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SUPPORTING NURSES' COMMITMENT TOWARDS VOLUNTARY ERROR REPORTING: A DISCURSIVE PAPER OF CURRENT POLICIES AND RECOMMENDATIONS

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ABSTRACT

Medical error is a serious public health concern and undermines healthcare organizations' commitment to drive safe, high-quality patient care. Voluntary error reporting (VER) is one key solution to address this concern because it is through conducting root cause analysis that constructive retrospective learning can take place to improve future practice. Nurses form the largest health workforce and are key stakeholders contributing to the institutional error management culture. While the significance of VER and nurses' role in driving this initiative cannot be further emphasized, studies revealed that nurses failed to engage in VER due to less positive experiences towards VER. Nurses' negative attitude towards VER can be attributed to unsupportive organizational responses to their act of VER, underpinned by the endorsement of blame, shame, and punitive culture consistent with the human approach to error management. This induces fear of speaking up for error among nurses, creating a culture of silence. This paper examines and discusses current policies underpinning the error management system and identifies the contemporary factors that challenge these policies, followed by proposing recommendations to support these policies to drive nurses' commitment to VER and improve the overall error management system.

KEYWORDS

Voluntary error reporting, error management culture, patient safety, safety culture, nurse

INTRODUCTION

Medical error is a serious public health concern and poses a significant challenge to healthcare organization's efforts to promote safe, high-quality patient care. The increased concern about medical errors was first triggered in 1999 by the Institute of Medicine (IOM) report: To Err is Human: Building a Safer Health System which revealed an exponential rate of inpatient morbidity and mortality caused by medical errors of which most of them are preventable [1]. According to the World Health Organization, medical error is defined as an adverse event resulting from medical care that deviates from standard practice and, as such, leads to patients experiencing harm or injury [2]. In the case of nursing, this deviation occurs in the context of either commission or omission of action(s) of a negligible nurse that falls below reasonable standards. Medical error is at odds with the principle of beneficence (first, do good to the patient) and even more so with non-

maleficence, which is, above all, do no harm to the patient ('primum non nocere') [3, 4]. This is in view that the effect of medical error can be deleterious, with the severity of the cause ranging from permanent incapacitation to death [5]. From the organization's perspective, medical errors continue to frustrate their efforts to drive patient safety and commitment towards continuous quality improvement. Managing medical errors entails several financial implications. It was identified that due to medical error, healthcare organizations had to allocate more than 15% of their budget to deal with extra hospitalization costs associated with longer lengths of patient stay, liabilities for torts litigation and managing other consequences [6]. Notwithstanding this fact, however, studies have reported that most cases of medical errors are preventable [7], of which one viable solution to this issue lies with retrospective learning of the mistakes through a thorough analysis of the process, which can be achieved only through voluntary error reporting [8].

To set the context of this study, voluntary error reporting (VER) delineates an individual's willingness and intention to disclose and report a medical error openly [1]. As the largest health workforce and have a significant role in direct patient care, nurses are key stakeholders in supporting VER and the overall error management system. Engaging in VER is important because it affirms the commitment and integrity of a nurse to be accountable for their action and offers them valuable opportunities to learn from their mistake [4, 9]. Healthcare organizations must continue to prioritize efforts to drive improvement of the error management system where all nurses can pledge allegiance to patient safety by allowing them to comfortably and openly report errors in a way consistent with a supportive and learning culture. The ability to act upon VER to improve patient safety is inherent to the principle of sound risk management and a responsible clinical governance system. Nonetheless, the notion of VER and nursing staff's actual intention to proactively speak up for errors is also dependable upon their experiences and how they perceive this action in the context of the safety culture that exists within the organization [10].

This discussion paper seeks to examine and discuss the current policies underpinning the error management system and identify the contemporary factors that challenge these policies, followed by proposing recommendations to support these policies in place to drive nurses' commitment to VER and improvement to the overall error management system.

