explanation of the study.

The interviews were audio recorded and transcribed verbatim by a certified transcription company and any identifying information was removed from the recording prior to handoff to the transcription company. In order to become familiar with the data it is suggested to transcribe the interviews verbatim but this is often very time consuming (Rowley, 2012). In order to expedite the data analysis the transcriptions were completed by an outside source. The researcher listened to the audio recordings to become familiar with the content and began a thematic analysis (Rowley 2012). The participants were able to chose to be audio recorded or not but all participant agreed to a digital audiotaping. As soon as the audio recording was completely transcribed and returned by the certified transcription company, the participants reviewed and approved the transcribed interview documents by email for verification purposes.

The open-ended questions were divided into two sub topics. One subtopic on human error was discussed to study how nurses and nurse manager define 'human error'. The second sub-topic discuss was the term 'incident reporting' and how each nurse or nurse managers viewed incident reporting and the usage of incident reporting.

Participant information

The five registered nurses (RN) averaged age was 42 years old and had an average of 10 years experience as registered nurses. One RN had 16 years prior experience as a Licensed Vocational

Nurse (LVN). All RN's had a bachelor's of science in nursing (BSN) and one had a master's in business administration (MBA). The five RN's worked in a medical /surgical unit, two critical care units and a special procedural unit. All RN participants worked under direct supervision of the three NM participants.

The three nurse manager (NM) ages averaged 47 years old with 18.3 years experience as RN's and averaged 6 years experience as nurse managers. One NM had a nursing leadership master's degree and the other two had BSN degrees. All the NM's had greater than six years of prior experience in a supervisory role before becoming a NM.

Collectively, there were a variety of organizational membership selections among the nurses and nurse managers. Only one nurse was a member of the American Nurses Association (ANA) and one a member of the Texas Nurses Association (TNA). Other participants were members of Texas Transplant Society, Preventative Cardiovascular Nursing Association, and American Association of Critical-Care Nurses (AACN) were among the membership associations. The nurse manager's memberships included AACN, the Institute for Healthcare Improvement (IHI), American Organization of Nurse Executives (AONE), and American College of Cardiology.

When asked about learning anything regarding incident reporting or human error from organizational websites, only one NM stated she had learned how many times a nurse made a mistake throughout the day but never learned more information regarding human error from any formal nursing organizational website. This information does lay a significant foundation as to who or what entity has the most influence on the nursing staff. Most of the learning and understanding of human error is self taught and/or influenced by the local institutional culture in

which they worked by stating they understood the definition of human error by *their own personal experiences*, not by a nursing course or an organizational websites. But, the healthcare institutions are highly influenced by participating in accreditation standards, regulating bodies and meeting the rules and regulations as set by state and federal laws.

Ethical considerations

Approval was obtained from the participating university's institutional research board (IRB), (See Appendix B). Confidentiality was maintained by assigning numerical codes and unique pseudonyms to each participant. All identify information was removed from the transcripts and no one except the researcher had access to the participant codes. A copy of the consent form (Appendix C) was given to the participant upon signing and agreeing to be a part of the study. Participants were offered no incentives or gifts as a result of participating in the research study.

The participant was instructed that they could decide to withdrawal from the study at any given time. Upon their withdrawal from the study all interview documents/audio tapes would be destroyed and there would be no consequences from withdrawing from the study. This would include any information that was used or disclosed prior to the decision to stop participation and needed in order to maintain the integrity of the research study. If there are significant new findings or we get any information that might change the mind of the participant about participating, we would give the participant the information and allow them to reconsider whether or not to continue.

Documents

Document analysis was used to study healthcare organizational views and laws related to human error and incident reporting. As Blaxter, Hughes and Tight (2010) suggests document elements were abstracted according to importance and relevance and were analyzed. The relevant documents chosen were: The American Nursing Association (ANA) Position Statement of *Just Culture* along with The ANA's *Code of Ethics for Nurses*; The Agency for Healthcare Research and Quality (AHRQ) *Chapter 4 on Incident Reporting*, written by Wald and Shojania (2001) and the Texas laws regarding nursing errors made from the *Texas Administrative Code Title 22, Part 11 Chapter 217.6* and finally, the Texas Board of Nursing Position Statement 15.17- *Texas Board of Nursing/Board of Pharmacy, Joint Position Statement, Medication Error* . The consideration of these chosen documents assisted in understanding healthcare systems approach to human error, incident reporting and just culture and findings were grouped together alongside others for relevance (p. 232).

Data analysis

As part of a data analysis of the transcribed interviews, a thematic analysis was used to collect particular themes within the recorded texts looking for significant statements and comparing the participant's views (Baxter, Hughes & Tight, 2010). Braun and Clark (cited in Baxter, Hughes and Tight, 2010) state, "becoming familiar with the data, generating initial codes, searching for and reviewing each theme, as well as, defining and naming the themes" (p. 233). This assisted the researcher to create a report analyzing the research question and the literature provided

understanding of the nurses' and nurse manager's review of human error and incident reporting. And by examining the transcribed texts, "a document analysis was accomplished question by question to compare the specific answers as a general approach". (p. 234).

RESULTS AND DISCUSSION

This study examined healthcare organizational documents along with data analysis of nurse participants' interviews to understand healthcare system approach to human error and how it is interpreted in what nurses perceive as attributions to human error and its application to incident reporting process.

Healthcare organizational approach to human error

In concerns to errors made by nurses, the state of Texas *Nurse Practice Act 2011* states, "Conduct required to be reported [to the Board of Nursing] if an error contributed to the patient's death or serious harm". The law goes on to state, "that a nurse does not have to be reported to the board unless it represents a pattern of multiple minor incidences". The law defines a 'minor' incident stating, (2) A "Minor incident' means conduct by a nurse that does not indicate that the nurse's continued practice poses a risk of harm to a patient or another person" (The Texas Occupational Code Title 22, Part 11, Chapter 217, Rule 217.16, (d)(1)(A)). But the minor incidents are limited and multiple errors could pose problematic as suggested,

"The nurse must be reported to peer review if a nurse commits five minor incidents in a 12-month period. (C) If a nurse manager or supervisor believes, regardless of timeframe, the minor incidents indicate a pattern of practice that poses a risk of harm that cannot be remediated, the nurse should be reported to the Board or Peer Review Committee (The Texas Occupational Code Title 22, Part 11, Chapter 217, Rule 217.16 (2)(B)).

The state law infers that serious injury; death or a pattern of minor incidents can stand as reasons why a nurse could be in judgment of his/her practice and possibly lose his/her nursing license.

The nursing organizational position statements are also suggestive that nurses are independently accountable for patient safety. As seen in the *ANA's Code of Ethics for Nurses with Interpretive Statements* (n.d.) state, “ the nurse retains accountability and responsibility for the quality of practice.... accountability means to be answerable to oneself and others for one’s own actions, nurses are accountable for judgments made and actions taken irrespective of health care organizations policies or providers directives” (Provision 4.1-2). When a nurse works within the constraints of policies and guidelines of some type of a healthcare institution and often receives physician directives in the course of his/her normal everyday work more often than not a nurse will follow institutional guidelines, policies as she is trained to follow. The *Texas Board of Nursing (BON) Position Statement* (2013) states, “The Registered Nurses’ (RN) duty is to always provide safe, compassionate, and comprehensive nursing care to patients” (The Registered Nurse Scope of Practice 15.28, para. 1). The weight of the organizational position and the state laws regarding responsibility and accountability appear to make the nurses solely accountable for judgments made within a complex system and to always provide safe care regardless of policy or provider guidelines.

