Sounding the Alarm to Healthcare Leadership to Establish a Standardized Evidenced-based Falls Prevention Program: An Integrative Literature Review

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Abstract

The dilemma for healthcare leadership is that interventions to prevent patient falls exist, but over the years it has been unclear as to which ones are the most effective and what strategies should be implemented to best support their needs (Delaforce et al., 2023). Because of the fact that national initiatives are aimed at preventing patient harm from falls, healthcare leaders have come to the conclusion that in order to be effective, a falls prevention program needs to be multi-faceted, which in turn produces a complex system. However, as the system becomes more complex, the risk of failures towards implementation also increases because the implementation of a falls prevention program can be influenced by several factors. Factors such as, environmental and contextual issues; staff knowledge, beliefs and attitudes; organizational culture and climate; staff workloads; patient education; and access to appropriate equipment to name a few, which are all driven by healthcare leadership (Ayton et. al, 2017). For this reason, the purpose of this study was to sound the alarm to healthcare leadership to establish a standardized evidenced based falls prevention program. By focusing on this, the researcher was successful in highlighting a series of fall risk assessment tools and interventions that has been known to develop fall prevention programs within healthcare. Equally important, the researcher provided several themes that has known to both inhibit and build fall prevention programs. Thereafter, the researcher then suggested two leadership strategies, reflexivity and resonant, for healthcare leaders to consider adopting as a means to help them develop effective fall prevention programs going forward.

Keywords: patient falls, healthcare leadership, patient safety, healthcare, fall prevention program, leadership, joint commission, reflexivity, resonant

1. Introduction

Despite decades of research into the prevention of patient falls, evidence still shows that this phenomenon continues to haunt healthcare leaders from a social and financial perspective. For instance, patient falls, which can translate to significant injury, extended hospital stays, increased health care costs, loss of independence, and even death, are one of the most frequently reported incident types for hospitalized patients (Williams et al., 2014). AlThubaity and Mahdy (2023) cited that inpatient falls cause major difficulties for patients on a physical or economic level (increased injury, mortality, and quality of patient life) and for medical organizations (increased medical care costs, stay in the hospital, and litigation)

Spiva and Hart (2014) held a similar view in stating that falls are the most frequently reported safety event among hospitalized patients in the United States with rates between four to 12 falls per 1,000 patient days occurring each year. Wilson (2022) confirmed these views in stating that the prevention of falls with harm for patients continues to present challenges for hospitals not only within the US, but globally. Wilson purported that falls are the leading cause of preventable injury during hospital admissions and may lead to decreased mobility, functioning, and participation in daily activities. Falls may also contribute to prolonged hospital stays and higher mortality. They may

result in anxiety, depression, and decreased quality of life for patients (p. 199).

Dykes et al. (2020) also came to a similar conclusion in citing that falls comprise the largest category of preventable adverse events in hospitals, and the associated per-patient costs are estimated to range from $19,376 to $32,215 (2019 USD). Also, LeLaurin and Shorr (2019) cited that patient falls are the most common adverse events reported in hospitals. Each year, roughly 700,000 to 1 million patient falls occur in U.S. hospitals resulting in around 250,000 injuries and up to 11,000 deaths.

With that said, the purpose of this literature review was to sound the alarm to healthcare leadership to establish a standardized evidenced-based falls prevention program. Additionally, the goal of this research was to explore themes that has known to both inhibit and foster falls prevention programs. What's more, the significance of this research was that it provided a different perspective on the already existing problem in healthcare as it relates to healthcare leadership not being successful in implementing effective falls prevention programs.

2. Literature Review

2.1 Contributing Factors Towards Patient Falls in Healthcare

The phenomenon of falls is recognized globally as a major public health problem. Falling down is globally the number-one health problem, and a common problem of evaluation by healthcare professionals (Strini et al., 2021). As for within the United States, although there has been a sense of urgency in hospitals to prevent falls to "do no harm" and because Medicare will not reimburse hospitalization costs due to fall related injuries, the end result is that patient falls remain a serious problem in US hospitals (Dykes, 2009). Strini et al. (2021) defined a fall as a "sudden, not intentional, and unexpected movement from orthostatic position, from seat to position, or from clinical position". In comparison, Hajduchová et al. (2018), defined a fall as a: "change of position, ending by contact of the body with the floor; it may be accompanied with loss of conscience and injury" (p. 620).

Another definition for a fall was cited by the National Database of Nursing Quality Indicators (NDNQI) as "an unplanned descent to the floor or extension of the floor, with or without injury to the patient" (NDNQI, 2008). Whichever definition one favors, patient falls are a serious problem in acute care hospitals and are used as a standard metric of nursing care quality. Challenges such as unfamiliar environment, acute illness, surgery, bed rest, medications, treatments, and the placement of various tubes and catheters have all been documented to put patients at risk of falling (Dykes et al., 2009). Mores (2009) cited similar contributing factors for falls such as, by accidental or environmental factors, by physiological factors that can be anticipated or unanticipated, by behavioral factors, and in children by developmental factors.

Hajduchová et al. (2018) cited reasons such as weakness or balance disorder, sudden change of health condition, sight disorder, effects of medicines, slipping due to unsuitable shoes, and disorientation in unknown environment. Risk factors associated with inpatient falls include a history of a recent fall, advanced age, certain medications, altered mental status/impaired cognition, specific diagnoses, multiple comorbidities, mobility impairment, muscle weakness, postural hypotension, behavioral disturbance, agitation, and urinary incontinence or frequency (Oliver et al., 2010). Wey (2020) summarized 10 reasons why patients fall within hospitals: (1) An aging population ;(2) Rising patient acuity;(3) Nurse shortages;(4) An inefficient work environment for caregivers;(5) Lack of hospital leadership to establish a safe climate culture;(6) Failure to call a nurse for assistance; (7) The bed exit alarm is not set; (8) Patients are on high-risk medication; (9) Patient inaccurately assessed;(10) Delayed response when the nurse is called (Wey, 2020)

Williams (2014) also provided data on the reasons why patients fall. As purported by Williams, the most common patient activities at the time of a fall were toileting (23%) and ambulating (22%). The most common patient factors contributing to falls were altered mental status/cognitive impairment (34%), inability to rise without assistance (19%), and altered elimination (16%).