CURRENT POLICIES

The importance for nurses to commit to error reporting cannot be further emphasized because it is through comprehensive investigation and root cause analysis of preventable errors and erroneous processes that only can learning be effectively taken place to drive improvement to prospective clinical practices [4]. In the quest to pursue and improve healthcare quality and safety, an organization must establish and maintain a safety culture that fosters and advocates reporting and disclosure among stakeholders [11]. Developing a positive safety culture in the context of responsible error-reporting behaviour entails a significant cultural change. Such cultural change delineates the need for several policies to facilitate an effective and robust error management system. In line with the recommendations of the literature, these proposed policies that organizations need to enforce will be discussed individually in each section.

1. PROMOTING A MANDATORY REPORTING SYSTEM

One year after 'To err is Human, Building a Safer Health System' report was released by IOM in 2000, the Chief Medical Officer of the United Kingdom (UK) Sir Liam Donaldson had followed up with his report 'An Organisation with a Memory' [12]. In his report, while Donaldson drives the creation of a new national health system to support the reporting and analysing of adverse events for healthcare professionals, he also proposed the idea of compulsory reporting of all medical errors so that key lessons can be derived and learned [9, 12]. Since then, the mandatory error reporting policy underpins the UK's national standard. Mandatory error reporting intends to make the involved healthcare organization accountable for the error, given errors usually occur in the existence of the system weakness rather than the flaw of an individual (refer to system approach to error management in next section) and that nurses are employees of the organization which underpins the contract of service clause [9, 13]. Encouraging nurses to embrace the policy of mandatory error reporting is important for two reasons. First, it serves as a teaching moment where it helps nurses to learn by identifying the hazards and the areas that need improvement, assess the effectiveness of current safety measures undertaken by the organization and, through such learning, facilitate the development of strategies to improve the institutional safety protocol [14, 15]. Second, embracing mandatory reporting affirms the integrity and honesty of a nurse, which conforms to the ethical and moral standards required of them as a regulated health

professional [16]. Nonetheless, to drive successful mandatory error reporting requires the organization to manage errors more objectively, which underpins the need for them to embrace the system approach to error management and a just and open culture, which were discussed in detail.

2. SYSTEM APPROACH TO ERROR MANAGEMENT

Given that humans are fallible, medical errors are highly likely to exist within the complexity of the healthcare system. The human approach to error management focuses on attributing errors entirely to individual responsibility (human fallibilities), which usually represents one component of the overall error trail [4, 17]. However, the Swiss Cheese Model, developed by James Reason, is a well-illustrated model in the context of patient safety that explains that the system approach to error management acknowledges that most errors are not isolated incidents concerning specific individuals but rather take place within a wider complex health system where several situations or factors arises simultaneously to allow an error to happen [18]. The system approach to error management requires healthcare organizations to embrace a safe and reliable culture that views error reporting as an opportunity for learning from mistakes to drive future improvement [19]. Emphasizing on the system approach to error management does not imply that nurses should be removed from their professional accountabilities, nor should it absolve them of negligence claims for causing the error. Rather, it permits scanning and root cause analysis of the entire erroneous process and gains insights into the bigger picture of the weaknesses and flaws entrenched within the complexity of the health systems responsible for the errors to elicit effective learning among nurses to improve their future practices [4].

3. PROMOTING A JUST AND OPEN CULTURE

Promoting a just and open culture in the context of patient safety culture entails a supportive culture endorsed by organizations that advocate open communication and transparency of error reporting without subjecting nurses to any fear of retaliatory actions [20]. A just and open culture shifts the organization's focus from assigning blame and punishment on an individual for unintentionally causing the error to cultivate a learning culture where it is about openly sharing the root cause of the problem following an investigation to facilitate learning and understanding on where things (processes) had gone wrong to prevent future occurrences [21, 22]. A just and open culture, however, does not exist in the absence of a system approach to error management because blame, shame and punitive culture are highly likely to undermine the efforts and commitments of nurses towards VER with such a toxic environment impedes constructive learning and reflection [23]. Promoting a just and open culture that prioritizes continuous learning for quality improvement and fostering a psychologically safe environment for nurses to speak up is critical to fostering nurses' continuous commitment to VER and patient safety.