But in 2010, a small working group from the Congress on Nursing Practice and Economics wrote the *Position Statement on Just Culture*, which was approved by the American Nurses Association (ANA) Board of Directors which states, “healthcare’s culture has held individuals accountable for all errors or mishaps that befall patients under their care but in contrast, “a *Just Culture*, recognizes that an individual practitioner should not be held accountable for system

failings over which they have no control” (para. 6). And Barnsteiner (2011) writes in the *ANA’s Teaching the Culture of Safety*, “the focus [of error] is on *what went wrong*, **not** (emphasis by the author), who caused the problem, a balance is currently referred to as the ‘just culture’” (para. 2). Supporting this concept, the *Texas Board of Nursing/Board of Pharmacy, Joint Position Statement, Medication Error 15.17(2000)* explains that attribution of error historically had been placed on a single practitioner but attempts to shift to a more collaborative systemic effort by stating, “medication errors are a multifaceted problem which may occur in any health care setting and acknowledge the interdisciplinary nature of medication errors and how often poor system design can create failure in medication administration” (para. 1-3).

On the other hand, the ANA’s *Position Statement on Just Culture (2010)* has integrated David Marx’s model for *Just Culture* which carries a strong accountability stance of the nursing staff for errors made stating, “human error and adverse events should be considered outcomes to be measured and monitored...”(p. 3). By utilizing this model the nurse managers will be able to decide what type of behavior lead to the error. This model divides three classes of human behavior by “simple human error” which is inadvertently doing something; “at -risk behavior” is a behavioral choice that increases risk where risk is not recognized or mistakenly justified; and “reckless behavior” is conscious disregard and unjustifiable. It also tends to focuses upon the individuals in the system rather than the systemic failings. It appears that somewhere along the line the front line staff will be made accountable for the error and the system in which the nurses’ structural constraints of policies, laws, work load, patient acuity, communication breakdowns, fatigue and training are all sent into the background instead of a backdrop of how error occurred.

Another way of approaching a *just culture* would be what Dekker (2009) states, “a basis for a just culture involves a normalization of incidents, so that they become a legitimate, acceptable part of organizational development” (p. 183). Accountability for the errors made would be similar to what Sharpe (2004) discusses as “forward-looking approach where responsibility is linked to theories and practices of goal setting and moral deliberation” (p. 13). Sharpe goes on to say,

“in a systemic approach to error emphasizes responsibility in a prospective sense. Responsibility takes the forms of preventative measures to improve poor system design, provide information about potential problems and an environment is created where it is safe to discuss and analyze error” (p.15).

Learning how to approach a *just culture* is just as important as patient safety. If organizations want to design a culture of learning from error an acceptance of error and a level of trust has to be maintained in order for it to be just.

The healthcare organizational documents analyzed also discussed details in regards to the characteristics of incident reporting in healthcare and a nomenclature for errors made by providing standardization for errors based on outcome severity.

Barach and Small (as cited in Wald & Shojania, 2001) discuss in the chapter for The Agency for Healthcare Research and Quality (AHRQ), characteristics of incident reporting state, “it is important to focus on near misses, provide incentives for voluntary reporting, ensure confidentiality and emphasize systemic approaches to error analysis” (Practice Description, para. 3). And using incentives, which have been taken from non-medical fields, should include

“immunity, confidentiality, outsourcing of report collation; rapid feedback to all involved and sustained leadership support” (Practice Description, para. 4). AHRQ has set a standard on what incident reporting should include and how it should be utilized. This standard would take on a ‘forward-looking approach’ (Sharpe, 2004), which would focus on systemic vulnerabilities prior to a patient injury, and it would also protect the reporters of incidents to increase the likelihood of continued reporting.

For more than decade a nomenclature has developed which focuses on outcome severity in order to attempt to decrease medical injury by holding hospitals accountable for reporting these incidents to healthcare organizations or accreditation bodies. A variety of government agencies began to defined and/or categorized severe events or medical injury (Wald & Shojania, 2001). In 1995, The Joint Commission (TJC) categorized a term ‘*sentinel event*’ and highly recommended hospitals to report these events from a list of serious events created by the TJC, which involved death or serious physical or psychological injury (Wald & Shojania, 2001). According to Wald and Shojania (2001), another set of severity categories was supported by the AHRQ, “in an attempt to mimic complex, high-risk industries, healthcare proposed to define medical errors in three basic categories: ‘adverse events’, ‘no harm events’ and ‘near misses’. And a third category of severity is connected to reimbursement funds from the government to hospitals was created for the Centers of Medicare and Medicaid (CMS) according to Levinson (2010),

The Tax Relief and Health Care Act of 2006 require that the Office of Inspector General report to Congress regarding the incident of ‘never events’ among Medicare beneficiaries. The Medicare program will deny payment or recoup payment for services furnished in connection with such events (p. i).

'Never events' comes from a list 26 serious reportable events by the National Quality Forum (NQF), which should never occur in a hospital for example: wrong site surgery, retained foreign object, a fall with injury, or any healthcare acquired infection (HAC) are items on the list (p. 2). The government will not pay the hospital for a serious medical injury that happened to one of their beneficiaries so keeping track of those events is mandated.

And lastly, at the local hospital level, one of the main reasons there is a focus of severity of events in the healthcare incident reporting system is stated by Wald & Shojania (2001) is, "because risk management departments tend to oversee incident reporting system in some capacity, these systems more often focus on incident outcomes, not categories" (Practice Description Section, para. 7).

The healthcare organizational approach to human error appears to vacillate between two standards. One in which the law counts minor errors; mandates reporting a nurse involved in severe injury or death and holds nurses accountable regardless of policies/ procedures implemented by their organizations to an opposing standard which support systemic approaches broadening the multifaceted interdisciplinary complexity of healthcare and encourages a just culture. The structure of incident reporting has been put in place by the national healthcare organizations with use of the nomenclature of severity definition but is framed around the local cultures' utilization. As stated by Wald and Shojania, (2001), "what is written in the reports often has to do with the practice within each particular institution due to the variability and the nature of the incident reporting, and are often filled with hindsight bias, lost information, lost contextual clues and can focus on individual performance instead of increasing institutional

quality improvement programs” (Comment section, para. 3) Given this context, we will turn to the data collected regarding how nurses perceive their organization’s view of human error, how the nurses’ define human error and how these definitions are expressed in incident reporting.

Nurses’ perception of organizational view of human error

The nurses’ perception of the organizational view of human error appeared to be dependent on how the nurse manager handled the incidents at the unit level. Elements of severity bias, ‘illusion of control’, and attempting to reach perfection were underlying themes from topics discussed by the nurse participants. They also reflected on their perceived inadequacies of themselves or their peers to be the cause of trouble.