2.2 Fall Risk Assessment Tools Used in Healthcare

The Joint Commission International for Accreditation Standards for Hospitals specifies that hospitals should aim to reduce the risk of injury from falls to inpatients and outpatients through the assessment of fall risk tools. Conducting an assessment using fall risk tools is a process for re-evaluation, especially if there are changes in the patient's condition and then implement interventions to reduce the risk of falling. For this reason, risk assessment is important. The expression of risk assessment is based on the following: checklists drafted of different risk factors for fall and numerical indexes to predict the risk. The checklists help the staff to identify the most common factors, while the numerical index is used to predict the risk of an individual using a numerical score that is proportional to the number of risk factors included (Strini et al., 2021).

However, the characteristics of the patient for a fall risk tool are varied: age, cognitive state, state of health in general, particular comorbidities, hospital or home context. These are just a few features. In fact, in recent studies, particular risk factors have been evaluated such as being hospitalized, being hospitalized in neuropsychiatry, suffering from dementia and delirium, and going to the bathroom (Strini et al., 2021). The vast majority of the proposed tools have been developed for use in acute and geriatric settings, in which there are numerous factors that expose individuals to this risk. The following are commonly known used risk tools to assess the likelihood that a patient may fall.

- Falls Efficacy Scale—International (FES-I). The FES-I scale is the most used tool in literature for the "fear of falling" evaluation, a factor closely related to the genesis of falls.
- The Activities-specific Balance Confidence Scale (ABC Scale) was developed to assess the perceived degree of confidence in maintaining balance or not becoming unstable in performing various functional tasks.
- The STRATIFY scale is a predictive tool for the risk of falls in hospitalized patients. STRATIFY has long been considered the ***"Gold standard"*** tool to be used at patient admission.
- The Johns Hopkins Fall Risk Assessment Tool (JHFRAT) was used for the multifactorial assessment of the risk of falling in departments for acute patients.
- The Tinetti Mobility Test (TMT) or the Performance-Oriented Mobility Assessment (POMA) consists of the combined use of the useful components drawn from both approaches.
- Morse Fall Scale (MFS) is a quick and easy way to assess the likelihood of a patient falling. It was developed in acute patient, rehabilitation and nursing home departments.

Granted that, it should be noted that the primary purpose of using a fall risk assessment tool is not to reduce falls, but to identify individuals at high and low risk. It should be noted that due to the multidimensional nature of the risk of falling, there is no single tool that can be used in any context or that performs a perfect risk assessment (Strini et al., 2021). Finally, Oliver and Haley (2009) purported that a standardized fall risk assessment tool is an essential component of a fall prevention program and should be completed at regular intervals during hospitalization.

2.3 Fall interventions Used in Healthcare

As noted by Williams (2014), most interventions studied have been supported in literature as important components of a multifactorial fall prevention program, but research-based evidence is limited and variable (p. 28). With this in mind, AlThubaity and Mahdy (2023) performed a study and provided the following strategies as interventions: (1) encourage people to ask for help when they get out of bed: (2) Always check the patient's ability and compare it to the written activity orders: (3) Check how the patient walks when they get out of bed and help them if they need it: (4) Perform hourly rounding; (5) Be aware of any medications that may cause drowsiness, dizziness, or impaired judgment; (6) Use preventative measures, such as slip-resistant socks and bed alarms, to reduce the chance of falling; and (7) Ensure that nurse managers monitor safe nurse-to-patient ratios (p. 700).

In comparison, Dykes et al. (2009) provided six suggestions to focus on to prevent patients from falling: (1) patient report, (2) information access, (3) signage, (4) environment, (5) teamwork, and (6) involving patient/family (Dykes et al., 2009). See Table 1 below.

Table 1. Strengthened and barriers to overcome (Dykes et at., 2009)

Overcome Barriers	Strengthen Facilitators
Knowledge/Communication	
Providing care, including help with morning toileting, before receiving report	Receive accurate and timely report about patients' fall risk and what to do to prevent a patient from falling
Fall risk status and/or fall prevention plan is cumbersome and not accessible to all stakeholders	Easy access to up-to-date fall risk information and prevention plan for all providers and patient/family
Fall risk signs are too common and generic to be helpful	Obvious, unambiguous, individualized visual alerts
Capability/Actions	
Not knowing how to access needed equipment, eg, walker; environmental clutter	Personal effects and equipment nearby; furniture arranged to meet patients' needs; clear path to the bathroom
Not responding to a call light because of not knowing what to do if the patient wants to get out of bed or needs toileting	Staff working together as a team; answering any call light rapidly
Patients not following instructions given by staff, eg, to call for assistance to help get out of bed or to walk to the bathroom	Working with families and visitors to carry out the fall prevention plan

Lastly, LeLaurin and Shorr (2019) provided strategies such as alarms, sitters, environmental modifications, non-slip socks, and patient education as known interventions.

2.4 Factors That Inhibit Developing a Falls Prevention Program

According to Matarese and Ivziku (2016**),** falls are the most frequent adverse event reported in hospitals, usually affecting older patients. Ayton et. al (2017) came to the same conclusion in stating that despite advances in clinical practice and research, falls remain the most common adverse event in hospitals (p. 2). Because of this, one would think that implementing a falls prevention program would be a seamless process within healthcare. On the contrary, as cited by (Ayton et al., 2017), the fact remains that there are some noted barriers that are known to obstruct such implementation. They are as followed:

- **Belief that falls are inevitable** - Many nurses reported that they were unable to prevent falls, despite feeling they had knowledge in falls prevention
- **Ward layout** - The layout of the ward was often perceived by nurses as a hindrance to surveillance. Single rooms made it difficult for nurses to physically move efficiently from one patient to another
- **Access to resources** - A key barrier identified in the implementation of the 6-PACK program was access to resources
- **Use of data to drive practice change** - Senior staff highlighted the need to ensure that nursing staff understood the extent of the problem of falls on the ward
- **Lack of ownership** - A perceived barrier to the implementation of the 6-PACK program was a lack of ownership for falls prevention in some hospitals
- **Complacency** - Reflecting on previous and current falls prevention practice, staff recognized that one barrier to practice change was complacency. Complacency was often discussed in relation to the completion of fall-risk tools (Ayton et al., 2017).

