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A Look to the Literature: Challenges for Creation of Cultures of Safety

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Abstract

Aim: The aim is to raise awareness of the evidence of issues and interventions for creation of a culture of safety. Challenges remain with medication errors impacting safety as the third leading cause of death in the United States (US) and hand hygiene is significant in prevention of hospital acquired infection (HAI). Hand off communication (HC) is crucial for safe care.

Background: There is a lack of accountability reported with the Joint Commission reporting safety measures caregiver compliance is only 47% (JCCTH, 2015). Medication errors lead to more than 7000 patient deaths annually in the US costing $2,000 - $8,750 per error. While 721,800 HAI occur in the United States (US) with cost exceeding 9 billion dollars annually. Evaluations The authors identify potential areas of individual caregiver noncompliance followed with organizational leadership interventions supported in the literature to promote creation of safe cultures.

Evaluation: The authors identify potential areas of individual caregiver noncompliance followed with organizational leadership interventions supported in the literature to promote creation of safe cultures.

Key Issues: The literature reveals caregiver noncompliance with lack of accountability for adherence to policies as a key issue.

Conclusions: After a thorough review of current nursing literature, evidence exist supporting health care organizations difficulty to create organizational structures conducive to cultures of safety related to medication errors, hand hygiene and hand-off communication.

Implications of Nursing Management: Nurse leaders have the responsibility to provide care givers the structure supporting the provision of safe care while balancing care giver accountability with support for processes promoting correctional behaviors.

AIM-The purpose of the article

Modern health care systems are remarkably complex and warrant patient safety practices requiring the continuous, consistent, and concerted effort of every member of the health care team for creation of cultures of safety [1]. The purpose of the article is to educate caregivers and organizational leaders of the latest evidence from the literature for the creation of a culture of safety. While many institutions have made progress creating cultures of safety through implementation of evidence-based practices, evidence of the room for improvement still exists. The first objective comes from the literature revealing continued problems with adherence to practice protocols in relation to medication errors, compliance with hand hygiene (HH), and handoff communication (HC). The article will identify potential areas of individual caregiver failure to create a culture of safety. The second objective is to follow with organizational interventions supported in the literature to promote creation of safety cultures. Unfortunately, there are continued reports of problems with provision of patient care, and other negative outcomes related to communication within many health care organizations lacking a structure of culture where safe care is provided as the expected norm.

Background: Why is the article important at this time?

It is interesting to note American Nurses Credentialing Center (ANCC) [2] Magnet designated hospitals addressing the highest standard of evidence-based care for patients have increased from sixty-two hospitals in 2012 to one hundred fifteen Magnet designation/re-designations in 2015 [2]. Evidence of problem areas for safety are still strongly identified within the most current literature.

First, consider individual accountability and responsibility. Individual healthcare providers have a responsibility to act on behalf of patients during times when patients cannot advocate for themselves [3]. While the Joint Commission [4] defines a safety culture in health care as "the summary of attitudes, knowledge, beliefs and behaviors where staff share and communicate the primary importance of the well-being of the patients they serve" [4]. Caregivers must be accountable for the continuity of care and are responsible continuously and consistently learning how to utilize the most current evidence available for patient care to ensure quality and safety outcomes [5]. Addressing continued safety problems, caregivers must enact critical thinking skills to uphold safe care responsibilities to the highest level [6]. While the organization has an obligation to caregivers, all caregivers are individually held accountable for the elements of their decisions [7]. The first issue supported in the literature related to creating a culture of safety is caregiver and organizational accountability. Secondly, the literature reveals other continued problems related to creation of safety cultures. Problems with medication administration are reported from multiple sources. Some sources report problems with the medication administration process while other sources report issues with nurse honesty for reporting of medication errors. Andersons' [8] research reported caregivers discover 50 to 86% of problem medication orders before the mistakes reach the patient. In the hospital, correct medication administration follows a threefold task. First, the provider writes the order for the medication, next, the pharmacist prepares the medication and lastly, the caregiver gives the medication [8]. Any step could have problems arise performed by both seasoned and novice caregivers. Bifftu, et al. [9] "reported the perceived rates of medication administration errors reported for non-intravenous related medications ranged from 16.8 to 28.6% and