Participant #RN4 stated the hospital defined, and managed (error) *differently depending on its severity. If it is minor, it might be overlooked, if no one is harmed.* The RN participant goes on to say, *if it were mild or moderate error you would be talked to by your manager, then written up and counseled, you could get probation and then termination if it was severe.* The minor offense, as stated by this participant, was *to tell someone to help another staff member pick up blood at the blood bank over three different times before it was done.* The major offense was *finding a co-worker asleep on the job four times.* To solve the system’s process for transporting blood products a review of the entire process would be a solution instead of ‘blame’ set upon one individual who may have other responsibilities, time constraints and workload complications. This illustration given by the participant is weighed with a backward-looking accountability, (Sharpe, 2004) of behavior-based example. It is also reasonable to believe a person should not be sleeping on the job. But what Sharpe (2004) called a ‘backward-looking’ approach to accountability links the practice of praising and blaming when we speak of holding someone

responsible such as “ he/she was responsible for harming the patient” (p.13) or we could say, “ falling a sleep on the job” has a retrospective focus of the outcome instead of learning why the person was falling asleep on the job or what caused the person to not go pick up the blood from the blood bank. As Woods and Cook (2002) state, blaming the individual is far easier than understanding the ‘second story’ and to discover the multiple contributors (p. 137). When normal people are doing their normal work bound by their everyday procedural boundaries and an injury occurs, this only proves the system had weaknesses all along and when the opportunity arose the systemic failures became apparent (Dekker, 2005). For example, systemic contributing factors, which could cause a nurse to fall a sleep on the job in a normal setting, could be a variability of workload with long periods of low intensity and drowsiness could take over on a night shift.

This participant suggested that a severe event would be reported to the manager and a lesser event would have less impact. The connection of discussing the event with the manager is tied to the severity of the event. It is possible that the healthcare organizational systems support severity bias that could lead to less emphasis on near miss or unsafe conditions and as Wald and Shojania, (2001) explain, “AHRQ estimates that ‘near misses’ occur 3-300 times more often than an adverse event, which reaches the patient” (Practice Description, para. 2). If minor errors are often overlooked, valuable learning opportunities are lost and a continuous of a backward approach resumes to be the basis of change.

Participant #RN7 explained the organizational view of human error came from a past experience, by stating he/she was involved in an investigation using a root cause analysis (RCA) and was found by his/her supervisors to be the cause of the error and placed on probation. This RN asked

the question, *if the human error was handled by the institution as post facto, do we ever handle it pre facto?* The RN suggests, *it is always best to deal with an issue before it happens.* This RN's perception of human error was very focused on a painful personal experience he/she discussed an error where the medications were given to the wrong patient and judgment was placed on his/her decision-making skills. Using these statements it appears the RN believed an organization could know all the elements, which could create an error. Three elements are revealed in these thoughts. One is the illusion that error can be controlled (Cook & Nemeth, 2010) secondly, perfection can be obtainable, and thirdly, the trap of believing one individual's judgment created an error.

By stating an organization should correct problems before they arise creates an 'illusion of control' (Cook & Nemeth, 2010). And by "creating the 'illusion of control' over the situation an error can be attributed to an individual then making future failures lessen" (p. 91). The concept that an organization believes its systems to be perfect provides a "defense against entanglement" (p. 90). The organization can attempt to distance themselves from an error made and set in motion that a human was the cause of the error. This RN observed that all systems could be manufactured to run perfectly which would leave only the element of the human to make the error.

Secondly, is there a true notion that a perfection point can be reached? This concept appears to follow the healthcare workers belief of their professional practice can reach a pinnacle of perfection (Leape, et al., 2011) where they will never make an error. This leaves out the understanding of the systems complexities that errors and accidents are only remotely related. Every socio-technical aspect of complex systems can lead to an unintended consequence due to its

very complexity. Living and breathing in complex systems, humans will never make improvements to system vulnerabilities if they attempt to climb the pinnacle of perfection. It is this understanding of the three insights as stated by Dekker (2006), “sources of error are structural not personal; errors and accidents are only remotely related and accidents are not the result of a breakdown” (p. 17).

Thirdly, the judgments and reaction of the supervisors focused on the fact that the RN made a poor judgment creating an ‘error’. In fact, as pointed out in the document analysis, the *Texas BON Position Statement 15.28* confirms, “RNs are accountable and responsible for the quality of nursing care and must exercise prudent nursing judgment at all times”. This focus on the RN’s judgment misses the ‘deeper understanding’ (Dekker, 2002, 2006) of the environment in which the RN gave the wrong medications such as: lack of staffing, patient acuity, patient load, and distractions (Gladstone, 1995). The supervisor’s punitive actions show ‘hindsight bias’, (Dekker, 2002, 2006), scapegoating (Cooke, 2007; Dekker, 2002,2006; Dekker, Nyce & Myers, 2012; Karga, et al. 2011; Parker & Lawton, 2003) and blame (Leape, 1997; Leape, et al., 2009) and a true example of the ‘illusion of control’ (Cook & Nemeth, 2010). The organization would be free of blame if the RN were punished. The RN had been working in a normal every day work environment. By focusing on the error as a personal judgment error, the system stays the same and the illusion continues that the organization has perfect systems.

The participants also discussed their organizational view of staff members much like they were the source of trouble or ‘bad apples’. Participant #RN4 stated *they (RNs) are just lazy; you have to stay on their butts!* Participant #RN1 stated, *some individuals who do things they know are not right. They choose to do things that are blatant that I would identify through patterns of*

behavior. It is their behavior, the way they choose to do their life. Both the nurse participants describe the ‘bad apple’ concept as Dekker (2002) explains; “if their (staff) behavior were better the system would be safer” (p. 7). These ‘bad apples’ are the primary focus instead of systemic flaws (Dekker, 2002, 2006; Parker & Lawton, 2003). Flaws in the system could be short-staff, (Cook, 2007; Reason, 2000; Udod & Care, 2012), high acuity, (Gladstone, 1995), burnout, (Dekker & Nyce, 2013;Karga, et al. 2011; Udod & Care, 2012;) lack of education, (Barach & Small, 1966) and time (Gladstone, 1995; Udod & Care, 2012).

The #RN1’s example of *blatant error* was about a nurse with three years experience but was a new employee to this hospital. The nurse had to administer blood products and failed to have a consent form signed prior to blood administration. The preceptor training this RN explained that the hospital policy is to get consent every time blood is administered and the NM felt like this consent process was covered in the orientation process. The nurse failed to get the consent on two other occasions. The last time, the RN gave the blood, the RN wrote out a consent form after the fact and called the doctor to sign the consent after the blood administration. When it was over, the preceptor told the NM. The RN was terminated from the position due to a pattern of behavior.

A pattern of behavior appears to be the key for the termination of this RN. This pattern of behavior is substantiated in the state nursing laws, “that a nurse does not have to be reported to the board unless it represents a pattern of multiple minor incidences”, (Texas Occupational Code Title 22, Part 11, Chapter 217, Rule 217.16). This nurse was not reported to the board of nursing (BON) but instead terminated due to the lack of learnability from errors made. It is difficult to speak with authority on this particular example since all the facts are not known. But

as Cook and Nemeth (2010) discuss this idea regarding the usefulness of error, “as an organizational defense, human error serves as a kind of lightning rod that conducts the potentially harmful consequences produced by an accident along an (organizational) pathway” (p.91). This can also be known as scapegoating or getting rid of the ‘bad apple’ and the illusion would be the system has now become better since the ‘bad apple’ is gone.

Nurses’ definitions of human error

In defining human error seven of the eight nurse participants articulated inadequacy, competency and responsibility as key themes of human error. One participant articulated understanding of human error to be an unintentional mishap.