2.5 Factors That Foster Developing a Falls Prevention Program

As noted by Moore and McAuliffe (2010), healthcare professionals have a responsibility to maintain standards of care and this responsibility includes taking action to report poor care (p. 166). Thus, when it comes to developing a falls prevention program, there are known factors that have fostered the development. They are as followed:

- **Falls prevention goals and commitment** - An enabler to falls prevention was a commitment to falls prevention by senior staff demonstrated through provision of resources (equipment and staff) as well as clearly articulated goals
- **Training and education** - Improving knowledge and skills through training and education sessions were identified as enablers to falls prevention practice
- **Leadership** - Leadership, including the establishment of champions for falls prevention was identified as a key enabler for practice change

- **Engaging staff in falls prevention** - As highlighted by one senior staff participant, staff engagement is important and can be facilitated through `engaging hearts and minds' both the emotional and logical aspects of falls prevention (Ayton et al., 2017)

2.6 Lack of Standardized Evidence-based Falls Prevention Program

A multifactorial falls risk assessment is typically performed using specific tools that cover a range of risk factors. However, according to Matarese and Ivziku (2016), there are no standardized multifactorial falls risk assessment tools. Therefore, healthcare organizations may develop their own tools based on research evidence and national guidelines. Also, as noted by Williams (2014), most interventions that have been supported in literature as important components of a multifactorial fall prevention program, but research-based evidence is limited and variable. LeLaurin and Shorr (2019) further added that falls in hospitalized patients are a pressing patient safety concern, but there is a limited body of evidence demonstrating the effectiveness of commonly used fall prevention interventions in hospitals (p.12).

Cameron et al. (2018) voiced a similar conclusion in stating that fall prevention interventions exist, such as exercise, medication review, environmental or assistive technologies (including bed or chair alarms), social environment interventions that target staff members, changes in the organizational system and knowledge interventions, but it remains unclear which interventions are most effective (Cameron et al., 2018). To this end, Ayton et al. (2017) had a similar view and stated that evidence for effective falls prevention interventions in acute wards is limited. In a different study, Piatkowski et al. (2021) focus was on the environment but came to the same conclusion pertaining to the lack of evidence towards falls prevention program in stating that despite decades of research into patient falls, there is a dearth of evidence about how the design of patient rooms influences falls (p. 1).

3. Leadership

3.1 Background on Leadership

Leadership has been researched over the last five decades, resulting in the development of 65 classifications and 350 definitions with an emphasis on understanding the positive "good" characteristics leading to the glamorization of leadership today (Cote, 2017). Leadership, while subject to numerous interpretations, has been given different definitions. As noted by Kumar and Khiljee (2016), some definitions have become popular just based on who was the source. For example, Warren Bennis, an expert on leadership studies, cited leadership as 'a function of knowing yourself, possessing a vision that is thoroughly communicated, establishing trust among colleagues, and exercising constructive action to recognize your own leadership potential'.

Peter Drucker, originator of modern management, termed a leader as 'someone who has followers' and cited that leadership is doing the right things." In comparison, Hersey et al. (1979) defined leadership as the 'process of influencing the activities of an individual or group to help achieve goals' (p. 418). Taken from another perspective, Torres (2013) defined leadership in the 21st century in the context that "leaders need to look into the future and foresee opportunities and be prepared and ready to act. Torres continued and said that leaders need to escape from their comfort zone and flourish relationships with different people, including physical, biological, political, socioeconomic, functional, and cultural differences." Torres concluded that effective leaders of the 21st century need to be different and willing to take risks (Torres, 2013).

Hersey et al. (1979) viewed leadership as a relationship that is a reciprocal process, whereby the leader influences the followers through persuasion to achieve common organizational goals. In comparison, Northouse (2016) concluded that the following components are central to leadership: (1) leadership occurs in group situations, (2) leadership is a process that is a transactional event that occurs between leader and followers, (3) leadership involves influencing followers, and (4) leadership includes goal attainment.

Finally, in addition to the above views and definitions, there have been well known leadership styles that has produced positive outcomes of leader-follower dynamics, such as: (1) Transformational Leadership, (2) Democratic, (3) Transactional Leadership, and (4) Autocratic Leadership. See Figure 1 below.

Figure 1. Importance of leadership style towards quality-of-care measures in healthcare settings: systematic review (Sfantou, 2017)

3.2 Competencies Needed for Effective Healthcare Leadership

Effective leadership in health care has already been broadly studied in literature during the last decades (Kanste et al, 2007). Because of this, several societal challenges have disclosed the pressing need for effective leadership styles in health and social services**.** As a comparison, Kumar and Khiljee (2016) concluded that effective leadership by healthcare professionals is vital in modern healthcare settings. The major factor underpinning this is the drive to improve the quality of healthcare provision on a background of ever-increasing healthcare demands and need for more efficiency and productivity (p. 63). Nevertheless, Hargett (2017) cited several key competencies for effective leadership in healthcare. See Figure 2 below.