ANALYSIS OF PROBLEM

Woo and Avery conducted an integrative review and revealed how nurses' experiences towards VER were being represented by three main themes: "Nurses' beliefs, behaviour, and sentiments towards VER", "Nurses' perceived enabling factors of VER", and "Nurses' perceived inhibiting factors of VER" [4]. Using the Theory of Planned Behaviour (TPB) by Ajzen and Fishbein [24], Woo and Avery explained how nurses' eventual decisions to engage in VER were determined by whether they had intended to commit to this behaviour [4]. Three areas of consideration further influence this intention: (1) how nurses perceived their attitude towards the behaviour of VER and how they would perceive the consequences behind their action of error reporting (behavioural beliefs); (2) how nurses would perceive the responses and social pressure they received from their supervisor and colleagues towards their behaviour of VER (normative beliefs) and; (3) how nurses perceived their ability to perform the behaviour of VER (perceived behavioural control) [24]. Despite the existence of the three policies, as discussed in the earlier section, that underpin responsible patient safety principles, this review observes how nurses, despite holding a positive perception towards the need to engage in VER, their idealistic view did not translate into actual action of error reporting, hence had concluded that nurses' experiences towards VER are less than ideal [4]. Such experiences stemmed from various factors underpinned by three areas of consideration of TPB in addressing the challenges that undermine the effectiveness of the three policies, which this paper seeks to explore further.

1. NURSES' ATTITUDE AND PERCEIVED LIMITATIONS TOWARDS ERROR REPORTING

Woo and Avery observed how nurses' commitment towards VER is significantly challenged by their attitude and perceived consequences of their VER actions (behavioural beliefs) [4]. First, studies of this review revealed how the complexity of the error reporting systems (hardcopy and

electronic version) had made nurses perceive the process of lodging formal error reporting in writing to be tedious [25, 26, 27]. This is likely to influence nurses' attitudes negatively and undermine their commitment towards VER despite the mandatory error reporting policy. Second, nurses' attitude towards VER is also determined by their perceived seriousness (consequences) of the error, where they are likely to report only serious errors [28, 29]. Third, nurses' attitudes towards VER were undermined by their perceived importance of error reporting in relation to other duties [27, 30]. Nurses often have substantial workloads, so they must prioritize time and task management to maximize efficiency [31]. Such expectation was further compounded by the imbalance between the supply and demand placed on nurses in the context of the workforce crunch. Therefore, the need to engage in error reporting is seen as subservient to other assigned clinical duties, influencing nurses' attitudes towards VER.

A low commitment of nurses towards VER is likely to be augmented by the increased sophisticated error management process and system, as well as a working environment that shows an unappreciation of their effort to commit to VER. While both tediousness and unsupportive culture challenge nurses' efforts towards patient safety, which aligns with TPB's control beliefs [24], this calls for nurse leaders to look into streamlining the process and support nurses' efforts and commitment towards VER. Additionally, it is plausible that displaying poor attitude and knowledge entails that nurses generally have a poor understanding of the dynamics and rationales behind error reporting and see this initiative to drive corrective action rather than to foster preventive measures to improve patient safety. This is evidenced by nurses reporting the lack of provision of constructive feedback in the aftermath of error reporting, which also negatively influences their attitude towards VER [30, 32]. It is imperative to educate nurses on the significance of VER and their role in committing to this initiative to improve their perception of VER and overall error management culture.

2. PREVALENT OF HUMAN APPROACH TO ERROR MANAGEMENT

The included studies of the review conducted by Woo & Avery [4] revealed that fear of facing censure and repercussions are the main reasons for nurses' reluctance to commit to VER as confirmed by various studies [32, 33, 34, 35]. Despite many healthcare organizations claiming that they had endorsed a system approach to the management of errors, such evidence is a clear sign affirming the continual existence of blame and punitive culture that points to an entrenched human approach to error management that focuses on attributing the causes of the error to individual weakness such as carelessness and incapability [17]. Additionally, a review of the contemporary literature further suggested that hierarchical reporting is still an ongoing practice in contemporary healthcare systems, as evidenced by nurses having to approach their immediate supervisor for approval and to informally vet and endorse their report prior to formal lodging of error [35, 36], and further subject them to receiving abrasive and hostile responses from their supervisors that delineates disapproval of their action of causing the error [32, 33]. In the context of TPB, this clearly illustrates negative normative beliefs that would challenge nurses' commitment towards VER [24]. Such resulting consequences could contribute to nurses having to perceive errors as indicators of their failure and deserving of punishment, and therefore, are less likely to commit to VER to avoid facing any penalties. Such explanations echoed the behavioural beliefs of TPB [24]. This provides an unreliable view of the error management process in the health care system.