The participants discussed a large proportion of inadequacies as attributions to the definition of human error. Examples of such inadequacies are relayed by Participant #RN4, who states human error is, “*misguidance; lack of judgment; lack of education; lack of proper training, not meticulous enough and a lot of laziness*”. Participant #RN7 stating, “*human error is a mistake committed by an individual in the practice of nursing whereby prudence was not practiced or observed that lead to committing a breach in public safety*”. And Participant #RN8 stated, *human error is committed by staff arising from behavior or deviations from protocol or standards of care*. The participants’ statements leave out the circumstances surrounding how healthcare staff are often set in motion by their surrounding cultural conditions, which created the environment for an error to occur (Dekker, Preface xi). As Woods, et al. (2010) stated “‘human error’ is markedly complex” (p.5) and error usually involves technology and interactions with others, it is not an isolated event.

This participant attributed human error toward one significant concept to where the nurse's competence had to match up with the criticality of his/her patient population by stating that *human error to a nurse goes back to patient load. Using an example, you can't put an agency nurse floating out to one area that does not match their expertise.* It appears the nurse's answer reveals a belief that with a perfect match of training, skill and competency an error will not occur. What seems to be a lack of understanding of this participant is even if a nurse's competency matching his/her clinical competency, failings can still occur due to the systemic complexity.

Participant #RN6 stated in his/her definition of human error that nurses' *need to take responsibility and not sweep it under the rug. What you do can literally harm a patient and it isn't right to not take responsibility for your errors.* The participant's desire was to take ownership of errors made and not hide it. Nursing organizational documents support responsibility of the nurse stating that the nurse is responsible for the safety of their patients at all times (ANA's Code of Ethics for Nurses with Interpretive Statements, n.d.). Many nurses would probably be open to dialogue about an error made but often the culture is not conducive to open dialogue without fear of retaliation. Sweeping error under the rug does not mean the nurse does not take responsibility for the error, it could mean he/she is afraid to tell anyone for fear of retribution. And retribution is not supported by the *ANA Nursing Bill of Rights*, which state, "nurses have the right to freely and openly advocate for themselves and their patients, without fear of retribution" (ANA, NursingWorld, para. 2).

And lastly, Participant #RN2 discussed human error definition was *someone who makes a mistake unknowingly or unintentionally thinking it was the right thing to do at the time because at the moment I did it, I thought it was the right thing to do*. Using an example by saying,

‘ when a bedside clinician is doing their everyday tasks and she forgets to check the dosage of a medication and gives the medicine to the patient not knowing the physician ordered a different dosage amount. We, as ‘human beings’, get task oriented and we don’t think about what we are doing and unknowingly commit errors’.

The document analysis of healthcare organizational view and state laws support the view that nurses need to hold themselves responsible, accountable for patient safety concerns regardless of what the policies and procedures of the organizations in which they work (ANA’s Code of Ethics for Nurses with Interpretive Statements, Provision 4.1-2) this is substantiated by the nurses’ understanding of inadequacy, competency and responsibility to be the essence of human error. But in the last few years’ healthcare organizational views and state laws have made attempts to look at more systemic approaches. The Participant #RN2 statement reveals that individual nurses may understand the interdisciplinary nature of medication errors and often poor systemic design which can create an environment for failure (Texas Board of Nursing/Board of Pharmacy, Joint Position Statement, Medication Error 15.17, 2000).

Nurses’ utilization of incident reporting and associated barriers

After analysis of how nurses define human error by explaining inadequacies, competency and responsibility as the basis of their definition, it is significant to understand how nurses apply their definitions of human error in incident reporting. Essential themes discussed by the participants were, why nurses report incidents and barriers associated with incident reporting among nurses' and nurse managers'.

Why nurses report

The most common reason for incident reporting was due to the severity of the event. All eight nurse participants agreed that an incident with a high severity should be told to the nurse manager (NM) and placed into the incident reporting tool by statements such as: "*the more severe, of course, you tell your NM*"; "*usually it is the severity of the issue is how I decide to write an incident report*"; "*if it is a sentinel event I will report it*". The commonality of this view is understandable due the injury of a patient, disclosure to the patient and family, and the legal ramifications. But often by categorizing adverse events into severity classes gives a false sense of accountability is placed on the reporter of a severe event as opposed to a reporter of a 'near miss' or a minor event. And as (Sharp, 2004) states, "responsibility in the retrospective sense focuses on outcomes", where as a "prospective responsibility is oriented to the deliberative and practical processes involved in setting and meeting goals" (p.14). Whether a severe, minor or 'near miss' event occurred the same review of systemic weaknesses should occur. The system of incident reporting should not always be based on the effects of the patient but the potential of unsafe conditions that are often repeatable within the systemic processes.

The second reason stated by the participants for reporting was tattling on each other or another department. Several comments were stated regarding telling on each other such as: *“people place incident [reports] on me so I will put them in on them!”* (Participant #4) and *“instead of helping me they placed an incident report on me!”* (Participant #5). Or departmental retaliation was stated, *“the lab is reporting all under filled lab specimens, now nursing is telling on the lab by writing an incident report because the lab didn’t get the tests done on time!”* (Participant #6). The usage of the incident reporting tool as a tattling tool is suggestive of two concepts. The first concept is scapegoating, due to the fear of being the target of blame a person will point the finger at another individual or department (Cooke, 2007; Dekker, 2002, 2005, 2006; Dekker, Nyce & Myers, 2012; Karga, et al., 2011) and secondly, the lack of understanding of collaborative accountability (Sharpe, 2004). Since the personnel closest to the patient are often the one most weighted with accountability, a push to move some of this responsibility to another department can appear as a negative approach but it could be due to the erroneous placement of accountability to the nursing staff (Bosk, 2003; Sharp, 2004). A change in an approach from retrospective to prospective approach would move the paradigm of accountability to a collaborative accountability, (Sharpe, 2004) which could equalize portions of the process failures and mitigate the finger pointing.

To go along with tattling the third motivation appeared to be self-preservation. Participant #RN4 stated, *“Every body has to watch their own butts. The manager may think she knows who did it (caused the error) but if you are not the one that gets to the manager first then the blame goes on you”*. Also Participant #RN5 stated, *“stories get twisted from what the nurses and physicians say and it depends on how the incident is presented”*. Three out of the five nurses interviewed stated they would write an incident report involving a peer rather than themselves

using statements such as: “ *its better him than me*”, “ *it is easier to look at the other person than yourself* “. Leape (2009) explains this concept as he states “healthcare’s bad habit of tendency to blame and punish individuals when an error occurs dies very slowly” (p. 3). This can be attributed to how innately healthcare providers see themselves within the system. And Leape (2009) continues by stating, “doctors and nurses have been taught to believe if they do their own job right there will be no problems” (p.3). How the story is presented to the NM only shows an individual’s perceptions of events, where an error occurred. The line of thinking about how an incident occurred goes back to the primary focus is an individual in the system instead of systemic flaws (Dekker, 2002, 2006; Parker & Lawton, 2003).

