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Incorporating Quality Improvement and Problem-solving Into a Unit Safety Huddle

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INCORPORATING QUALITY IMPROVEMENT AND PROBLEM-SOLVING

INTO A UNIT SAFETY HUDDLE

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Abstract

The complex nature of healthcare creates significant risks of harm to patients. Safety huddles are a mechanism some hospitals utilize to raise awareness of safety concerns and minimize risks. Typically occurring at the start of each shift, safety huddles generally take the form of a brief, structured discussion with visual management for information sharing. In addition, safety huddles create a safe space for nursing staff to escalate concerns, supporting a culture of safety. This quality improvement project describes the expansion of a safety huddle process that has become a mere ritual at the start of each shift on a 25-bed medicine unit at a large urban hospital in the Midwest to improve nursing staff engagement. Through a formal quality improvement and problem-solving approach, there is a clear plan of action to elevate issues and a process to engage and empower nursing staff in identifying, achieving, and hardwiring improvements. Margaret Newman's Theory of Health as Expanding Consciousness concepts of pattern recognition, increased awareness, and higher consciousness serves as this project's theoretical foundation. The success of this project will be measured using pre and post-employee engagement scores for questions related to safety, patient experience, and empowerment. In addition, the number of completed projects that meet target conditions and scorecard metrics for falls with harm and patient satisfaction will serve as secondary measures of success of the expanded safety huddle process. Engaging and empowering nursing staff in quality improvement and problem-solving supports a culture of safety, leading to improved patient safety and positive health outcomes.

Keywords: safety huddle, engagement, nursing staff, quality improvement, problem-solving, Newman's Theory of Health as Expanding Consciousness

Incorporating Quality Improvement and Problem-Solving into a Unit Safety Huddle

Chapter 1: Introduction

Health care is highly complex. According to Gonzalez-Formoso et al. (2011), the health care environment is changing rapidly due to labor shortages, decreased reimbursement, shorter hospital stays, increased patient acuities, and fast-paced technology. These rapidly evolving experiences can create significant risks of harm to a patient. Safety huddles raise awareness about patient safety and create a non-threatening environment to discuss safety issues (Johnson, 2018; Montague et al., 2019; Walsh et al., 2018). Nursing staff working on a 25-bed adult inpatient medicine unit at a Midwest hospital have participated in safety huddles since 2019. While informational, the safety huddle structure lacks accountability and a tracking process for problem-solving, a critical component of safety huddles that fosters improvement (Donnelly et al., 2017). In addition, Franklin et al. (2020) recommended standardized reporting measures that include the number of, type of, and time to resolve problems escalated at safety huddles to understand the effect on patient safety and targeted outcomes. However, despite a growing interest in using huddles to improve safety, evidence of their impact is limited. Nurse leaders have a unique opportunity to address this gap through nursing staff engagement and influencing cultural change. Guided by Margaret Newman's (1999) Theory of Health as Expanding Consciousness (HEC), a multidisciplinary workgroup will develop interventions to engage nursing staff working on a 25-bed adult inpatient medicine unit at a Midwest hospital in quality improvement and problem-solving during safety huddles. Consequently, this intervention will help to foster a culture of safety and potentially lead to improved patient safety metrics.

Background

Amid complexity, hospitals strive for safety. Like hospitals, high-reliability organizations (HROs) operate in complex, high-hazard domains with the potential for catastrophic failure; however, HROs experience nearly error-free performance (Brass et al., 2018; Christianson et al., 2011; Goldenhar et al., 2013). Five key principles characterize HROs: preoccupation with failure, reluctance to simplify, sensitivity to operations, resilience, and deference to expertise (Christianson et al., 2011). HROs such as commercial and military aviation, nuclear power, and firefighting frequently use huddles as a means for employees to share and make sense of current situations, escalate errors and concerns, and discuss options for resolving or eliminating them in the future (Goldenhar et al., 2013). As hospitals strive to achieve high-reliability status, many start the journey by implementing safety huddles.

Nursing staff must be aware of current and potential safety risks to keep patients free from harm. Safety huddles raise awareness of patient safety and can engage and empower staff to affect change (Brass et al., 2018). According to the Institute for Healthcare Improvement researchers, successful safety huddles include standard work with well-defined, process-specific tasks and a visual management method to share key performance measures and track problems (as cited in Rakover et al., 2020). In addition, according to Christianson et al. (2011), safety huddles are sensitive to operations, can catch and mitigate minor issues before they become significant problems, and defer quality improvement and problem-solving to those closest to the work. Advancing safety huddles beyond informational to include quality improvement and problem-solving provides an opportunity to improve nursing staff engagement in safety huddles.

This project will be conducted at a large acute care non-profit urban hospital in the Midwest with approximately 450 beds. The hospital provides a full range of health care services, including inpatient and outpatient surgery, emergency services, intensive care, mental health, and maternal health. Nationally and locally recognized for its expertise and care, more than 200,000 patients and their families receive care yearly at this hospital (T. Kirby personal communication, February 4, 2022). The area of focus of this project is a 25-bed adult inpatient medicine unit. As the patient care director of the medical-surgical units at this hospital, the author is aware that in the most recent staff engagement survey, completed November 2021, this nursing unit staff scored five questions related to safety, patient experience, and empowerment (see Figure 1) lower than the nursing staff on three other inpatient medical-surgical units.