Indeed, the human approach to error management is motivated by Lucian Leape's perfectibility model. Leape offered insights into this phenomenon by explaining how health professionals (nurses) during their training were being inculcated with the belief that "good nurses do not make mistakes", which this notion calls for the need to deliver flawless care with the occurrence of error becomes unacceptable [37, 38]. However, harbouring such expectations can be unrealistic. Focusing on fault finding and blame when an error occurs does not assist in investigating its root causes, leading to more likely recurrences [39, 40]. Nurse leaders need to realize that managing medical errors in the context of human failure rather than system failure is more likely to be counter-productive and have diminished value in improving the healthcare systems' safety [41]. This calls for nurse leaders to play a proactive role in improving the organizational safety culture that drives zero tolerance to incivility and destructive workplace behaviour in a way consistent with the system approach to error management.

3. DOMINANCE OF THE CULTURE OF SILENCE

Despite acknowledging the presence of the three policies in places, as discussed earlier, that underpin responsible patient safety management, Woo and Avery offered insights into how nurses had expressed their reluctancy to

speak up and report errors in the context of their rational behaviour presented in three trajectories: (1) the need to conceal errors, (2) practising of selective reporting, and, (3) not wanting to whistle blow [4]. These three trajectories represent different facets of an organizational culture of silence, which exists in blame, shame and punitive culture secondary to the human approach to error management [42]. While a just and open culture, as discussed earlier, prioritizes open communication and active learning from mistakes, which require nurses to be vocal and openly speak up for and admit any errors caused by self or others, this is opposed to the culture of silence, which could produce two deleterious effects. First, at a personal level, where nurses had believed that they are being deprived of the opportunity to speak up, this could potentially manifest in feelings of diminished motivation, dissonance, and undervaluation, hence undermining their intention to commit and contribute to improving patient safety and the safety culture [43]. Second, at the organizational level, a culture of silence may lead to deliberately concealing existing problematic safety issues, impeding possible opportunities to make changes and drive improvement in patient safety [4, 19]. Both consequences impede an organization's commitment to drive quality improvement.

POLICY IMPLICATIONS AND RECOMMENDATIONS

Despite having proposed several recommended policies that underpin a responsible error management system, as outlined earlier, the analysis of management issues further presents various challenges that undermine its materialization. This suggests that developing a culture of safety is still a 'work in progress' for many healthcare organizations, hence entails several implications for nursing management. This paper seeks to propose some recommendations to support this 'work in progress' by addressing the issues and to support the policies in place, as discussed earlier, that are consistent with the consideration of TPB.

1. ADVOCATING FOR PATIENT SAFETY EDUCATION AND TRAINING

Driving the initiative of ongoing patient safety education and training to nurses underscore the first and crucial step to improving their commitment towards VER and the overall organizational error management process. This entails advocating for patient safety education and training at three nursing levels: nursing students, practising nurses and nurse leaders (middle and senior management). Studies have recommended that cultivating nurses' attitudes and behaviour towards error reporting should predominantly occur earlier, ideally at the stage where they pursue their pre-registration nursing education program to set the right standard of patient safety behaviour [44, 45]. Patient safety needs to be incorporated and adequately taught in both theoretical and clinical education of the pre-registration nursing education programs [45, 46]. Additionally, studies observed how frequent training, such as workshops and in-service talks, makes nurses more blatant towards disclosing and reporting errors [4, 47]. This allows nurses to better understand the institutional standpoint, which clears nurses' doubts about the error management culture to promote VER. As such, patient safety education and training could incorporate various pedagogical approaches such as problem-based learning and simulated role-play [45] to deliver content such as how to objectively report errors, highlighting the importance and benefit of error reporting to cultivate responsible patient safety behaviour and how they as nurses can contribute to shaping the safety culture. Doing so would equip them with the necessary knowledge and skills (control beliefs) to apply theories to practice and helps to shape their attitude in patient safety (behavioural beliefs) to drive their commitment to VER.