Lastly, personal gain was attributed in one of the nurses’ interviews. The RN#2 interviewed stated he/she had concerns for why nurses had increased reporting on her unit and found out it was because the nurses were “*getting credit on the clinical ladder for reporting*”. The clinical ladder is a voluntary program used to recognize, and reward staff nurses from direct patient care areas who can apply for promotion by following a variety of activities such as: serving on committees, demonstrating excellent patient care in complex situations, providing education and participating in quality improvement initiative among other listed items (The Ohio State University, Clinical Ladder, n.d.). It is a positive step to promote programs where nurses teach each other and join into the collaborative efforts to improve their skill and expertise. Adding incident reporting to the list of items to gain promotion can lead to interesting debate. Is the nurse going to write an incident report where she was found lacking? Or write a report where she caught a problem before it happened? Or maybe a peer who did something wrong? If the nurse reports an event she was involved would she still be promoted? It appears from the interviews regarding definitions of human error that a large focus of attribution of human error was on

individual behavior such as *laziness, not prudent enough or meticulous enough*. If this is the case, improvement strategies will not be gained by adding incident reporting to the list of improvement approaches for nurse promotion.

On the other hand, Wald and Shojania (2001) discuss the endemic of underreporting in the United States with only 1.5% of all adverse events result in an incident report. Encouraging reporting of error is a valuable tool but what is being reported and how it is reported often focuses on the individual (Cook & Nemeth, 2010; Dekker, 2002, 2004, 2006; Leape, 1997, 2009; Leape, et al., 2009; Woods, et al., 2010) and this is attested from what the interviewees stated in the definitions of human error. Barach and Small (2000) suggest, “better reporting systems promote incentives for reporting of errors, such as philanthropic, integrity, educational and cathartic”(p.761) to increase reporting to overcome extreme barriers front line reporters face. If the frontline staff believes the incident reports have some systemic value of process improvement, promoting the usage from a clinical ladder program is valuable to the promotion of safety. But if the continuation of the same rhetoric of individual failure and scapegoating continue within the reports the incident reports are of no value.

Nurses’ barriers in incident reporting

Barriers to overcome in incident reporting were fear of retaliation, punishment, lack of respect, trust and just culture. The barriers mention by interviewees were statements such as, “*Incident reporting informs management an error has been committed and retaliation is either on the way or it is coming*”(Participant #RN7); “*People are scared they will be reprimanded, afraid of losing their license*”(Participant #RN6); “*perception of fear of disciplinary actions, it is difficult to trust*

the system”(Participant #RN8). Although, much of healthcare organizational literature promotes a less blame approach and more of a *just culture* approach (Leape, 1997, 2009; Leape, et al., 2009; Weiner, et al., 2008; *ANA Position Statement on Just Culture*, 2010), it has yet to infiltrate the ranks of front line users by the interviewees statements mentioned above. The nursing literature reviewed suggested the same barriers existed such as fear of punishment, fear of peer confidence, (Chiang, et al., 2010; Gladstone, 1995;Karga, et al., 2011) manager reaction, and trust (Gladstone, 1995; Hewitt, 2010, Wakefield, et al., 1999;Walker & Lowe, 1998).

These barriers continue to enlighten the fact that the nurses perceive the crosshairs of error lie upon the individual as seen in their definition of human error by the nurses statements that the nurse’s themselves or peers were *not meticulous enough, good enough, lazy....and someone wrote an incident report on them*. This individual behavior focus in the incident reporting system is used to communicate the faulty behavior of others/themselves within the system. The nurses continue focus at the individual within the system instead of teamwork, trusting each other and looking for the ‘systemic vulnerabilities’ (Woods & Cook, 2002).

The pressure from the healthcare organizations and the nursing state law have explained both sides of this coin with these concepts that nurses have to be responsible at all times for the safety of their patients, (ANA’s Code of Ethics for Nurses with Interpretive Statements, n.d.), and the state law which counts reportable errors against the nurse, even minor ones (Texas Occupational Code Title 22, Part 11, Chapter 217, Rule 217.16) but with the other side of the coin, healthcare organizations do not support retaliation according to *ANA Nursing Bill of Rights*, which state, “nurses have the right to freely and openly advocate for themselves and their patients, without fear of retribution” (ANA, NursingWorld, #4). And Barnsteiner (2011) writes, “the focus [on error]

is on *what went wrong*, **not** (emphasis is the author), who caused the problem, a balance is currently referred to as the ‘just culture’” (ANA’s Teaching the Culture of Safety, para. 2). And supported by the *ANA Position Statement on Just Culture*, (2010) the current emphasis should be on the systemic failings and not the individual.

A barrier for reporting is the lack of a just culture. And as Participant #RN2 openly discussed her belief about the ‘just culture’ concept said, “*bottom line is when something isn’t right it goes right back to the person at the bedside. How just is that?*” A culture cannot be just as long as the system is unclear on the normalcy of error and the environment in which they work remains untouched due to the constant focus of the individuals within the system that appear to not measure up to standards, or a policy/procedure, and errors are counted. Secondly, as Dekker (2007) suggests, having a just culture takes in all views and angles of a story, and compromises through the discovery negotiating with all parties; protecting those involved and proportions accountability. But the ANA Position Statement on Just Culture (2010) supports a model that clearly focuses on analyzing behavior of individuals and not on the systemic vulnerabilities which decreases the opportunities to look for second-stories (Dekker, 2005,2006,2008; Woods & Cook, 2002)

Brunt (2010) states, regular monitoring of medical mishaps or injury should have open discussions of safety risks and barriers to safety, ensuring the practitioners and caregivers involved in the events are given attention that is just, respectful, compassionate, supportive and timely. But apparently these nurses do perceive barriers of fear and lack of trust in the system if the nurses believe *retaliation is on its way*, they *cannot trust the system* and they are treated unfairly.

Nurse Managers' Barriers in Incident Reporting

Along with nurses' barriers, nurse managers face unique challenges with incident reporting. Three of the eight participants were nurse managers (NM) and discussed their role in reviewing incident reports and disclosure of error. Much of the previous literature reveals NM reaction to be extremely vital to the nurses' feelings of guilt, loss of confidence and willingness to continue incident reporting (Gladstone, 1995; Hewitt, 2010; Walker & Lowe 1998). The participants discussed story distortion, nurse manager approach and one nurse discusses his/her ethos connection with errors made as it related to the nurse manager's reaction to errors.

Participant #RN2, as a nurse manager openly stated, "*stories often get twisted and focus on the individual in the story and is very subjective and that is why the incident report was written*". The NM stated she "*usually takes her time and investigates the story to ask other staff members or even the patient who might have complained*". She stated she tried not to react too quickly. Again, the NM appears to be forced to focus on the individual because she is unsure of the distorted story told. After an investigation she stated, "*it is really hard to know what to do. I go with my 'gut' feeling, try to focus if there is a policy or guideline and if it has been broken*". She goes on to say; "*sometimes we need to break policy to save a patient's life*". Managing others has been identified as a significant stressor for nurse managers (Udod & Care, 2012). These stressors are often derived from manager turnover and lack of resources to provide adequate patient care. And as the NMs stated, they are often left to understand managing others by his/her own personal experience and with no significant management training.

This NM appears to mistrust the story as told to her by the nurse and the second barrier is the NM's view of using policy breaking as a guide to errors or accidents. Mistrust and suspicion among the nurses toward management were key factors creating challenges for the nurse managers. Mistrust among nurses was validated among nursing staff when interviewed. Three out of the five nurses interviewed stated they would not share an error they made with a peer and one nurse stated when she did it was discussed in a staff meeting and *she walked around with her tail between her legs and she would not do it again*. And another stated *I would not tell my peers because they will go back and tell on me*. And secondly, breaking policy as a guideline reveals that accidents are apparently simplistic instead of comprehending the system's complexity and the work constraints when the error was made (Dekker, 2006). And as McDonald, Waring & Harrison (2006) discuss, "when a blame culture exist there is a strong emphasis on rules and standardization with the assumption that a 'share set of beliefs' will be the basis for clinical guidelines and reduce the scope of individuals own judgment in practice" (p. 180). This practice tends to focus more on the individual personality traits and attributing error to poor judgments and overlooking situational and environmental factors.