Figure 1

Focus Unit's Low Scoring Engagement Survey Questions

Question #	Category	Question
3	Safety	The culture in this work setting makes it easy to learn from the errors of others
20	Safety	I would feel safe being treated here as a patient
22	Safety	I know the proper channels to direct questions regarding patient safety in this work setting
14	Patient Experience	This organization makes patient/customer satisfaction a top priority
26	Empowerment	I have the appropriate decision-making ability to do my job well

The nursing staff working in this unit include a patient care manager, patient care supervisor, three assistant clinical managers (ACMs) functioning in permanent charge nurse roles, 45 registered nurses, 12 nursing assistants, and two health unit coordinators that support clerical duties on the unit.

Nursing staff in this particular unit have participated in safety huddles for three years. These short five to eight-minute huddles that occur at the start of the day, evening, and night shifts seven days a week, were initially introduced as phase one of a two-phase process. Phase one involves oncoming nursing staff gathering around a sizeable wall-mounted safety huddle whiteboard. The layout of the huddle board includes the date and an area to document three good things elicited from nursing staff. Examples of good things shared are improved processes, patient experience scores, and teamwork. Ideally, the first good thing shared is safety-related. In addition, the facilitator reviews key performance indicators (KPIs), including operational statistics, safety, and equipment concerns. Finally, the huddle concludes with a review of critical communication, listening posts, items to be escalated, and a reflection of the huddle process (see Figure 2).

Figure 2

Example of a Safety Huddle Board

Huddle Time: Today:		3 Good Things:	
	Status	Follow-up Actions	
Census			
Projected Volumes			
Staffing +/- (productivity)			
Safety (employee and patient)			
1:1/ROBS, behavior risks, etc.			
Equipment/Supplies			
Critical Communication	Listening Post		
	What do patients want us to know?		
	What do we want leadership to know?		
	What do we want to know from leadership?		

A unit leader or charge nurse facilitates each safety huddle using a standard work activity

sheet (see Figure 3), resulting in a consistent sharing process.

Figure 3

Safety Huddle Facilitator Standard Work Activity Sheet

Standard Work Activity Sheet		Author: XXXX Rev Date: XXXX
Purpose: Plan for a smooth day, identify problems, escalate issues for support		Process: Tier 1 Huddle

Seq. No	Task Description	Key Point / Image / Measure (What does good look like?)
1	Prior to huddle: Tier 1 Leader/individuals populate information on board for review at huddle.	
2	Welcome team and remind purpose of huddle.	"As a reminder, this is a quality & peer protected meeting to allow us to speak freely in a confidential setting. Our focus is on events that we can learn from to make us better."
3	Ask for 3 Good Things, i.e. improvements made on processes, patient experience scores, teamwork. - **1st one Safety related**	To acknowledge what is working well, recognition; start huddle with positive tone.
4	Review Daily KPIs: check status/ask for information on: • Operational stats, i.e. staffing to demand, productivity, etc. • Safety concerns (employee and patient), i.e. falls, pressure ulcers, behaviour risks, etc. • Equipment/supply concerns.	Record notes/follow-up actions on board. When actions are done, take off board.
5	Review critical communication. Ask for any additional items.	
6	Listening Post – ask 3 questions and record notes/follow-up actions on board. What do Patients want us to know? What do we want Leadership to know? What do we want to know from leadership?	To capture voice of the customer and staff.
7	Summarize actions for today: • Identify what needs to be escalated to next Tier huddle, i.e. if "yes" to any of these questions – – Is there a serious harm or risk? – Is there potential impact to other employees, patients, or departments? – Are there lessons to share? – Have I executed my mitigation plan and still require assistance? • Ask who needs to connect with whom on what.	
8	Reflection: What went well following the huddle standard work? What can we do better?	
9	End huddle – thank team and dismiss	
10	After huddle: Tier 1 Leader take items for escalation/critical information to next Tier huddle. After next Tier huddle, Tier 1 Leader bring back follow-up items and communication to Tier 1.	

Phase two of the safety huddle implementation involves incorporating quality improvement and problem-solving into the safety huddle process; however, that has not yet occurred in this unit. Without quality improvement and problem-solving, these safety huddles have become merely a ritual with low nursing staff engagement at the start of each shift.

Without clear accountability for mitigating issues or acting on improvement ideas shared during safety huddles, quality improvement and problem-solving do not consistently happen. It can result in nursing staff not feeling heard, minor issues becoming catastrophes, and leaders continuing to manage patient safety reactively versus proactively. Creating a process of clear accountability and tracking of quality improvement and problem-solving during safety huddles builds nursing staff trust in leaders and organizations (Provost et al., 2015; Ulrich & Kear, 2014). In addition, developing a process for quality improvement and problem-solving creates an opportunity to engage and empower nursing staff to think strategically to mitigate issues (Brass et al., 2018; Christensen et al., 2021) and fosters a patient safety culture in which safety is everyone's responsibility (Farley et al., 2019; Lamming et al., 2021). Finally, progressing to phase two of safety huddles builds a consistent quality improvement and problem-solving process.

Phase two of safety huddles incorporates quality improvement and problem-solving using a storyboard format (see Figure 4) added to the right side of the safety huddle board. The storyboard format includes six sections developed to guide leaders and nursing staff through the improvement process: challenge, focus process, actual

condition, target condition, obstacles parking lot, and plan-do-study-act (PDSA) cycles

record.

Figure 4

Storyboard Format

Focus Process	Challenge	
	By When: _____	
Target Condition By When: _____	**Actual Condition Now**	**Obstacles Parking Lot**

PDSA Cycles Record

PDSA CYCLES RECORD		*(Each row = one experiment)*		
Obstacle:		Process:		
		Learner:		Coach:
Date & step	What do you expect + metric	Conduct the Experiment / Do a Coaching Cycle	What happened	What we learned

In addition, the revised standard work activity sheet (see Figure 5) includes all the phase one components, a daily review of quality improvement and problem-solving, and a weekly check-in with the individuals working on action items on the right side of the board.