for the intravenous-related medications, from 20.6 to 33.4 %" [9]. Some medication errors will lead to serious injury or have fatal outcomes [10]. The literature reports "Medication errors lead to more than 7,000 patient deaths annually and is the 3rd leading cause of death in the U.S. costing $2,000-$8,750 per error" [8, 11]. Additionally, Abusaad, et al. [12], conducted a study reporting 30 % of nurses strongly agree they are afraid of the impact of reporting medication errors. Barriers of reporting medication errors could be related to managerial factors as one study reported 55% of nurses strongly agree experiencing a disproportionate reaction of the managers to the errors. Furthermore, the study reported 47.5% of nurses received negative responses from the managers on medication error reports. With 42.2% of the managers focusing on finding the causes, blaming the nurses even when factors influenced the incidence of errors [12]. Careful root cause analysis for medication errors must be the expectation to identify the area of system failure, while organizations must promote cultures of honesty in reporting medication errors addressing the medication administration problems from both the organizational side and the caregiver role+. Medication errors tend to raise the cost of health-care. Root cause analysis can identify multifactorial problems/errors affecting medication administration including occurrences of caregiver knowledge deficits affecting the safety of patients. The literature reports recent caregiver units implemented actions with effective positive medication administration outcomes including:

1. The creation of "safe zones" of quiet and zero distraction around caregivers as they retrieve and prepare medication for administration [13, 14].
2. An initiative to focus on effectiveness of arm band scanning technology and link to the electronic medical record (EMR) for timely and correct medication administration as a promising strategy for prevention of errors [14] and
3. Implementation of continued healthcare provider training to avoid poor compliance related to EMR safeguard adherence, documentation and decision making related to safe medication administration [14]. Based on the severity of reported patient safety issues in the reviewed literature, these and other interventions are needed for improved medication administration practices.

A second prevalent issue reported relates to Hand Hygiene (HH). Washing hands is one of the most significant actions for the prevention of spreading infection among patients. According to the reviewed literature, the simple issue of HH compliance is a good example of where accountability could be improved. Hand washing (HH) is one of the most important and safety strategies for prevention and spread infections [15]. The Centers for Disease Control and Prevention report CDC [16], found 75,000 patients with Hospital Acquired Infection (HAIs) died during hospitalizations from infection. The joint commission statement revealed compliance to hand washing was only 47.5 % within the study contributing as the main cause of the HAI [17]. The solution to the challenge of maintaining a safe culture is to hold both leaders and caregivers accountable for their actions related to HH.

Other reviewed literature reveals nosocomial infections are one of the most commonly reported infections impacting patients of acute care and long term care facilities leading to prolonged hospital stay, long term disability, and increased resistance of microorganisms to antimicrobial interventions. Approximately 721,800 health care-associated infections (HAIs) occur in the United States (U.S.) annually [18], and the medical costs associated with treating these HAIs can exceed 9 billion dollars annually [19]. In 2002 alone, nearly 99,000 patients died from complications associated with HAIs [20]. The Naderi, et al. [21] report their observational studies found the adherence of health care providers HH was very poor with mean baseline rates at 5% to 81% with an overall average of 40% [21].

A recent study by Vendetti-Hatie et al. [22] reported there are diverse perspectives on factors influencing HH compliance. The World Health Organization (WHO) [23] report on patient safety issues related to (HH) emphasizes five critical moments for hand hygiene, 1) before touching a patient 2) before clean/aseptic procedure 3) after body fluid exposure/risk 4) after touching a patient and 5) after touching the patient's surroundings. One recent mini-systematic review of 14 research articles addressed the improvement of hand hygiene practices of individuals incorporating multiple interventions. Alshehari, Park & Eashid [24] suggests strong leadership and administrative support, for education, training, reinforcement of compliance in practice.is foundational for achieving positive outcomes. The authors also stated maintaining a surveillance and evaluation of the caregivers feedback improved the compliance from a baseline of 51.5% to 80.1%; but could not accomplish the compliance to the desired level of 100%.