The managers all state they support incident reporting and Participant #RN2 admits she *just now understands how incident reporting should not be punitive*. She states, *my staff still doesn't get it*. And remarks how she attempts to respond to erroneous events by *investigating the story further before reacting and talking about the incidents in the staff meetings and want the department to take accountability on what they have done and fix it moving forward*. This NM attempted to look at the second story (Dekker, 2005, 2006; Woods & Cook, 2002; Woods, et al., 2010). This appeared to be a newer concept for this NM as she worked through her newer approach and tried to share errors made in a way that her staff could all learn from the error in a

forward-looking approach (Sharpe, 2004). The struggle is to share these errors outside the department and to be more transparent with each other (Leape, 1997; Leape, et al. 2009). One brave step for this NM was to begin to share these incidents in a staff meeting in general terms for learning from error and teambuilding. Leape, (1997) states, “teambuilding requires a supportive environment and skilled leadership to help avoid mistakes” (p. 220). The frustration of the *staff “not getting it”* is directly related to the NM’s past reactions to errors made. If the NM just now understands that incident reporting is not a punitive concept, it may take a while for the nurses to believe it will not be punitive and to trust the NM. As one nurse interviewed, who had been placed on six months probation due to erroneous administration of medications, he/she was very unlikely to report an incident again because of the suffering endured from one event. Just one blame/shame event can erode the trust within the system (Leape, 1997, 2009; Leape et al. 2009).

Participant#3RN stated as a manager she functions much *like a ‘mom’*. *We have a small group and a good relationship. They tell me everything. If it isn’t reported it is probably because they didn’t know it happened. I usually ask ‘what happened?’ and how are we, we, we going to fix it so it doesn’t happen again?* She added, *because no one lives in a vacuum*. This is an example of a forward-looking approach (Sharpe, 2004). By attempting to adjust and adapt after an error occurred can be beneficial for the staff and increase accountability, not stifle it. Individuals can be held accountable without blaming them (Dekker, 2009). The ‘mom’ approach appears very supportive and trusting. But the managers appear to want to cover for their staff as much as possible. The NM’s are told about an error made and they decide whether it should be placed into the incident reporting tool. This participant states, *I believe in incident reporting, it is just ‘part of me’ but my concern for punitive action against the person makes it difficult to trust the*

system. The transparency and learning from error often does not cross over one department to the next. As Leape, et al (2009) discusses “healthcare leaders have been far too timid about becoming truly transparent between caregivers, patients, between organizations and the public” (p. 425). One may want to become transparent but historically, other leaders have not been on the same page. Once the mishap or error is placed into an incident reporting tool the NM may not be able to protect his/her staff member.

Another challenge NM’s face is to support staff when reporting an incident. The support of a NM is important for the continuum of incident reporting (Gladstone, 1995; Hewitt, 2010; Karga, et al. 2011; Leape, 1997; Leape, et al., 2009). But by connecting dispositional characteristics to human error a conflict arises. For instance, one nurse participant discusses how he/she attributes nursing ethos with support from the NM along with errors made. Participant #RN5 stated, *“having a good relationship and rapport with my manager has made a difference in my reporting. I think she thinks I am a good nurse and I don’t make mistakes all the time. She will ask what is causing you to have these errors?”* What is revealed in the second portion of his/her statement is the very essence of how the nurse believes that if he/she is a ‘*good nurse*’, he/she will not make mistakes. He/she correlates the attribution of good character or ethos with errors made. According to Meurier, Vincent and Parmar, (1998) “this may be related to the strong professional ethos, which exists among nurses that take responsibility for their actions” (p. 349). This is also supported by the training of nurses from their nursing infancy stating in the *ANA Code of Ethics for Nurses with Interpretive Statements* that, “nurses are accountable for judgments made and actions taken in the course of nursing practice, irrespective of health care organizations policies or providers directives” (Provision, 4.2). The strong emphasis of moral character and nurse judgment in healthcare organizational position statements overpowers the

systemic complexities within the healthcare delivery of safe patient care. Woods, et al., (2010) discusses this view of human error explanation, “that human performance is substandard and flawed when viewed in retrospect and lead directly to the negative outcome. This approach retards any advances in our understanding of how complex systems fail and the role of human practitioners in both successful and unsuccessful system operations” (p. 5).

Assisting nurse managers in their role and the challenges they face is fairly absent in the nursing organizational literature. The only statement found in the document analysis regarding managers was in the *ANA Code of Ethics for Nurses with Interpretive Statements* (2001) states, “The nurse as manger must establish, maintain, and promote conditions of employment that enable nurses within that organization to practice in accord with accepted standards of nursing practice and provide a nursing and health care work environment that meets the standards and guidelines of nursing practice” (Provision, 7.2). But in personal communication with an ANA leader, it was stated a new position statement for the management process has not yet been developed but they would entertain the idea (C. Bickford, personal communication, August 19, 2013).

Overall the NM’s interviewed appeared very supportive of their own staff and attempted in a variety of ways to share errors made with a forward-looking approach (Sharpe, 2004) and investigated errors to glean a second-story (Dekker, 2004, 2006; Woods & Cook, 2002; Woods, et al., 2010) but the NM could become bogged down in the types of mishaps communicated to them appeared very individually focused. The nurse’s focus of moral character connected to lack of errors made reveals the deep seeded ethos of nursing practice strongly influenced by organizational standards of nursing practice but the nurse needed the support of the NM to

believe she was a 'good' nurse. Nurse Management style is apparently left to the local level which many NM have limited resources and support (Udod & Care, 2012).

CONCLUSION

This study contributes to the nursing literature as an exploration of the significance of the way the healthcare approaches human error and how it impacts incident reporting in the healthcare system. We show that often the nurse reporting may depict a small window in his/her description of the incident and the nurse manager's view of that narrative may be tainted by forethought of human error definitions instead of forming a broader view of the system. The broader systems defining 'just culture' may not be enough to move the 'tipping point' to a more systemic supportive approach. Two subject areas were discussed: the two human error approaches from safety science literature, and nursing research studies on the underlying factors of nurse incident reporting.

Our findings suggest that the healthcare systems approach to human error conveys elements of both the Old View (OV) approach and the New View (NV) approach. The OV approach elements can be seen in the nursing organizational documents and state laws that lay a foundation of individual accountability upon the nursing roles with statements suggesting nurses independently are accountable for patient safety and judgments made irrespective of hospital policies or providers directives (ANA Code of Ethics for Nurses with interpretive statements, Provision 4.1-2) and the Texas state laws for registered nurses discusses the RN's duty is to always provide safe care to the patients (Texas Board of Nursing Position Statement, The Registered Nurse Scope of Practice 15.28, 2013) supported by the Texas state laws which continue to count minor errors (Texas Occupational Code Title 22, Part 11, Chapter 217, Rule 217.16).