Figure 5

Revised Safety Huddle Facilitator Standard Work Activity Sheet

Standard Work Activity Sheet	Author: XXXX Rev Date: XXXX
Purpose: Plan for a smooth day, identify problems, escalate issues for support	Process: Tier 1 Huddle

Seq. No	Task Description	Key Point / Image / Measure (What does good look like?)
1	Prior to huddle: Tier 1 Leader/individuals populate information on board for review at huddle.	
2	Welcome team and remind purpose of huddle.	"As a reminder, this is a quality & peer protected meeting to allow us to speak freely in a confidential setting. Our focus is on events that we can learn from to make us better."
3	Ask for 3 Good Things, i.e. improvements made on processes, patient experience scores, teamwork. - **1st** one Safety related	To acknowledge what is working well, recognition; start huddle with positive tone.
4	Review Daily KPIs: check status/ask for information on: • Operational stats, i.e. staffing to demand, productivity, etc. • Safety concerns (employee and patient), i.e. falls, pressure ulcers, behaviour risks, etc. • Equipment/supply concerns.	Record notes/follow-up actions on board. When actions are done, take off board.
5	Review Improvement Problem Solving: • What happened yesterday vs. what expected, i.e. meeting goal, misses and reasons (see run/pareto) • Determine if need to take any immediate actions or provide support • Thank the team for their attention to improving processes.	Record notes/follow-up actions on board. Problem solving occurs outside of huddle, use huddle time for brief updates.
6	Review critical communication. Ask for any additional items.	Record notes/follow-up actions on board. Take off board when actions are done or communication no longer needed.
7	Listening Post – ask 3 questions and record notes/follow-up actions on board. What do Patients want us to know? What do we want Leadership to know? What do we want to know from leadership?	To capture voice of the customer and staff.

8	Summarize actions for today:
	• Identify what needs to be escalated to next Tier huddle, i.e. if "yes" to any of these questions –
	  – Is there a serious harm or risk?
	  – Is there potential impact to other employees, patients, or departments?
	  – Are there lessons to share?
	  – Have I executed my mitigation plan and still require assistance?
	• Ask who needs to connect with whom on what.	

9	Reflection: What went well following the huddle standard work? What can we do better?	
10	End huddle – thank team and dismiss. *Once a week, perform step 11.*	
11	Once a week after the huddle, meet with people who are working action items on right-side of board – • Review process metrics for trends and determine next step for problem solving. • Review status of actions being taken for problem sovling.	
12	After huddle: Tier 1 Leader take items for escalation/critical information to next Tier huddle. After next Tier huddle, Tier 1 Leader bring back follow-up items and communication to Tier 1.	

This unit's safety huddle process currently lacks daily accountability and consistent discipline to mitigate escalated issues, affecting nursing staff engagement in the huddle process. In addition, this unit's nursing staff scored below average on items related to safety, patient experience, and empowerment on the November 2021 employee engagement survey compared to three other medical-surgical nursing units. This project aims to incorporate quality improvement and problem-solving into a 25-bed adult inpatient medicine unit's safety huddle process. Through the implementation of phase two, there is an opportunity to improve nursing staff engagement related to safety, patient experience, and decision-making as measured by the 2021 and 2022 employee engagement surveys.

Significance of the Project

The complexity of today's rapidly changing health care environment can negatively impact nursing staff engagement. Safety huddles, shown to improve interprofessional communication, patient safety, and operational efficiency, have the potential to move decision-making to grassroots levels, engaging and empowering frontline staff to improve care delivery (Brass et al., 2018; Donnelly et al., 2017; Johnson, 2018; Melton et al., 2017). In addition, involving nursing staff in quality improvement and problem-solving creates a sense of identity where everyone is part of a unified system that makes working together more enjoyable.

Acute care nursing leaders often assume sole responsibility for solving daily issues and problems, leaving them to spend their time "putting out fires." Huddles create a team thinking pattern, support team building, and enable an organized quality improvement methodology for problem analysis (Dutka, 2016). As leaders cultivate

teamwork, they create the foundation for ongoing and future improvement (Azyabi et al., 2021; Pearson et al., 2016.). Embedding quality improvement and problem-solving in a safety huddle process creates a consistent platform for leaders to engage those who do the work to improve processes and outcomes.

There are limited ways of measuring the outcomes of daily safety huddles. While there is anecdotal evidence in the literature regarding successful safety huddles, a lack of standardized reporting results in a scarcity of high-quality evidence (Franklin et al., 2020). Incorporating quality improvement and problem-solving into daily safety huddles will yield data related to the number of, type of, and time to resolve issues discussed during huddles for the nursing community to understand the impact safety huddles have on patient safety and targeted outcomes.

Theoretical Foundation

Nursing theory is foundational to nursing practice. Newman's (1999) HEC theory embraces a scientific approach to nursing practice, research, and education. The HEC theory recognizes individuals as whole, invisible self-organizing creatures. According to Newman's theory, individuals become more of themselves and reach new dimensions of connectedness through the dynamic, evolving pattern of interactions between person and environment. According to Parker and Smith (2010), the HEC theory views every person in every situation, no matter how disordered and hopeless, as part of a universal process of expanding consciousness. The HEC Theory conceptualizes that individuals exist in a dynamic interchange with the environment, with no clear beginning or end, as a continually evolving and changing pattern, and that every person in every situation is part of a universal process of expanding consciousness (Endo, 2004; Parker & Smith, 2010;

Pharris, 2011; Smith, 2011; Stec, 2016; Zust, 2006). Concepts from Newman's theory that will guide this project include pattern recognition, increased awareness, and higher consciousness.