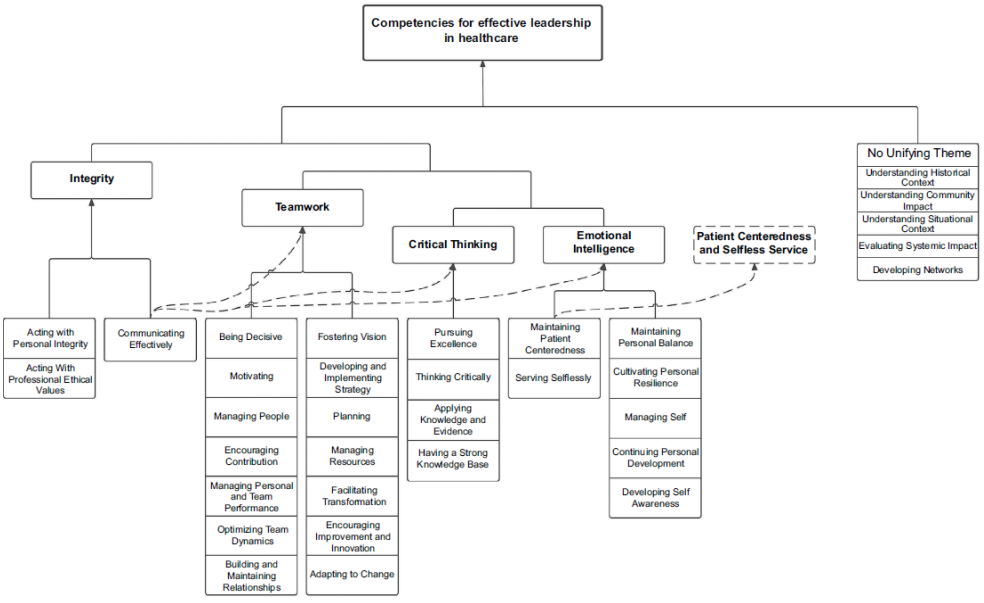

Figure 2. Organization of competency statements based on hierarchical cluster analysis and mixed quantitative and qualitative assessment (Hargett, 2017)

As a comparison for competencies needed for healthcare leadership, Kumar and Khiljee (2016) presented a Healthcare Leadership Model that has been designed to allow healthcare workers of all backgrounds to become better leaders and consists of nine dimensions (p. 64). See Figure 3 below.

Figure 3. Healthcare Leadership Model (Kumar & Khiljee, 2016)

4. The Joint Commission

4.1 Sentinel Event

In 1996, The Joint Commission created a Sentinel Event Policy to help healthcare organizations that experience serious adverse events improve safety. The Joint Commission's Office of Quality and Patient Safety assists healthcare organizations in conducting comprehensive systemic analyses to learn from these sentinel events. Since that time, The Joint Commission has maintained an associated Sentinel Event Database with de-identified and aggregate data.

The aggregate information, including causes and outcomes of sentinel events, is analyzed yearly to help the nation in general and accredited organizations in specific gain insight into causes of sentinel events and develop mitigating strategies to prevent harm to individuals under their care. A sentinel event is defined as: A patient safety event that reaches a patient and results in any of the following: death, permanent harm, or severe temporary harm and intervention required to sustain life. An event can also be considered a sentinel event even if the outcome was not death, permanent harm, severe temporary harm and intervention required to sustain life (The

Joint Commission, 2017b, para 2). In Short, The Joint Commission issues sentinel event alerts for issues that require immediate investigation and response (Ulrich, 2017).

4.2 Sentinel Event Alert on Preventing Falls and Fall Related Injuries in Healthcare

Falls with serious injury are consistently among the Top 10 sentinel events reported to The Joint Commission's Sentinel Event database, which has 465 reports of falls with injuries since 2009, with the majority of these falls occurring in hospitals. Approximately 63 percent of these falls resulted in death, while the remaining patients sustained injuries. Because of this alarming data, the Joint Commission issued Sentinel Event Alert 55 in 2015 and revealed that the most common contributing factors pertaining to falls were: (1) Inadequate assessment; (2) Communication failures; (3) Lack of adherence to protocols and safety practices;(4) Inadequate staff orientation, supervision, staffing levels or skill mix; (5) Deficiencies in the physical environment; and (6) ***Lack of leadership*** (The Joint Commission, 2015). See Figure 4 below for Top sentinel events for 2022 and Figure 5 for Leading Sentinel Events (2018 –2022).

Top 10 Frequently Reviewed Sentinel Events, 202

Patient falls were the most prevalent sentinel event type reviewed in 2022 (n=611) – an increase from 483 reviewed falls in 2021.

Top 10 Leading Reviewed Sentinel Event Types (CY2022)

Event Types	N	% of Total
Fall	611	42%
Delay in treatment	89	6%
Unintended retention of a foreign object	88	6%
Wrong surgery*	85	6%
Suicide	73	5%
Assault/rape/sexual assault/homicide	60	4%
Fire/burns	49	3%
Perinatal event	33	2%
Self-harm	30	2%
Medication management	30	2%

*Wrong surgery includes wrong site, wrong procedure, wrong patient, and wrong implant.

The Joint Commission Sentinel Event Data 2022 Annual Review

Figure 4. Top 10 Sentinel Events for 2022 (The Joint Commission, 2023)

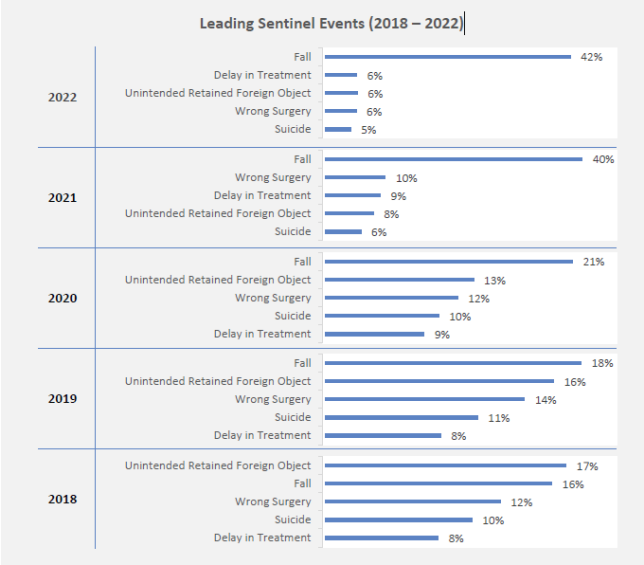

Figure 5. Leading Sentinel Events 2018-2022 (The Joint Commission, 2023)

4.3 Sentinel Event Alert on Healthcare Leadership Developing Safety Culture

In any health care organization, leadership's first priority is to be accountable for effective care while protecting the safety of patients, employees, and visitors. Competent and thoughtful leaders contribute to improvements in safety and organizational culture. With this as its focus, The Joint Commission issued Sentinel Event Alert 57 in 2017 and disclosed that ***healthcare leadership*** was failing to create an effective safety culture which in turn was a contributing factor to many types of adverse events – from wrong site surgery to delays in treatment. The finding was that Inadequate leadership can contribute to adverse events in various ways, including but not limited to these examples: (1) Insufficient support of patient safety event reporting; (2) Lack of feedback or response to staff and others who report safety vulnerabilities; (3) Allowing intimidation of staff who report events (The Joint Commission, 2017a). Sentinel event alerts are not issued lightly or often. Since the inception of the issuance of sentinel event alerts at the time when this was issued, The Joint Commission had only issued 57 alerts (including this recent alert) within its 20 year history (Ulrich, 2017).