In like manner, elements of the OV approach such as severity bias, bad apple, scapegoating, tattling, illusions of control were revealed by the participants. The way nurses define human error focuses more on nursing ethos of pressure of perfection for individual behavior rather than understanding the value of normalizing errors and adapting the system (Dekker, 2004, 2006; Woods, et al. 2010). It was particularly noted nurses' views were more about inadequacies, incompetence and irresponsible behavior within the system. Could this understanding of human error come from the standards set by nursing organizational values and state laws that independently separate nursing clinical judgment from the institutional guidelines in which the nurses work and laws counting the number of minor errors to support punitive actions?

This study also revealed a backlash of the healthcare organizational drive to standardize errors or injury made to a harm score with the more severe or highest harm scores were more likely to be reported to the NM (Wald & Shojanian, 2001). This standardization often leads to a backward-looking approach (Sharpe, 2004) and blame, or getting rid of the bad apple, which they believed, would improve the otherwise safe system (Dekker, 2002).

Incident reporting analyzed exposed the same historic reasons for reporting or not reporting error such as fear, mistrust, retaliation, and self-preservation (Chiang, et al., 2010; Gladstone, 1995; Hewitt, 2010; Karga, et al., 2011; Wakefield, et al., 1999; Walker & Lowe, 1998) due to healthcare's bad habit of blaming each other (Leape, 2009). Although, much of the nursing organizational documents supported a more just culture approach (ANA Position Statement on Just Culture, 2010; Leape, 1997, 2009; Leape, et al., 2009; Weiner, et al., 2008) it appeared to not be able to override the nursing ethos of individual attributions of error. And this was understood best by the nurse's statement regarding her relationship with her NM when she

stated, *I think she thinks I am a good nurse and I don't make mistakes all the time.* This perception is that if you are 'good', prudent, and vigilant at all times you can predict and stop error from occurring.

The NV approach could be seen more in the NM's definitions of human error but it was difficult to analyze if the NV approach discussion was in fact, a NV approach or a derailing of the OV approach believing at some point the systemic failing mentioned by the participants of the lack of education, and training would someday reach a pinnacle point of perfection where they would not make mistakes. Document analysis also disclosed NV approach of supportive documentation for the nurses' rights to not fear retribution (ANA, NursingWorld, #4) and teaching a culture of safety approach to what went wrong instead of who caused the problem (Barnsteiner, 2011). The *ANA's Position Statement of Just Culture* (2010) attempts to assist the nursing world to capture an alternative to a punitive system but may stop short by focusing on monitoring individual behavior within the system, which continues to question if the behavior of the nurse at the bedside is still the focus instead of looking at the systemic vulnerabilities as a whole (Woods & Cook, 2002). An alternative just culture approach would be a NV approach by normalizing incidents so they are acceptable part of organizational development (Dekker, 2008) and moving to a forward-looking accountability (Sharpe, 2004).

The manager role of support gave way to the NV approach by supportive statements of the 'we' concept and moving forward (Sharpe, 2004) to fix the problem together. The difficulty the NM's faced was the twisting of incident stories depending on who was telling the story but the NM attempted to investigate further before reacting and shared learning from error in a general way to the rest of his/her staff. Four of the nurses interviewed felt supported by their NM, which is a

key for the continuum of learning from errors made, and they were more likely to continue to report incidents.

Overall, the internal, personal definition of what a nurses believe is human error conciliates what is reported to the NM or placed into the incident reporting tool. The overarching nursing organizational documents and nursing state laws add boundaries and constraints of how an incident will be manage within the healthcare system. Since the healthcare system is in its adolescent years of initiating and publishing safety initiatives, changes may evolve over time to assist the nursing ethos standards that errors are normal everyday occurrences and fallibility requires ownership. This ownership will increase accountability to improve the systemic vulnerabilities and a less focus on individuals within the system.

Limitations to the study were that a single institution was used for data collecting. The sample size was limited to eight participants. The participants could have held back information since the researcher and the participants worked at the same institution. Therefore, the results cannot be generalized. Even though, this study can help make visible some important issues that may need to be considered when healthcare systems deal with human error.

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Appendix A-

Interview Questions

Questions for Nurse Managers

Demographic Information

1. Please tell me your name, age, gender and how long you have been a registered nurse and how long you have been a nurse manager.

Relevance: To establish background and demographic information

Human Error

1. What is your definition of 'human error'?

Relevance: To gain a basic understanding of what the nurse manager believes is human error.

2. How did you come to know this definition?

Relevance: This will give insight to what types of social concepts or healthcare organizations influences guide the nurse manager's belief about human error.

3. How does your organization approach 'human error'?

Relevance: This will give information as the nurse manager's perception of the organizational principles regarding human error.

4. How do other nurse managers you know define human error?

Relevance: This will give information as to any type of knowledge sharing about human error or if each nurse manager follow her own type of understanding of human error.

5. How do they deal with human error?

Relevance: This will give information as to understand what each nurse manager perceives about peer managers dealings with human error.

Incident Reporting

1. How many incidents (approximately) has your staff reported on your units in the last month? And was it placed in the incident reporting tool?

Relevance: To establish the understanding that the nurse may report an incident to the nurse manager but not place it in the incident reporting system.

- a. What type of incident was reported to you?

Relevance: To understand if the nurse managers are aware of incidents and take care of it themselves without placing them in as an incident report.

- b. Do you feel there is under reporting (over reporting) of incidents in your unit?
- c. Share with me your reasons as to why you feel there is underreporting (or over reporting)

Relevance: This will give information of the nurse manager's perception of overall incident reporting

- 2. How do you typically respond to an incident report?

Relevance: This will give information of how the nurse manager gathers information of an incident report.

- 3. What would be an example of a situation where an incident was reported?
 - a. When it was not reported? Why do you think it was not reported?

Relevance: This will give information of decisions made to report or not to report and incident and why.

- 4. Can you tell me about the time when a nurse discussed an error with you?
 - a. How did you handle the situation?

- b. Is there a time you would have handled it differently? And how so?

Relevance: This will give information of what type of approach the nurse manager takes as she follows through a incident with a nurse.

5. Can you think of anything that would make reporting more likely?

Relevance: This presents information from a nurse manager's view of improvements in the current system.

Questions for Registered Nurses

Demographic Information

1. Please tell me your name, age, gender and how long you have been a registered nurse and how long you have been a nurse manager.

Relevance: To establish background and demographic information

Human Error

1. What is your definition of 'human error'?

Relevance: To gain a basic understanding of what the nurse believes is human error.

2. How did you come to know this definition?

Relevance: This will give insight to what types of social concepts or healthcare organizations influences guide the nurse's belief about human error.

3. How does your organization approach human error?

Relevance: This will give information as the nurse's perception of the organizational principles regarding human error.

4. How do other nurses you know define human error?

Relevance: This will give information as to any type of knowledge sharing about human error or if each nurse follow her own type of understanding of human error.

5. How do they deal with human error?

Relevance: This will give information as to understand what each nurse perceives about peers coping with human error.

Incident Reporting

6. What types of incidents are reported to your nurse manager? And are the incidents placed into the incident reporting tool?

Relevance: This will give information in regards to the nurses understanding as to the various types of incidents she would report to her nurse manager and if she believes in needs to be placed into the incident reporting tool.

- a. Do you think there are errors that do not get reported? And why?

Relevance: This will give information as to the nurse's perception of the cause of lack of reporting of an incident.