Additional studies report the intervention of performance feedback related to hand hygiene resulted in an improvement to a significantly higher rate of compliance in hand hygiene adherence [25, 26]. These recent studies conclude, based on the available data, the authors reported the outcome of multi-modal interventions were effective in raising the compliance to a 'plateau' level but not up to the desired standard. The authors suggested methodologically appropriate trials of combined interventions could enhance the evidence about interventions to improve hand hygiene compliance among caregivers [24]. The imperative is to explore the enablers and barriers to HH through assessment and accountability in order to support the caregiver and promote HH compliance. The reviewed literature clearly supports proper hand hygiene will reduce spread of infections while many organizations are still experiencing challenges with compliance in this area.

The third area reviewed in the literature is handoff communication (HC). HC is defined as "a transfer and acceptance of responsibility for patient care achieved through effective communication. HC is the real time process of "passing specific information from one caregiver or team to another to ensure the continuity and safety of patient care" (JCCTH, 2017, p. 4). Each health care setting has issues and challenges related to hand-off communications. The JCCTH [4] emphasizes the importance of health care organizations using a process identifying causes for hand-off communication failures and barriers to improvement in each setting. Use of the Joint Commission's Targeted Solutions Tool for HC can assist in managing a quality improvement process [4]. The Pennsylvania Patient Safety Reporting System (PA-PSRS) reported 1,565 handoff related events from 2014-2015, with about 60 % of the handoff reports containing discrepancies between information shared and the actual patient's condition noted during or after a hand off occurred. The study revealed the failure to report a description of follow up care in 40% of the events reported. Additional failure to follow up occurred with the patient care information report discrepancies [27]. The typical expectation is the caregiver confirms the accuracy of information from one health caregiver to another providing opportunity to catch and correct errors [28]. The Johnson et al., [29] study reported the most common cause of medication errors upon transition of care is poor HC during patient transition from one level of care to another [29]. Poor HC creates an open door for harm to occur to the patient with incomplete, inaccurate and missed pieces of information creating ambiguities during the information exchange. The process of effective HC has multiple functions transferring primarily moving responsibility and accountability from one caregiver to the next. A risk reduction strategy reported by Gardner [27] promotes standardizing inconsistent processes, minimizing environmental distractions, clear communication and improved focused training and education (p.23). During transition HC the care giver should concisely and responsibly provide comprehensive structured data related to the care of the patient. The transmission includes acceptance of responsibility to assure safe care will prevail.

While each of the three areas reviewed in the literature reveal complexity and challenges to manage well in complex care environments, organizations must do whatever is necessary to provide a structure for safe practice while holding individual caregivers responsible to adhere to the structure. The organizational performance of providing structures for safe practice are crucial for the creation of cultures of safety.

Some examples of successful methods contributing to creation of cultures of safety were found in the reviewed literature. First, organizational leadership support was found to be integral for creation of cultures of safety. The organizational leadership should commit to bold improvement goals. The most recent nursing literature reports the organizational leadership goal should be two-fold, first to move individuals to practice ethically and independently with the protocols created to keep patients free from incidents causing patient's harm, and secondly, present the organizational leadership responsibility for creation of a culture where the first goal may be accomplished. The creation of an accountability culture involves having a "just culture" in which expectations are very transparent and clear. Every person is held accountable in an equitable and fair way and holding each other responsible and accountable is a peer-to-peer responsibility, not just the responsibility of leadership [30]. The promotion of practicing a safe culture with expected reporting of problem issues in the environment will promote the need for focused learning and lead to better outcomes [7]. Team members must recognize the interdependencies, affinity, and two-way effect of the individual parts within the context of the whole environment [5]. When organizational leadership does not own the culture of safety and "live it or role model it", the staff begin to view safety as the "flavor of the month" leading to complacency [31].