Pattern recognition supports nursing staff in recognizing and understanding the impact of changes in the safety huddle process. In Newman's theory, the concept of pattern is the unique, dynamic, evolving configuration of inherent wholeness (as cited in Musker, 2008). According to Newman (1999), "pattern is relatedness and is self-organizing over time, i.e., it becomes more highly organized with more information" (p. 72). According to Ulrich and Kear (2014), the first phase of implementing a safety culture "includes leader actions that consolidate the premise for a safety culture" (p. 454). With the transition to the expanded huddle process, the nursing staff will begin to recognize the pattern of structure and accountability for quality improvement and problem-solving. In addition, when nursing staff escalate a safety issue or improvement idea, there is a mechanism for tracking until resolution or implementation that includes reporting on progress at each safety huddle. Ideally, with this change, the nursing staff will recognize that what they say is acted on and makes a difference in patient care.

Through increased awareness of their patterns, nursing staff develop a deeper understanding of the importance and impact expanded safety huddles have on themselves and the team. According to Rosa (2006), pattern recognition allows individuals to gain awareness and insight. Smith (2011) and Zust (2006) described awareness as an "A-Ha" moment (p. 259). Similarly, Yamashita (1999) found that greater awareness allowed caregiving families to surpass limitations and see their situation differently. Greater awareness prompts nursing staff to prioritize safety (Ulrich & Kear, 2014). As nursing

staff realizes that what they share at safety huddles has an impact, they will gain confidence and understand that safety takes the entire team, not just leaders.

The HEC theory conceptualizes that individuals experience deeper relationships, find meaning, and have new perspectives through pattern recognition. Endo (2017) describes consciousness as insights gained through recognizing patterns. According to Smith (2011), "expanding consciousness is reflected in patterns of enhancing relationships, creating meaning, and changing patterns" (p. 260). Finding meaning, gaining an understanding of the current situation, and identifying possible actions were described by Endo (2004) as pattern recognition leading to higher levels of consciousness. As nursing staff gain confidence in their ability to affect change, they will become more engaged in safety huddles.

Using Newman's (1999) HEC theory as a framework, interventions will be developed to expand a unit-based safety huddle process on a 25-bed adult medicine unit at a Midwest hospital to improve nursing staff engagement in safety huddles. Incorporating quality improvement and problem-solving into the safety huddle process results in nursing staff recognizing that what they say makes a difference, achieving greater awareness of their roles in safety, and becoming more engaged in the safety huddle process. Chapter Two will explore the literature for current practices and interventions to promote a culture of safety through nursing staff engagement.

Chapter 2: Literature Review

Keeping patients safe while providing optimal patient care is the goal of nursing staff. However, despite decades of focused attention aimed at improving safety, hospitalized patients continue to experience preventable patient harm (Adler et al., 2018; Ulrich & Kear, 2014). This reality of patient safety has received more attention in the last decade, and many hospitals strive to achieve a culture of safety (Azyabi et al., 2021; Farley et al., 2019; Lamming et al., 2021). Nurse leaders must engage nursing staff to develop proactive, sustainable approaches to improve patient safety. The literature reviewed for this project focused on definitions and the impact of a culture of safety in hospital settings, huddles, quality improvement, and the concept of engagement.

Definitions and Impact of a Culture of Safety in Hospital Settings

A culture of safety is a complex phenomenon. According to Fujita et al. (2019) and Sammer et al. (2010), a culture of safety is one of the core components of high-quality health care. Bacon et al. (2021) and Fujita et al. (2019) defined a culture of safety as the overall shared attitudes, values, patterns of behavior, and assumptions of an organization related to safety. In addition, Sammer et al. (2010) identified seven properties of safety cultures, including leadership, teamwork, evidence-based practice, communication, learning, just culture, and patient-centered care. One of the critical qualities of a safety culture is the empowerment of nursing staff to freely report safety concerns without fear of reprisal (Shea, 2020). Unfortunately, according to Copeland (2019), health care has historically accepted a culture of individual blame and shame following adverse events leading to the under-reporting of errors due to the fear of discipline.

Consequently, under-reporting results in missed opportunities for leaders to recognize and improve system breakdowns and mitigate recurrence. To stop this cycle, the National Safety Foundation described a culture of safety as "one in which health care professionals and leaders are held accountable for unprofessional conduct yet not punished for human mistakes; errors are identified and mitigated before they harm patients; and strong feedback loops enable staff to learn from previous errors and alter care processes to prevent recurrences" (as cited in Campione & Famolaro, 2018, p. 23). Likewise, Shea (2020) described bottom-up, top-down culture focusing on accountability for continuous improvement, withholding individual blame, and commitment from senior leaders, physicians, and nursing as tactics utilized by successful high-reliability organizations to achieve a culture of safety.

A culture of safety impacts hospitals. The importance of promoting a culture of safety has been well established concerning patient safety (Ulrich & Kear, 2014; Weaver et al., 2014). According to Bacon et al. (2021), it is vital to promote positive health outcomes. In addition, Berry et al. (2020) linked an improved safety culture with harm reduction, and Kavanagh et al. (2017) and Mardon et al. (2010) found a positive culture of safety was associated with fewer adverse hospital events. Likewise, a positive patient safety culture reduced surgical site and central line-associated bloodstream infections (Fan et al., 2016; Weaver et al., 2014). In addition, Ravi et al. (2021) concluded that a safety culture improves operational and clinical outcomes. Finally, an improved culture of safety results in increased employee satisfaction (Sorra et al., 2014; Alves & Guirardello, 2016), enhanced nurse-patient safety competency (Cho & Choi, 2018), and improved employee safety (Pousette et al., 2017). Because of the positive effects on

hospitals and patients, nursing leaders need to understand how to sustain a culture of safety.