5. Methodology and Data Collection

5.1 Research Method and Design

The purpose of this literature review was to sound the alarm to healthcare leadership to establish a standardized evidenced-based falls prevention program. Additionally, the goal of this research was to explore themes that has known to both inhibit and foster falls prevention programs. Because of this, Simon and Goes stated that performing an extensive literature review should be the underlining objective when performing a study (p. 277). What's more, Simon and Goes stated that the literature review is a blended critical essay that examines and unifies the most relevant and current published knowledge on the topic under investigation. Knowing this, the researcher performed a literature review, which resulted with leadership strategies as a suggestion to help establish a standardized evidenced based falls prevention program.

5.2 Data Collection

The ProQuest database and GOOGLE SCHOLAR was the primary source and EBSCO was the secondary database used in this literature review. The search keywords used were Patient Falls, Healthcare Leadership, Fall Prevention Program, Leadership. Articles researched for this literature review provided an overview of patient falls, leadership, and fall prevention programs. After researching articles on patient falls, the researcher continued the review with articles about fall assessment tools, fall interventions, and the role of leadership in healthcare.

The research documents included in this study were published and compiled by various sources. Lastly, this literature review consisted of both U.S. and international journals on patient falls, fall prevention programs, and leadership. Specific journals included – The Journal of Nursing Administration, BMC Health Services Research, Journal of the American Geriatrics Society, Journal of Nursing Care Quality, Nursing Economics, Journal of Nursing Management, Journal of Advanced Nursing, International Journal of Qualitative Studies on Health and Well-being.

6. Instrumentation and Setting

As for instrumentation, the researcher used secondary data as its main source instrumentation. However, as Creswell (2014) noted, in research, the researcher can also be included as an instrument because the researcher collects data themselves through examining documents, or observing behavior. Therefore, the researcher was the second source of instrumentation used. Furthermore, because research setting is an important component of research design/methodology, the researcher focused on exploring themes and patterns around patient falls and prevention programs, the link between leadership and patient falls, and the tools and interventions to prevent falls from occurring within healthcare as its research setting.

7. Synthesizing Literature Review

As defined by Bradley et al. (2007), taxonomy is a system for classifying multifaceted, complex phenomena according to common conceptual domains and dimensions. Bradley further stated that the purpose of employing taxonomy is to increase clarity in defining and comparing complex phenomena (p. 1761). As a result, because patient falls are viewed as the most frequently reported safety event among hospitalized patients in healthcare, the researcher used different lenses to look at the complicated problems and social issues within this phenomenon. With that said, the following domains were used to synthesize different views.

7.1 The Impact From Patient Falls

Falls of hospitalized patients constitute undesirable and risky incidents in health care facilities. They can affect significantly the expected therapeutic outputs. Falls may cause traumas, but also quite serious damage or even lead to the patient's death (Hajduchová et al. (2018). LeLaurin and Shorr (2019) cited that patient falls are the most common adverse events reported in hospitals. Each year, roughly 700,000 to 1 million patient falls occur in U.S. hospitals resulting in around 250,000 injuries and up to 11,000 deaths.

Spiva and Hart (2014) held a similar view in stating that falls are the most frequently reported safety event among hospitalized patients in the United States with rates between four to 12 falls per 1,000 patient days occurring each year. Falls are associated with increased risk of mortality and morbidity and an estimated cost of $20 billion a year. Dykes et al. (2020) also came to a similar conclusion in citing that falls comprise the largest category of preventable adverse events in hospitals, and the associated per-patient costs are estimated to range from $19,376 to $32,215 (2019 USD). Accordingly, Wilson further argued that patient falls are associated with increased financial costs to patients, families, and the health care system. Wilson estimated annual cost of serious episodes of injuries from hospital falls in the United States is $50 billion (p.199).

7.2 Lack of Standardized Evidenced-based Falls Prevention Program

As noted by Williams (2014), most interventions that have been supported in literature as important components of a multifactorial fall prevention program, but research-based evidence is limited and variable. LeLaurin and Shorr (2019) further added that falls in hospitalized patients are a pressing patient safety concern, but there is a limited body of evidence demonstrating the effectiveness of commonly used fall prevention interventions in hospitals (p.12). As a comparison, Matarese and Ivziku (2016) noted that there are no standardized multifactorial falls risk assessment tools. Therefore, healthcare organizations may develop their own tools based on research evidence and national guidelines

Cameron et al. (2018) voiced a similar conclusion in stating that fall prevention interventions exist, such as exercise, medication review, environmental or assistive technologies (including bed or chair alarms), social environment interventions that target staff members, changes in the organizational system and knowledge interventions. However, it remains unclear which interventions are most effective. Lastly, according to Ayton et al. (2017), the authors came to the conclusion that evidence for effective falls prevention interventions in acute wards are limited. One reason for this may be suboptimal program implementation (p. 1).

8. Literature Review Results

The purpose of this literature review was to collect relevant and timely research on falls prevention programs and then synthesize it into a cohesive summary of existing knowledge, which would better prepare the researcher to critically asses what former studies lacked and how this study will make a difference going forward. As for themes that have resulted from this literature review they were as followed: (1) past strategies that have been used to implement falls prevention programs have been insubstantial; (2) there still exist a chasm between healthcare leadership and front-line staff when the focus is on developing a culture of patient safety; and (3) there is a direct association between leadership and patient falls.

Given these themes, what former studies lacked was making the argument that it is time for healthcare leadership to start to dare to do things differently. In other words, leaders of tomorrow will need to have more vision and courage to conclude that enough is enough around the subject of not having a standardized evidence-based falls prevention program. Equally important, although this literature review found that effective healthcare leadership is a skill that consist of several competencies, but based on the current state of healthcare, in order to show signs of real change, these competencies will need to be paired with a new set of leadership theories, which are ***Reflexivity and Resonant***. In closing, the final analysis of this critical assessment is that neither of these theories are currently being viewed as the first choice of selection for strategic thinking in healthcare, which means that this research can potentially add value to this area of research going forward.