In order to create organizational accountability and responsibility, the key foundational component could, for example, be through creation of Comprehensive Unit Based Safety Programs (CUSP) [32] within each unit or departments and working collaboratively to create zero tolerance for errors and safety breaches. The organization will have a better chance of attaining a culture of safety when all levels of the organization demonstrate a commitment and understanding of the high-risk nature of the work. Promotion of safety mindfulness in caregivers and clinical teams at all levels must be the expected norm. According to one literature source, the American Nurses Association President, Pam Cipriano stated patient safety does not require a hierarchy, it requires empowering voices. The nurses' duty to the patient includes implementing safety measures to keep patients from harm and speaking up when safety threats are identified [33]. The successful implementation of a culture of safety requires all leaders and caregivers to be accountable to each other and to their patients for the creation of a changed culture.

Evaluation

The authors utilized four nursing data bases to search for current evidence related to the topics of the manuscript. Journal articles were reviewed and analyzed for currency, pertinence, presentation of key outcomes, and evidence to include in the manuscript as reviewed literature pertinent to the topic. Some of the search terms utilized were "culture of safety", "communication", "accountability", "healthcare culture" and "leadership". The highest level of evidence for the topic were sought.

Key issues from the analysis

Creating a culture of safety is complicated and challenges exist today in a variety of areas.

1. Individual accountability-At risk-behaviors are actions by some caregivers compromising patient safety by engaging in at-risk behaviors because the rewards are immediate resulting in convenience, comfort, and saved time. Increased awareness of at-risk behaviors is one way to improve safety. It is more important to reduce caregiver tolerance of at-risk behaviors than to increase their compliance with specific safety rules. Caregivers must enact critical thinking skills to uphold safe care responsibilities to the highest level [6]. Organizations should start by enhancing caregiver awareness of and reporting at-risk behaviors and analyzing error reports [34]. Organizations have the responsibility to provide structure and protocols supporting individuals while holding them accountable for safe care cultures.
2. Medication error issues-The present trends in health care delivery system have high demands impacting the incidence of adverse events causing significant human and economic costs. Therefore, the leaders and the frontline caregivers must remain vigilant all the time in order to avoid medication errors and promote safety of the patient. Leaders should respond to adverse events and foster organizational learning by following the policy and protocols designed to support safety cultures [35]. The Kavanaugh [36] study reported the problems with medication errors related to standardized, electronic order sets creating confusion on which orders are to be activated or not activated by the caregiver when the ordering physician fails to check specific medication orders preferred. Each organization should have an embedded design to check and evaluate medication administration systems to minimize the errors [10]. Strict attention to the detail of the medication error cause is imperative for addressing and correcting problem medication delivery systems or caregiver error whichever is determined to be the cause of the medication error.
3. Hand hygiene (HH) – In American hospitals alone, it is estimated HAI account for an estimated 1.7 million infections and 99,000 associated deaths each year [16]. Hand hygiene is critically important in reducing HAIs by providing safe, high quality patient care [28]. Most of the hospital acquired infections like bacteria, fungi and viruses spread mainly through person to person contact including unclean hands, medical instruments, devices such as catheters, respiratory machines, and other hospital tools [37]. As medical care becomes more complex antibiotic resistance increases, the cases of HAI are difficult to control. The good news is HAI can be prevented if proper policy and procedures are followed, and caregivers are held accountable for non-compliance. HH is reported to be one of the simplest most effective actions for prevention of spreading of infection in the hospital setting thus, impacting incidence of HAI.
4. Communication-Providing hand off communication (HC) composed of the information to ensure safe, high quality patient care is essential. The Joint Commission [4] states caregivers need to conduct face-to-face HC in locations free of interruptions, including multi-disciplinary team members, patient and family as appropriate. Organizations need to conduct analyses to investigate the cause of events impacting safety in practice and promote strategies to address issue discovered in the gap analysis. The caregivers should have consistency in work place setting protocols for HC to occur about a patient using interventions such as a zone of silence, free of non-emergency interruptions. The reviewed literature reports in order to have the best outcome for the successful HC, organizations should engage caregivers in real time training with independent learning expectations. Organizations need to identify HC champions and coaches to promote quality improvement serving as role models to others. The coaches need to take time to use successful HC as exemplars within the training to provide positive reinforcement to caregivers who perform HC according to the standardized process. Exemplar inclusion/training is essential for empowering a safe culture. Also, teamwork and situational awareness with the responsibilities including conflict resolution in safety cultures should be reinforced in training exercises as a way to improve effectiveness of HC. Supervisors need to be

encouraged to dedicate ample time and opportunities for healthcare providers to ask questions and time for supervisors to answer questions as the process of safe HC is implemented [4]. Each of these reported interventions are supported in the literature reviewed and reported here.