Sustainment of a culture of safety requires staff buy-in. Leaders can support nursing staff buy-in by securing resources, removing barriers, and effectively solving problems (Shand et al., 2021). In addition, nursing staff need to feel empowered and protected to escalate safety concerns resulting in data to prevent future errors and improve patient safety (Ravi et al., 2021). Likewise, Siewert et al. (2019) highlighted the importance of establishing a "transparent, nonpunitive approach to learning from adverse events, near misses, and unsafe conditions" (p. 260). Shand et al. (2021) proposed investment in systematic mechanisms to gather data and identify improvement opportunities. One such mechanism is a huddle.

Huddles

Huddles are not a new concept. According to Goldenhar et al. (2013) and Provost et al. (2015), huddles have been standard practice in hospitals striving to achieve high reliability for over a decade. Huddles, described by Brass et al. (2018) and Provost et al. (2015), are dynamic gatherings of functional groups successfully implemented in various healthcare settings, including nursing units, clinics, and operating rooms. The list of multidisciplinary attendees at huddles, according to DiVincenzo (2017), may include "nurses, unlicensed assistive personnel, attending health care providers, social workers, physical therapists, respiratory therapists, case managers, occupational therapists, and speech therapists" (p. 59). Huddle formats and models vary depending on local conditions (Brass et al., 2018; Provost et al., 2015), and according to Goldenhar et al. (2013), improvements associated with huddles include "quality of information sharing,

increased accountability, empowerment and a greater sense of community" (p. 904).

Likewise, Brass et al. (2018) and Donnelly et al. (2017) discovered operational and

teamwork benefits associated with huddles. Finally, according to Fiveash et al. (2021),

Gauron and Bigand (2021), and Leonard et al. (2004), huddles improve patient safety and

can be used to increase situational awareness for specific patients at risk for deterioration

(Brady et al., 2013; Brady & Goldenhar, 2014; Christensen et al., 2021), improve patient

flow (Brady, 2018), and foster a culture of safety (Brass et al., 2018; Dewan et al., 2022).

Depending on the desired outcome or specific situation, there are different types of

huddles.

A safety huddle is one specific type of huddle. According to Brady et al. (2013)

and Glymph et al. (2015), safety huddles generally take the form of a brief discussion

following a standard plan resulting in increased awareness. Safety huddles allow

participants to express concerns, plan risk mitigation strategies, address conflicts, and

realign resources. Successful safety huddles are dynamic with ongoing purposeful

assessment and experimentation (Montague et al., 2019; Provost et al., 2015) that offer

staff a non-threatening way to share concerns (Goldenhar et al., 2013; Montague et al.,

2019; Walsh et al., 2018). In addition, safety huddles can improve teamwork, create an

opportunity to learn from errors, and foster a safety culture (Lamming et al., 2021).

Safety huddles offer multiple benefits to nursing staff.

Hospitals implement safety huddles to eliminate or minimize harm. However,

while there are numerous anecdotal reports of successful programs, according to Franklin

et al. (2020), there is a lack of high-quality peer-reviewed evidence supporting the

effectiveness of hospital-based safety huddles. In addition, the wide range of huddle

designs and objectives make it difficult to compare studies. Proposed standardized outcome reporting measures that would support comparability of studies include measurements and details of the issues escalated and resolved, program implementation, safety culture, clinical process, and clinical outcomes (Franklin et al., 2020). Expanding the purpose of safety huddles could drive more robust, measurable results.

Quality improvement huddles are similar to safety huddles. According to Rakover et al. (2020), overall quality improvement huddles involve using a visual management board to track problems, solutions, feedback, and ongoing issues. In addition, quality improvement huddles have a systematic approach to problem-solving with an organized problem analysis leading to discovering the root causes of problems and targeted solutions (Franklin et al., 2020). Finally, involving those that do the work, the experts, in quality improvement and problem-solving engages and empowers staff to think strategically to mitigate issues (Christianson et al., 2011). To effectively incorporate quality improvement and problem-solving into safety huddles, nursing staff must be familiar with quality improvement.

Quality Improvement

Quality improvement in hospitals can affect patient outcomes. According to Dawson (2019), the concept of quality improvement has existed since the 1920s, with the common theme focusing on methodologies to improve patient care and achieve sustainable outcome processes rather than blaming people for errors. Quality improvement processes provide the foundation for effective and sustainable continuous improvement, leading to better outcomes (Brown & Falk, 2014; Rakover et al., 2020). Evidence-based practice guides nursing practice and processes (Melnyk et al., 2010;

Patterson et al., 2017), and according to Brown and Falk (2014) and Rakover et al.

(2020), a baseline measurement of current practices or processes supporting outcomes is

one way to identify improvement opportunities. In addition, specific problems can drive

quality improvement projects. Needleman et al. (2016), Silver et al. (2016), White et al.

(2014), and Zarbo (2022) identified that the people who do the work are critical to

creating innovative ideas, thinking differently, and piloting small tests of change. Finally,

according to Brown and Falk (2014) and Needleman et al. (2016), there is no beginning,

middle, or end to quality improvement. To achieve success with quality improvement, it

must be integrated into daily practice. A good example of this approach is quality

improvement through a daily management system.