7. How do you typically decide to write an incident report?

Relevance; This will give information as to the understanding of the nurses view to place an incident report or not too.

8. Can you give me an example of a situation where an incident was reported and what happened as a result of reporting the incident?

- a. When it was not reported?

Relevance: This will give information to what the nurse decides to report and what happens as a result and when an incident is not reported and the result?

9. Can you tell me about the time when you discussed an error with a peer?

Relevance: This will give information as to whether nurses share errors made with their peers and establish the rationale for sharing or not sharing with a peer.

a. Was this an error you did not report but you wanted to? Can you elaborate?

b. What was your main reason for not reporting the incident?

Relevance: This will give information of understanding as to the rationale for not reporting the incident.

10. Would you more likely self report an incident or report a peer? And why?

Relevance: This will give information of the rationale for self reporting or peer reporting and which one is more often reported over the other.

Appendix B-

University of Texas Medical Branch in Galveston IRB Approval Letter



OFFICE OF RESEARCH SUBJECT PROTECTIONS
Institutional Review Board

30-Jul-2013

MEMORANDUM

TO: Amanda Kuenstler, RN, BSN/Carol Wiggs, PhD, RN
Quality Management

Andrea McKay

FROM: Janak Patel, MD
Vice-Chairman, IRB #2
Institutional Review Board 0158

SUBJECT: IRB # 13-0320 - **Final Approval** of Expedited Protocol.

How Does The Approach to Human Error in Healthcare Guide The Nurse And/Or Nurse
Manager's View of Incident Reports?

Having met the requirements set forth by the Institutional Review Board by an expedited review process on **July 25, 2013**, your research project is now approved, effective **July 30, 2013**.

This project will require annual review and will expire on July 25, 2014. **Research that has not received approval for continuation by this date may not continue past midnight of the expiration date.**

Attached is the research consent form with the date of the IRB approval. Please use this form with the IRB approval date and make additional copies as they are needed. **In accordance with amendments to 21 CFR Parts 50, 312 and 812 effective 12/5/96, consent forms must be dated when consent is obtained.**

JP/ak

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Appendix C

RESEARCH CONSENT FORM

You are being asked to participate as a subject in the research project titled: How the approach to human error by the healthcare guides the nurses and/or nurse manager's view of incident reports?

Study Location: The University of Texas Medical Branch in Galveston

Study Researcher: Amanda B. Kuenstler

Study Sponsor: Lund University, Lund, Sweden.

Please take the time to read the following information carefully.

PURPOSE OF THE STUDY

The purpose of this study is to understand how nurses and nurse managers in a healthcare setting understand human error and how their understanding impacts incident reporting and the manager's response to the incident reports. The primary research question is: How does the approach to human error in the healthcare system guide the nurse and/or nurse manager's view of incident reporting? There are no right or wrong answers. This study is to understand how humans think about errors made in a healthcare setting and how this plays a role in how we participate in writing and responding to incident reports.

This study is being conducted as part of a Masters of Science project on human factors and system safety.

You are being asked to participate because you are either a registered nurse who has worked in a hospital with one or more years experience or a nurse manager in a hospital setting, with four or more years of experience in the manager role.

PROCEDURES RELATED ONLY TO THE RESEARCH

You are consenting to participate in an interview using semi-structured questions related to human error and incident reporting which will take about 60 minutes of your time. With this consent, you will be audio recorded or if you wish not to be recorded, hand written notes will be taken. Confidentiality will be maintained by assigning numerical codes and unique pseudonyms to each participant. All identify information will be removed from the transcripts and no one except the PI will have access to the participant codes. The codes will be kept in a locked file and destroyed at the completion of the study. All consents and research information will be maintained in a locked file cabinet in the researcher's office for one year. A copy of the consent form will be given to the participant upon signing and agreeing to be a part of the study. If the participant would like a copy of the study after completion then a copy will be given to the participant. The whole project will be completed by December 2013.

PROCEDURES NOT RELATED TO THIS RESEARCH (i.e., standard of care)

No procedures will be done that are not part of the research.

RISKS OF PARTICIPATION

Confidentiality will be maintained by assigning numerical codes and unique pseudonyms to each participant. All identifying information will be removed from the transcripts and no one except the PI will have access to the participant codes. The codes will be kept in a locked file and destroyed at the completion of the study. All consents and research information will be maintained in a locked file cabinet in the researcher's office for one year. The potential risk is loss of confidentiality if the participant self-discloses that they are in the study.

NUMBER OF SUBJECTS PARTICIPATING AND THE DURATION OF YOUR PARTICIPATION

The anticipated number of subjects involved in the study will be five registered nurses and three nurse managers, all participants are from UTMB. The length of time for your participation is a one-time 60-minute interview. In order to verify or clarify portions of the interview, the PI may contact the participant for a third interview.

BENEFITS TO THE SUBJECT

You will not benefit individually from your participation in the research project but the profession or patients could benefit from the study results.

OTHER CHOICES (ALTERNATIVE TREATMENT)

The alternative is to not participate in the research study.

SAFE WITHDRAWAL FROM THE STUDY

As a participant in this study, you may decide to withdraw from the study at any given time. If you decide to withdraw all interview documents/audio tape will be destroyed. There are no consequences from withdrawing from the study.

REIMBURSEMENT FOR EXPENSES

There will be no reimbursement for participation in this study and participants will be offered no incentives or gifts as a result of participating in the research study.

COSTS OF PARTICIPATION

There will be no cost for participating in the study.

If you sign this form, you are giving us permission to collect, use and share your interview information. You do not need to sign this form. If you decide not to sign this form, you cannot be in the research study. We cannot do the research if we cannot collect, use and share your interview. Whether or not you agree to the research project or give us permission to collect, use or share your interview is strictly voluntary. The interviews are being done only because you are in this study. The results of this study may be published in scientific journals without identifying you by name.

If you change your mind later and do not want us to collect or share your interview, you need to contact the researcher listed on this consent form by telephone. You need to say that you have changed your mind and do not want the researcher to collect and share your interview.

ADDITIONAL INFORMATION

1. If you have any questions, concerns or complaints before, during or after the research study, you should immediately contact Amanda Kuenstler at 409-772-5252 office or 409-771-1926 cell
2. Your participation in this study is completely voluntary and you have been told that you may refuse to participate or stop your participation in this project at any time without penalty or loss of benefits and without jeopardizing your medical care at UTMB. If you

decide to stop your participation in this project and revoke your authorization for the use and disclosure of your information, the PI may continue to use and disclose your study information in some instances. This would include any information that was used or disclosed prior to your decision to stop participation and needed in order to maintain the integrity of the research study. If there are significant new findings or we get any information that might change your mind about participating, we will give you the information and allow you to reconsider whether or not to continue.

3. If you have any complaints, concerns, input or questions regarding your rights as a subject participating in this research study or you would like more information, you may contact the Institutional Review Board Office, at (409) 266-9475.

The purpose of this research study, procedures to be followed, risks and benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study. You are free to withdraw your consent at any time. You may withdraw your consent by notifying Amanda Kuenstler at 409-771-1926. You will be given a copy of the consent form you have signed.

Informed consent is required of all persons in this project. Whether or not you provide a signed informed consent for this research study will have no effect on your current or future relationship with UTMB.

Signature of Subject

Date

Date

Signature of Person Obtaining Consent