Conclusions and implications for nursing management

Individual accountability

Safety assessment and improvement processes should begin by engaging organizational leadership and follow with individual caregiver engagement. The morale of performance improvement is the key to promote culture of safety by accountability. The main essence to working for creation of a culture of safety is developing trust and confidence [5]. The essential component to remember is to infuse a shared accountability culture, which means creation of a culture of safety is everyone's responsibility. The organizational transparency and accountability created are necessary components for successful individual caregiver contribution to a safe culture. The leadership team in health care organizations is critical to both individual caregiver engagement and to the success of the organization as a whole for improving patient outcomes. Empowering voices means there is no hierarchy within the organization meaning creation of safety cultures is everyone's responsibility [6]. In his publication, Boysen [7] states both individuals and organizations are accountable in the creation of cultures of safety. Conscientious individuals working within the system and the proactive organization providing and designing the structure to promote safety are equally balanced for the ongoing process improvement. A just culture is evolving and constantly moving towards an effective culture of patient safety [7].

Organizational needs

Healthcare providers need a climate of administrative support including adequate staffing, effective communication, professional accountability and trust. The organizational leaders should take firm, assertive steps to meet the organizational goals and prevent any harm to the patient. The organizational leadership must hold as a priority the importance of identifying high risk areas of care, the system environment with collaboration of the caregivers to solve the problems. The leaders must identify and question the barriers to find solutions to prevent them. On March 1, 2017, the Joint Commission (JCCTH) reported in a complimentary publication the essential role of leadership in developing a safety culture. In order to assess the quality of a "reporting culture" it must be determined if organizational leaders listen to or punish caregivers raising genuine concerns related to patient safety. One way to assess the culture is to conduct a caregiver survey which measures how supported frontline caregivers feel if safety concerns are voiced. Leaders need to determine whether caregivers are contributing towards success at work with organizational support. Promotion of teamwork, trust, and accountability is everyone's responsibility. A positive vision and attitude should always reflect quality in a holistic manner adhering to care protocols and policies to safe guard the patients and protect them from harm. Furthermore, a deeper thought and understanding is necessary to know why and how safety breeches occurred [38]. When caregivers give and receive feedback on safety issues, an essential part of creating and sustaining a safety culture is promoted [39].

Support for caregivers through accountability incentives

The latest evidence from the literature reveals continued problems with the creation of cultures of safety due to continued medication errors, hand hygiene compliance and hand off communication related to individual and organizational leadership and accountability. Nurse leaders have the responsibility for guiding caregivers in achieving a balance in providing patient care by devising strategies to prevent the commission of clinical errors [40].

The individual caregiver must be responsible for continually learning and following evidence-based practices. The strict adherence to policy will promote a safety culture. Instead of blaming, leaders should consistently evaluate the effectiveness of the work environment system. The organizational leaders need to analyze in depth and develop strategies for gap analysis for there will always be errors to evaluate [38]. Finally, caregivers need to make the care of the patient their first concern, taking prompt action if they think the patient's safety is being compromised. Be open, honest, and act with integrity [41].

The authors conducted an extensive search of the current nursing literature seeking to identify the current issues related to creation of cultures of safety. Some identified problems for the creation of cultures of safety have been presented particularly in the area of individual accountability, hand hygiene and communication. The evidence supporting successful interventions to address problem areas were reported. The cost in human suffering and death plus the report of tremendous financial expenditures used to address failed safe care instances are strongly evident from the reviewed literature.

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