Quality Improvement through Daily Management Systems

Integrating anything into daily practice requires a plan. A daily management

system (DMS) can engage and empower staff to identify and address problems daily to

achieve a culture where improvement becomes the work of everyone every day (White et

al., 2014). According to Rakover et al. (2020), the features of a DMS include:

- Well-defined standard work

- Process of ensuring standard work is followed

- Visual management methods such as a whiteboard for measuring performance
  and tracking escalated problems

- Process to improve problem-solving skills at all levels

- Escalation system for problems that can't be solved by staff (p. 416)

These features improve staff engagement and patient safety, offer professional

development opportunities for staff, and provide a sustainability mechanism for quality

improvement (Rakover et al., 2020). In addition, according to Maurer et al. (2018) and Zarbo (2022), a DMS creates a team-owned problem-solving structure that functions around the clock supporting continuous improvement from the base of an organization up that can, according to Rakover et al. (2020), lead to higher scores on patient safety culture surveys. Visual controls, including green and red indicators for processes in and out of control, along with metrics indicating the consistency and reliability of processes, foster data-driven problem solving (Zarbo, 2022). The use of daily management systems allows leaders to support the daily improvement efforts of staff.

Instead of developing and implementing a new DMS, nursing leaders may find opportunities to incorporate DMS features into an existing process. For example, safety huddles have some but not all of the DMS features identified by Rakover et al. (2020). According to McFadden et al. (2015) and Rakover et al. (2020), adding quality improvement initiatives to this daily process may be a foundational element of a continuous improvement culture. In addition, reviewing up-to-date metrics each day as part of a DMS allows teams to gauge success and identify improvement opportunities based on the root causes of issues (Zarbo, 2022). According to Scoville et al. (2016), "continuous frontline attention to quality and a culture that focuses on problem analysis (versus personal blame) provide the foundation for quality planning, quality control, and quality improvement" (p. 5). Finally, a DMS allows managers to transition from "fighting fires" to serving as coordinators and coaches to build staff capacity and quality improvement expertise (Barnas, 2011; Scoville et al., 2016; Zarbo, 2022). Dawson (2019) described systematic methodologies that nursing staff could utilize to work through quality improvement, including Plan-Do-Study-Act, Six Sigma, and Lean.

Plan-Do-Study-Act

Quality improvement methodologies can guide nursing leaders and nursing staff through quality improvement. According to Christoff (2018), one of the most common quality improvement methodologies is the four-step Plan-Do-Study-Act (PDSA) process (see Figure 6).

Figure 6

PDSA Process
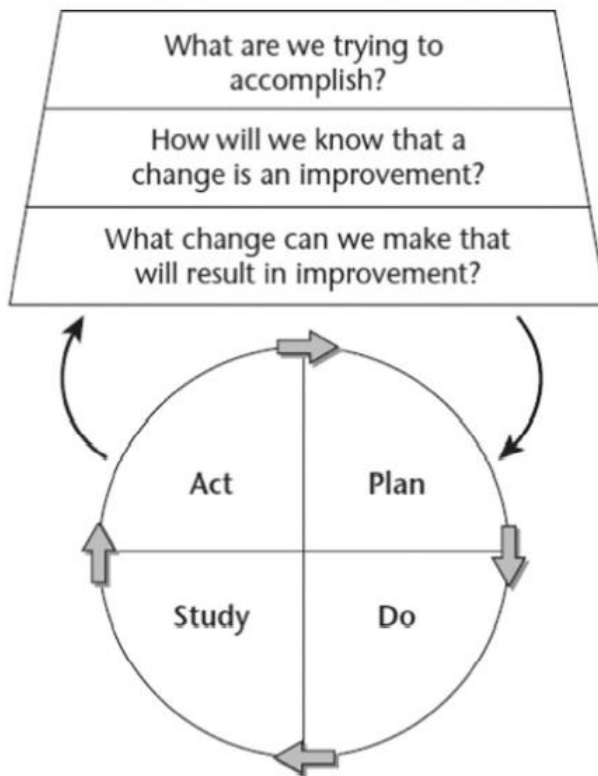
(Christoff, 2018, p. 199)

Unit-based teams can use PDSA cycles to implement projects quickly and efficiently without collecting extensive data or making sweeping changes to existing processes (Christoff, 2018; Dawson, 2019). After selecting a project and identifying measures of success, project teams use PDSA cycles to determine if a change will lead to

improvement as they implement small tests of change (Christoff, 2018; Dawson, 2019;

Silver et al., 2016). According to Dawson (2019), the four steps of each PDSA cycle

include:

1. Planning project outcomes and measures

2. Doing a small-scale test of change for a short period

3. Studying the results of the data collected during the small test of change

4. Acting on learnings from the small test of change (p. 42)

It is important to understand a small test of change and why it is used before

embarking on PDSA cycles. Dawson (2019) defined small tests of change as involving

only a few stakeholders that are adapted, expanded, or abandoned with each cycle of

changes. Because each process step is critically evaluated through PDSA cycles, teams

may identify improvements early in the project and not need to change the entire process.

In addition, Silver et al. (2016) described the goal as the ability to rapidly implement and

measure small imperfect tests of change instead of slowing the improvement process by

seeking perfection. This low-risk process allows project teams to demonstrate success on

a small scale before widespread implementation, which may influence staff buy-in. The

PDSA methodology can be utilized independently or as part of another quality

methodology, such as Six Sigma.