9. Recommended Leadership Strategies to Standardize a Falls Prevention Program

9.1 Reflexivity Theory

Aa noted by Hempel et al. (2013), fall prevention programs are typically complex, involving multiple components that depend on leadership involvement and the cooperation of frontline staff from multiple disciplines (p. 483). Equally important, as noted earlier in this research, leadership has been researched over the last five decades and has produced common leadership styles such as, (1) Transformational Leadership, (2) Democratic Leadership, and (3) Transactional Leadership.

However, patient falls have plagued the healthcare community for so long, it's safe to conclude that neither of these leadership styles have made a big enough impact to make its claim as the savior for healthcare leaders. For this reason, two new leadership styles are recommended within this research for healthcare leaders to consider utilizing to help establish a standardized evidence-based falls prevention program. With that said, the first recommended leadership theory is ***Reflexivity Leadership***. Reflexivity has been defined in team literature as the extent to which participants reflect upon group objectives, strategies and processes and then adapt (Widmer et al., 2009). Reflexivity was found in case studies where both effective processes of communication and leadership existed as shown in Figure 6 below.

Reflexivity was fostered through effective communication processes, which in turn were facilitated through effective leadership. Reflexivity operated in two main ways: through processes promoting greater interrogation of data and actions and processes of reviewing effectiveness (Brown, 2020). Creating time for discussion and challenge through agenda management was a key leadership process that fostered closer scrutiny of information. Reflexivity was also fostered through leadership practices of reviewing effectiveness and data reporting at the governance level (Brown, 2020). Reflexivity can emerge as a key factor to influencing healthcare leaders towards engagement in healthcare quality.

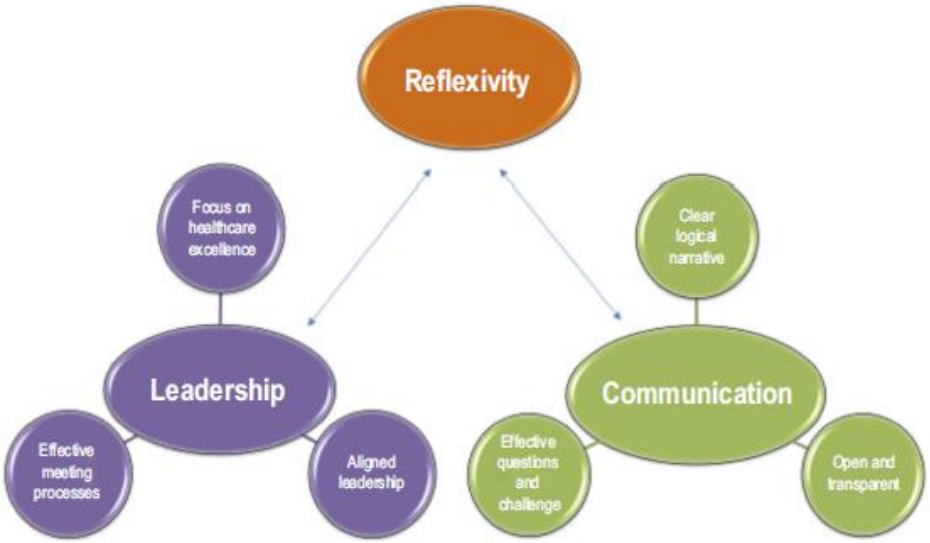

Figure 6. Leadership, communication and reflexivity (Brown, 2020)

9.2 Resonant Theory

Nursing leadership is often held to account for the quality of patient care despite an absence of research-relating nursing leadership to nurse sensitive outcome indicators (Parr et al, 2021, p. 208). Because of this conclusion, Nurse executives continue to be challenged with insufficient evidence to guide decisions on how to organize and lead nursing to affect gains in patient safety, clinical effectiveness and patient experience (Parr et al., 2021, p.208).

The implication, therefore, is that nursing leadership should be a focus for organizations intent on improving patient outcomes (Wong et al., 2013). Critical relational components of nursing practice such as engaging with patients, being present with them, and helping them to cope (Feo et al., 2018) are highly emotional and require relational energy (Cummings, 2004). It also requires staff to be positive and fulfilled (Schaufeli et al., 2006) With all of these characteristics needed to interact in the complex healthcare setting, the second leadership theory recommended is ***Resonant Leadership***.

Resonant leadership styles are described as visionary, coaching, affiliative and democratic (Cummings et al., 2005) see Figure 7 below. Resonant leaders are those in tune with the people around them, they know and can communicate what to do and why to do it and have a high level of emotional intelligence (McKee & Massimilian, 2006, p. 45). Cummings et al. (2010) demonstrated that high-resonant leadership styles were significantly associated with 26% lower odds of mortality. Squires et al. (2010) held a similar view in stating that resonant leadership influenced the quality of safety climate which, in turn, impacted on medication errors

Parr et al. (2021) concluded that Resonant leadership also has a direct relationship with the socio-emotional mutual investment social exchange resource between staff and patients. It also indicates that when resonant leadership is high, staff report higher quality of care being delivered, associated with ***lower falls rates*** (p. 216).

Figure 7. Resonant Leadership (Parr et al., 2021)

10. Limitations of Research

Although every effort was made to capture all relevant papers and documents in the various reviews using comprehensive search strategies, some may have been missed as this area is complex. Also, although this is a phenomenon in the form of real life, this research did not consist of using human subjects to conduct interviews or ask questions, so findings may not be as robust towards exploring and understanding the behavioral factors of individuals or groups within an organization (Augustine, 2022).

11. Conclusion

Although there have been concerted efforts to implement robust fall prevention programs to keep patients safe, evidence shows that there is much work to be done to reduce patient falls within hospitals. In fact, a key contributing factor that was identified as being related to falls was the ***Lack of Leadership*** (The Joint Commission, 2015). Equally important, The Joint Commission clearly established an association between fall related injuries and healthcare leadership by issuing sentinel event alerts for each. While this is true, The Joint Commission also noted that before any actions be taken to prevent falls, there must be evidence that leadership is committed to continuous improvement. What's more, The Joint Commission also noted that leaders must establish and continuously improve a safety culture, which consist of trust, accountability, identifying unsafe conditions, strengthening systems, and assessment.