Lastly, educating nurse leaders is critical to shaping the error management culture, given their significant roles. First, this entails the need for nurse leaders to attend patient safety courses (executive level) for them to learn about the importance of their role in endorsing a just and non-punitive patient safety protocol and in managing their emotions and responses during the occurrence of errors that are aligned with these supportive policies and consistent with the system approach to error management. Second, this entails sending them for patient safety leadership training [48, 49]. Leadership training should focus on exposing nurse leaders to various supportive leadership styles and expected behaviours to guide their managerial actions to motivate and encourage their staff to commit to responsible error reporting behaviour.

2. DRIVING A MORE SUPPORTIVE ENVIRONMENT TO PROMOTE ERROR REPORTING

The earlier analysis revealed several challenges towards nurses' commitment to VER. Healthcare organizations must rally nurses' efforts to actively participate in error reporting by providing a supportive environment through various initiatives. First, given that fear of managerial consequences (blame, shame and punishment) is

identified as the main barrier that challenges nurses' intention (normative beliefs) [4, 32, 33, 34, 35], nurse leaders can leverage opportunities by holding regular roadshows and discussion forums and posting online bulletins to openly share successful stories of how they recognize, appreciate and reward nursing staffs' effort towards VER. They may share examples of how past VER initiatives had contributed to ideas and implementation of successful quality improvement projects that led to clinical improvement to show nurses how their effort of error reporting was being recognized and put into use to foster a learning culture [50]. Likewise, dialogue sessions can be organized between nurse leaders (senior and middle management) and frontline nurses to explore possible barriers nurses encountered that are likely to challenge their intention towards VER and their proposed solutions to address these barriers [51]. These interventions will give nurses a positive impression that a learning and non-punitive culture was exhibited, further strengthening their commitment. Second, to address issues of cumbersome reporting, this entails nurse leaders to work closely with other stakeholders, such as hospital administrators, hospital information technology (IT) staffs and frontline nurses, to streamline error reporting process by:

1. assessing the current reporting system to simplify complex reporting process and omit unnecessary documentation steps to reduce administrative burden for reporting [27],
2. driving simplified user interface in designing electronic incident reporting software to promote simplicity and accessibility of the system so that error reporting can be seen as less time-consuming and can be done efficiently.
3. organizing open dialogue sessions or anonymous staff suggestion schemes to solicit stakeholder's ideas and suggestions to revise the existing error management system to ensure they are more user-friendly and tailored to their needs [51].

Third, nurse leaders should drive a bottom-up approach to error management culture by:

1. organizing regular dialogue sessions and meetings at both departmental and institutional levels to allow nurses to share their experiences.
2. actively listening to nursing staff's constraints, barriers and motivators towards VER.
3. Avoid being defensive to feedback and being open to constructive suggestions.

Lastly, nurse leaders could consider offering incentives that support the nursing staff's VER effort. This involves offering them protected time during their working hours to fully devote to administrative work such as incident reporting [4]. This helps to relieve their administrative burden and enhance their commitment to VER. However, if not possible, compensate them with remuneration (overtime pay) or time off in lieu (TOIL) and consider integrating nurses' proactive error reporting initiatives into their work performance through appraisal to reward them for their dedication towards patient safety and assisting in root cause analysis.

3. NURSE LEADER AS ROLE MODEL

Nurse leaders play a significant role in cultivating a positive organizational safety climate by creating conditions emphasizing patient safety [52]. As a role model, a nurse leader is vital to establish the organizational tones, social fabric and behavioural norms that set the expectation of a culture, which determines the shared beliefs and practices of the staff within their department or organization. In the context of the safety culture, it implies that when a medical error occurs, the attitude, response and practice of nurse leaders towards this incident can influence nurses' attitude, beliefs and their decision to commit towards VER (normative beliefs of TPB) [24, 32]. This entails nurse leaders being role models to undertake the necessary actions. First, promote a just and open culture by initiating a blame- and punitive-free response when being informed of the occurrence of the error. This will inhibit nurses' fear, enhance their trust in management, and drive a positive perception towards VER [53]. Second, foster a learning culture by providing prompt and constructive feedback (not destructive) to the affected nurse(s) about deriving salient learning points and lessons from this error. This enables nurses to reflect and retrospectively learn from erroneous practices to enhance future practices [4, 53].