Six Sigma

Another type of quality improvement methodology is Six Sigma. Leaders at

Motorola developed Six Sigma in the 1980s, combining some of the best practices,

processes, and breakthroughs in management theory while focusing on customers and

generating cost savings (Dawson, 2019). According to Feldman et al. (2022) and

Peimbert-Garcia (2009), Six Sigma aims to identify the root cause of inefficiencies and systematic barriers supporting changes that reduce variation resulting in workflows without defects. Six Sigma methodology relies on statistical methods and has been used in various studies focused on surgical turnaround times, appointment access, hand hygiene compliance, antibiotic prophylaxis in surgery, scheduling procedures, catheter-related bloodstream infections, and patient throughput (Linderman et al., 2003). As described by D'Andreamatteo et al. (2015) and Dawson (2019), nursing staff would use the Six Sigma process for projects with a three to six-month duration following the define, measure, analyze, improve, and control (DMAIC) framework:

1. Define: Identify the process they want to improve

2. Measure: Determine baseline data that correlates with the defined improvement goal and measure current performance using one or more data collection tools.

3. Analyze: Examine collected data to identify variation and determine causes.

4. Improve: Work to remove the cause resulting in a mistake-proof process.

5. Control: Monitor and control the new process to maintain improvements without regression to the initial state (p. 44)

Step five is the most challenging step of the process, according to Dawson (2019), as most Six Sigma projects fail because there is not a written plan for follow-through after the initial stages of the project are complete. This lack of a plan results in repetitive improvement initiatives without an underlying change in philosophy. Without a plan and transparent accountability, improvements become temporary and can negatively impact staff buy-in to future improvement work. Another type of quality improvement methodology is Lean.

Lean

Lean is another quality improvement methodology nursing leaders and staff could use to guide an improvement project. Lean process improvement methodology, like Six Sigma, originated in manufacturing and has been used in health care over the last 20 years (Dawson, 2019; Hagel et al., 2020). According to Shetty et al. (2021), "most hospitals have implemented Lean practice improvement strategies (with variable intensity and maturity), and most reported Lean practices to be helpful in improving performance" (p. 544). Lean methodology focuses on eliminating waste by removing steps that do not add value to the customer or end-user (D'Andreamatteo et al., 2015; Dawson, 2019; Young & McClean, 2008). To identify non-value-added steps, leaders complete a systematic evaluation called "value stream mapping," a process of outlining each step required in a process. (Dawson, 2019). Focusing on cultural change, Vest et al. (2009) identified the "4-Ps" of Lean methodology:

1. Philosophy of adding value to customers, society, and associates

2. Processes paying off over time

3. People and partners who are respected and developed

4. Problem-solving to drive organizational learning (p. 5)

Leaders are an essential element in quality improvement. According to Zarbo (2022), "in a lean culture, the role of leaders is to support daily improvement—to add energy, ask questions, encourage, and coach without taking over" (p. 166). Leaders develop and reinforce the nursing staff's problem-solving abilities by recognizing that those who do the work have the answers and are best positioned to improve the work. Likewise, Barnas (2011) described the development of standard work for managers that

enable teams to see, prioritize, and pursue continuous daily improvement opportunities. Using lean tools results in less variability in problem-solving approaches and can lead to managers addressing issues proactively versus reactively in their units.

It can be challenging to understand the best methodology to implement in a given situation. According to Dawson (2019), to successfully integrate quality improvement into a DMS, leaders and identified unit champions must initially be supported by an individual well versed in performance improvement. Next, unit champions and leaders model the techniques, teach, cascade quality improvement methods, and spread the expertise (Studor, 2014), potentially improving nursing staff engagement in quality improvement.

Engagement

Nursing leaders need to understand engagement. According to Carthon et al. (2019), "the concept of engagement has emerged over the past two decades from disciplines such as organizational psychology, sociology of complex organizations, and business" (p. 41). Employee engagement has been defined as worker inclusion in organizational decision-making, inter-professional collaboration, and opportunities for professional development (Brandis et al., 2017; Prybil, 2016; Rivera et al., 2011). Examples of nursing staff engagement include "participation in committees, unit councils, and advisory boards" (Carthon et al., 2019, p. 41). In addition, nurse engagement describes nurses' commitment to and satisfaction with their jobs, their level of commitment to the organization that employs them, and their commitment to the nursing profession itself (Dempsey & Reilly, 2016). Rivera et al. (2011) concluded that "nurse managers play a critical role in promoting employee engagement" (p. 265).

Therefore, nurse leaders should continuously explore engagement opportunities for nursing staff.

In addition to impacting individual nurses and hospitals, nursing staff engagement can affect patient experience and outcomes. According to Laschinger (2012), high levels of nurse engagement can lead to better workforce outcomes, including lower staff turnover, less burnout, and higher reports of job satisfaction. Carthon et al. (2019) and Kutney-Lee et al. (2016) found that patients scored their experiences more favorably when cared for at hospitals with highly engaged nurses. In addition, according to Zallman et al. (2020), a 17% increase in hospital employee engagement can increase safety scores by approximately 5%. Likewise, Carthon et al. (2019) reported that engaging nurses in hospital decision-making could improve patient safety assessments. Finally, Pearson et al. (2016) determined that nurse engagement initiatives were associated with lower pressure ulcer prevalence. According to Needleman et al. (2016), the engagement of frontline staff is essential to achieving and sustaining practice changes and improving care quality. Literature supports the pursuit of interventions to increase nursing staff engagement.