In essence, each of the latter five components must be championed by a leader who is committed to prioritizing and making patient safety visible through every day actions. Furthermore, this leader must create an engaged and collaborative environment, which can only be accomplished through effective leadership. As a result, the objective of this research was to sound the alarm to healthcare leadership to establish a standardized evidenced-based falls prevention program. For this reason, the conclusion of the whole matter is that the time has come for healthcare leaders to establish such a program to demonstrate their commitment to patient safety, which is what the Joint Commission and patients expect daily.

12. Recommendations for Future Research

Although decreasing, hospital falls remain a significant patient safety problem. While there is a growing literature on strategies to prevent these events, most are uncontrolled quality improvement studies. Equally important, even though a number of successful quality improvement programs have been described, evidence shows that most controlled studies of fall prevention have not been positive, which is typical for any emerging science. Hence, there is a pressing need for well-designed research studies in hospital fall prevention (LeLaurin & Shorr, 2019). Furthermore, future research is needed around investigating whether the barriers and enablers identified by nurses and senior staff are also identified by other hospital staff is required. Lastly, the obligation for every healthcare leader is to keep patients safe once they are within their care. Hence, more research is needed around the subject of patient education and how they too can work in tandem with healthcare leadership to help prevent patient falls.

References

AlThubaity, D. D., & Mahdy Shalby, A. Y. (2023). Perception of health teams on the implementation of strategies to decrease nursing errors and enhance patient safety. *Journal of Multidisciplinary Healthcare*, 693-706. https://doi.org/10.2147/JMDH.S401966

Augustine, L. G. (2022). Whistleblowing in Healthcare for Patient Safety: An Integrative Literature Review. *International Journal of Human Resource Studies*, *12*(1), 1531-1531. https://doi.org/10.5296/ijhrs.v12i1.19477

Ayton, D. R., Barker, A. L., Morello, R. T., Brand, C. A., Talevski, J., Landgren, F. S., ... Botti, M. (2017). Barriers and enablers to the implementation of the 6-PACK falls prevention program: A pre-implementation study in hospitals participating in a cluster randomised controlled trial. *PloS one*, *12*(2), e0171932. https://doi.org/10.1371/journal.pone.0171932

Bradley, E. H., Curry, L. A., & Devers, K. J. (2007). Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health services research*, *42*(4), 1758-1772. https://doi.org/10.1111/j.1475-6773.2006.00684.x

Brown, A. (2020). Communication and leadership in healthcare quality governance: Findings from comparative case studies of eight public hospitals in Australia. *Journal of Health Organization and Management*. https://doi.org/10.1108/JHOM-07-2019-0194

Cameron, I. D., Dyer, S. M., Panagoda, C. E., Murray, G. R., Hill, K. D., Cumming, R. G., & Kerse, N. (2018). Interventions for preventing falls in older people in care facilities and hospitals. *Cochrane database of systematic reviews*, (9). https://doi.org/10.1002/14651858.CD005465.pub4

Cote, R. (2017). Vision of effective leadership. *International Journal of Business Administration*, *8*(6), 1-10. https://doi.org/10.5430/ijba.v8n6p1

Creswell, J. W. (2014). Research design: Qualitative, quantitative and mixed methods Approaches (4th ed.). Thousand Oaks, CA: Sage Publications.

Cummings, G. (2004). Investing relational energy: the hallmark of resonant leadership. *Nursing Leadership (Toronto, Ont.)*, *17*(4), 76-87. https://doi.org/10.12927/cjnl.2004.17019

Cummings, G. G., Midodzi, W. K., Wong, C. A., & Estabrooks, C. A. (2010). The contribution of hospital nursing leadership styles to 30-day patient mortality. *Nursing research*, *59*(5), 331-339. https://doi.org/10.1097/NNR.0b013e3181ed74d5

Cummings, G., Hayduk, L., & Estabrooks, C. (2005). Mitigating the impact of hospital restructuring on nurses: the responsibility of emotionally intelligent leadership. *Nursing research*, *54*(1), 2-12. https://doi.org/10.1097/00006199-200501000-00002

Delaforce, A., Li, J., Grujovski, M., Parkinson, J., Richards, P., Fahy, M., & Jayasena, R. (2023). Creating an implementation enhancement plan for a digital patient fall prevention platform using the CFIR-ERIC approach: A qualitative study. *International Journal of Environmental Research and Public Health*, *20*(5), 3794. https://doi.org/10.3390/ijerph20053794

Dykes, P. C., Burns, Z., Adelman, J., Benneyan, J., Bogaisky, M., Carter, E., & Bates, D. W. (2020). Evaluation of a patient-centered fall-prevention tool kit to reduce falls and injuries: a nonrandomized controlled trial. *JAMA network open*, *3*(11), e2025889-e20. https://doi.org/10.1001/jamanetworkopen.2020.25889

Dykes, P. C., Carroll, D. L., Hurley, A. C., Benoit, A., & Middleton, B. (2009). Why do patients in acute care hospitals fall? Can falls be prevented?. *JONA: The Journal of Nursing Administration*, *39*(6), 299-304. https://doi.org/10.1097/NNA.0b013e3181a7788a

Feo, R., Conroy, T., Jangland, E., Muntlin Athlin, Å., Brovall, M., Parr, J., ... Kitson, A. (2018). Towards a standardised definition for fundamental care: A modified Delphi study. *Journal of clinical nursing*, *27*(11-12), 2285-2299. https://doi.org/10.1111/jocn.14247

Hargett, C. W., Doty, J. P., Hauck, J. N., Webb, A. M., Cook, S. H., Tsipis, N. E., ... Taylor, D. C. (2017). Developing a model for effective leadership in healthcare: a concept mapping approach. *Journal of Healthcare Leadership*, 69-78. https://doi.org/10.2147/JHL.S141664

Hempel, S., Newberry, S., Wang, Z., Booth, M., Shanman, R., Johnsen, B., ... Ganz, D. A. (2013). Hospital fall prevention: a systematic review of implementation, components, adherence, and effectiveness. *Journal of the*