Given that every mistake entails further room for improvement, nurse leaders can leverage on error occurrence as teaching moment to encourage nurses to participate in quality improvement projects, which empowers them to proactively contribute to improving the erroneous process. Doing so would generate effective learning and enhance their commitment to continuously improve patient safety [54]. Third, nurse leaders should openly communicate their expectations regarding the safety culture to all nurses. The expectation of mandatory reporting made formally through writing, zero tolerance for non-reporting behaviour, and the non-punitive

consequence of error reporting should be openly communicated to all nursing staff during staff orientation programs, nursing retreats, and patient safety workshops, as well as in writing through institutional nursing policies [4]. Lastly, it is also imperative for nurse leaders to advocate for policies and support mechanisms such as counselling and employee support groups to support their emotions and well-being in the aftermath of error reporting. This builds their trust and enhance their commitment to VER.

4. LEADERSHIP AS CATALYST TO DRIVE CLINICAL GOVERNANCE STEWARDSHIP

While the previous three recommendations to be undertaken by nurse leaders are important to drive nurses' commitment towards error reporting, as discussed, they are dependable upon their leadership skills to advocate a healthy working environment in the context of a just and open culture to support these initiatives. Studies revealed that leadership style is the blueprint influencing staff's learning from error and driving an optimal error management culture [48, 49, 55]. Studies found that nurse leaders who adopt a toxic leadership style that is consistent with the blame, shame and punitive culture in the context of human approach to error management drive fear, distrust and insecurity among nurses [56], which in turn manifest into the vicious cycle of poor nursing performance and greater propensity for error occurrence [49].

Conversely, a review of the health management literature over the past decade observed how a positive error management culture that contributes to nurses' positive attitude and receptivity towards VER was underpinned by the adoption of several leadership styles by nurse leaders such as transformational leadership, authentic leadership and more recently ethical leadership [48, 49, 57, 58, 59; 60). It is beyond the scope of this paper to explain individual leadership styles in detail. In summary, however, they do share one common similarity, that is, they are follower-centric and relational leadership styles [60] that focus on acknowledging the emotion, participation and contribution of nursing staff in error management and recognise the active role of the nurse leaders in modelling and influencing their followers' (nurses') attitude and decision to commit towards VER. This notion drives nurse leaders to adopt approaches such as open and non-destructive communication, encouragement, motivation and commitment consistent with a supportive organizational culture to drive nurses' commitment to VER and contribution towards patient safety [49].

To drive these approaches into practical use to support error reporting initiatives, this entails nurse leaders going beyond identifying errors, but rather adopt cutting-edge strategies towards error management. They should lead by example to offer visible managerial commitment by:

1. fostering open communication in discussing errors with their followers (nurses),
2. encouraging and empowering them to speak up openly and to truthfully admit their mistake when error occurs and
3. staying true to their conviction of blame-, shame- and punitive-free culture by not inflicting disciplinary actions against erring nurses.

Adopting these approaches through exhibiting these relational leadership styles by nurse leaders is critical to facilitate effective role modelling and materialize other initiatives, as discussed, is needed to drive a just and open safety culture that encourages more committed and responsible error reporting behaviour among nurses.

CONCLUSION

Error reporting is important as it enables the detection of errors and, through root cause analysis, enables learning of the flaw processes within the system vulnerabilities. Despite the presence of various policies in place that underpin the principle of responsible error management, it is futile if they remain relevant theoretically but are not able to materialize and put them into practice to promote patient safety. VER requires a significant commitment from the nursing staff, which is centred upon their attitude and beliefs (behavioural beliefs), perception towards social norms (normative beliefs), and ability to contribute (control beliefs) towards error reporting. It is imperative that driving strategies and interventions consistent with the recommendations proposed by this paper are required to foster a supportive environment in the context of a just and open culture. Doing so helps to drive the feasibility and practicality of these policies to achieve the desired effects of driving nursing staff's commitment towards VER, contributing to a more robust and effective error management system.

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AUTHOR'S CONTRIBUTION

MWJW and MJA contribute to the study's conceptualization and manuscript development; MWJW synthesizes material and primarily writes the paper; MJA reviews and contributes to the writing of this paper; MWJW is responsible for revising the manuscript. MWJW finalized the manuscript.

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