American Geriatrics Society, 61(4), 483-494. https://doi.org/10.1111/jgs.12169

Hersey, P., Blanchard, K. H., & Natemeyer, W. E. (1979). Situational leadership, perception, and the impact of power. *Group and Organization Studies, 4*, 418-428. https://doi.org/10.1177/105960117900400404

Kanste, O., Kyngäs, H., & Nikkilä, J. (2007). The relationship between multidimensional leadership and burnout among nursing staff. *Journal of nursing management, 15*(7), 731-739. https://doi.org/10.1111/j.1365-2934.2006.00741.x

Kumar, R. D., & Khiljee, N. (2016). Leadership in healthcare. *Anesthesia & Intensive Care Medicine, 17*(1), 63-65. https://doi.org/10.1016/j.mpaic.2015.10.012

LeLaurin, J. H., & Shorr, R. I. (2019). Preventing falls in hospitalized patients: state of the science. *Clinics in geriatric medicine, 35*(2), 273-283. https://doi.org/10.1016/j.cger.2019.01.007

Matarese, M., & Ivziku, D. (2016). Falls risk assessment in older patients in hospital. *Nursing Standard, 30*(48). https://doi.org/10.7748/ns.2016.e10345

McKee, A., & Massimilian, D. (2006). Resonant leadership: A new kind of leadership for the digital age. *Journal of Business Strategy, 27*(5), 45-49. https://doi.org/10.1108/02756660610692707

Mores, J. M. (2009). *Preventing patient falls. Establishing a fall intervention program* (2nd ed.). New York, NY: Springer Publishing Co, LLC.

National Database of Nursing Quality Indicators. Guidelines for data collection and submission on quarterly indicators. Version 8.1. Kansas City, KS: The University of Kansas School of Nursing, 2008.

Northouse, P. G. (2016). *Leadership: Theory and Practice* (7th ed.). Los Angeles, CA: Sage Publications, Inc.

Oliver, D., & Healy, F. (2009). Falls risk prediction tools for hospital inpatients: do they work?. *Nursing Times, 105*(7), 18-21.

Oliver, D., Healey, F., & Haines, T. P. (2010). Preventing falls and fall-related injuries in hospitals. *Clinics in geriatric medicine, 26*(4), 645-692. https://doi.org/10.1016/j.cger.2010.06.005

Parr, J. M., Teo, S., & Koziol-McLain, J. (2021). A quest for quality care: Exploration of a model of leadership relationships, work engagement, and patient outcomes. *Journal of Advanced Nursing, 77*(1), 207-220. https://doi.org/10.1111/jan.14583

Piatkowski, M., Taylor, E., Wong, B., Taylor, D., Foreman, K. B., & Merryweather, A. (2021). Designing a patient room as a fall protection strategy: The perspectives of healthcare design experts. *International Journal of Environmental Research and Public Health, 18*(16), 8769. https://doi.org/10.3390/ijerph18168769

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and psychological measurement, 66*(4), 701-716. https://doi.org/10.1177/0013164405282471

Sfantou, D. F., Laliotis, A., Patelarou, A. E., Sifaki- Pistolla, D., Matalliotakis, M., & Patelarou, E. (2017). Importance of leadership style towards quality-of-care measures in healthcare settings: A systematic review. *Healthcare, 5*(4), 1-17. https://doi.org/10.3390/healthcare5040073

Simon, M., & Goes, J. (2013). Dissertation and Scholarly Research: A Practical Guide to Start and Complete Your Dissertation, Thesis, or Formal Research Project. *Dissertation Success* (13th ed).

Spiva, L., & Hart, P. (2014). Evidence-Based Interventions for Preventing Falls in Acute Care Hospitals.

Squires, M. A. E., Tourangeau, A. N. N., Spence Laschinger, H. K., & Doran, D. (2010). The link between leadership and safety outcomes in hospitals. *Journal of nursing management, 18*(8), 914-925. https://doi.org/10.1111/j.1365-2834.2010.01181.x

Strini, V., Schiavolin, R., & Prendin, A. (2021). Fall risk assessment scales: A systematic literature review. *Nursing Reports, 11*(2), 430-443. https://doi.org/10.3390/nursrep11020041

The Joint Commission. (2015). *Sentinel event alert 55: Preventing falls and fall-related injuries in health care facilities.* Chicago, IL.

The Joint Commission. (2017a). *Sentinel event alert 57: The essential role of leadership in developing a safety policies and procedures.* Chicago, IL.

The Joint Commission. (2017b). *Sentinel event policies and procedures.* Chicago, IL.

The Joint Commission. (2023). *Sentinel Event Data 2022 Annual Review*. Chicago, IL.

Torres, R. (2013). *What it Takes to be a Great Leader. Ted Conference.* Lecture conducted from San Francisco, United States of America.

Ulrich, B. (2017). Sentinel event alert: the essential role of leadership in developing a safety culture. *Nephrology Nursing Journal, 44*(2), 109-111.

Wey, K. (2020). *The Top Reasons Why Hospital Falls Occur in Medical Facilities.* Van Wey and Williams Law.

Widmer, P. S., Schippers, M. C., & West, M. A. (2009). Recent developments in reflexivity research: a review. *Psychology of Everyday Activity*, *2*, 2-11.

Williams, T., Szekendi, M., & Thomas, S. (2014). An analysis of patient falls and fall prevention programs across academic medical centers. *Journal of nursing care quality, 29*(1), 19-29. https://doi.org/10.1097/NCQ.0b013e3182a0cd19

Wilson, M. A., Hacker Teper, M., Sinno, M., Kohlberger, K., Nuseir, D., Chan, A., & Taher, A. (2022). Designing and implementing a zero harm falls prevention program: a quality improvement study. *Journal of nursing care quality, 37*(3), 199-205. https://doi.org/10.1097/NCQ.0000000000000617

Wong, C. A., Cummings, G., & Ducharme, L. (2013). The relationship between nursing leadership and patient outcomes: A systematic review update. *Journal of Nursing Management, 21*(5), 709-724. https://doi.org/10.1111/jonm.12116