Involvement in quality improvement may provide an avenue to increase nurse engagement. According to Barnes et al. (2016), Maurer et al. (2018), and White et al. (2014), involving those who do the work to drive changes through quality improvement can increase engagement. Including quality improvement in a DMS, such as a safety huddle, with structured, standardized work, can empower and engage frontline staff by giving them the tools to succeed (Barnas, 2011; Farley et al., 2019; Maurer et al., 2018; White et al., 2014). In addition, Alexander et al. (2022) reported that the performance

targets and organizational goals shared with nursing staff during huddles could improve

staff engagement with quality improvement. Finally, Provost et al. (2015) suggested that

"huddles positively impact culture as a source of continuity, a common thread that keeps

care providers engaged in the continuous pursuit of quality and patient safety" (p. 10).

Imbedding quality improvement into a unit-based safety huddle could improve staff

engagement.

      A culture of safety is foundational to high-quality health care and requires staff

buy-in. Safety huddles support just culture, a critical culture of safety quality, where

nursing staff is encouraged to share safety concerns without blame and shame. Expanding

safety huddles to include a systematic approach to quality improvement and problem-

solving transforms the safety huddle into a daily management system with a process for

continuous improvement. In addition, involving nursing staff in safety huddle quality

improvement and problem-solving may increase employee engagement, an essential

component of improving care quality, resulting in increased staff buy-in (White et al.,

2014). Chapter three will describe the steps for incorporating quality improvement and

problem-solving into a unit-based safety huddle.

Chapter 3: Next Level Safety Huddles

A culture of safety is essential in achieving positive health outcomes in a hospital. One of the foundational elements of building a culture of safety is the engagement of nursing staff in freely reporting safety issues, creatively solving problems, and advocating for change and improvement of care (Campione & Famolaro, 2018). Safety huddles offer a non-threatening environment for the sharing of safety issues and have the potential to move decision-making to grassroots levels, engaging nursing staff to improve care delivery. Therefore, this chapter will discuss plans for integrating quality improvement and problem-solving into an existing safety huddle to improve nursing staff engagement and the nursing theory that guided the process.

My Current State

I am a patient care director supporting four inpatient medical-surgical units and a hospital-based infusion clinic at a large acute care non-profit urban hospital in the Midwest. On a journey to becoming an HRO, this hospital implemented safety huddles three years ago. Initially started at the unit level, safety huddles underwent multiple revisions, including creating standard facilitator work, developing a defined whiteboard format for visual management, and establishing a hospital and system escalation process for sharing and learning from safety issues. This consistent process, phase one of a two-phase safety huddle implementation, works well and supports planning for a smooth day and escalating issues; however, it lacks a standardized process for quality improvement and problem-solving. This gap was identified and addressed in phase two of safety huddle implementation, which has not yet occurred consistently at this hospital.

As a transformational nursing leader, phase two of safety huddle implementation is exciting. It is an opportunity to bring nursing staff to the forefront to help solve problems, empowering those who do the work to improve the work. Unfortunately, initially introduced and supported by performance improvement in early 2020, phase two of safety huddles was paused with the start of the COVID pandemic. Since the initial introduction, leaders at this hospital have endured shifting priorities and multiple leadership changes, resulting in a significant knowledge deficit regarding incorporating quality improvement and problem-solving into safety huddles.

Recognizing the potential of expanding the safety huddle process with quality improvement and problem-solving, the hospital's chief nursing officer began to explore resources to support this work. Seeing phase two as an opportunity to improve the nursing staff engagement essential to achieving a culture of safety, I asked for consideration to take the lead on this project.

Project Implementation

After receiving the approval to lead this work and completing the pre-planning phase, a one-page problem-solving document (A3) based on Lean principles was started (see Appendix A). This document will focus on the facts and ensure consistency throughout this continuous improvement initiative. In addition, after completing the pre-planning phase of work, I scheduled weekly meetings with a multidisciplinary project team consisting of the unit manager of the pilot nursing unit, supervisor, clinical nurse specialist (CNS), and safety and quality manager.

Pre-Planning

The pre-planning phase of this project involved assessing resources to support the work and the current state of hospital safety huddles. My chief nursing officer informed

me that the hospital safety and quality manager expressed interest in the project and possible system performance improvement (PI) support for training. After meeting with the safety and quality manager, they quickly became a partner in the design of this project. Unfortunately, given the prioritization of other projects, the system director of PI was unable to offer dedicated PI resources for this work; however, we were able to consult with a PI advisor who shared resources from the initial phase-two training and rollout. Resources for additional support were initially limited; however, an experienced CNS transitioned from a manager position to a CNS role in early April and joined the multidisciplinary team.

Before planning the project, it was essential to understand the current state of safety huddles across the hospital. In conjunction with the safety and quality manager, ten unit safety huddles were observed in February-March 2022 for adherence to standard work. I created a table for the collected data (see Appendix B). Of the ten units, two had quality improvement and problem-solving visually displayed, two had some of the elements, and six had no phase-two features on the boards. Two of the ten units, both procedural units, are following the phase two safety huddle facilitator standard work.

Because there were no inpatient units with a fully implemented phase two huddle process, a decision was made to select one nursing unit to pilot the rollout, allowing an opportunity to reflect on learnings during the process. Following a PDSA methodology, starting with one nursing unit will allow the multidisciplinary team members to identify any needed adaptions to the process before the large-scale implementation project across the hospital. In addition, the leaders and champions of the pilot unit will become resources to help support other nursing units through implementation.

Information learned in this pre-planning phase was used to populate the A3 document with the current condition, root cause analysis, and future state. Currently, no inpatient units adhere to quality improvement and problem-solving standard facilitator work within the hospital. The identified root cause of this gap includes disruption to the initial rollout due to the COVID pandemic and competing priorities. In addition, while there is standard safety huddle facilitator work, there is no leader standard work or an onboarding process for implementing and hardwiring quality improvement and problem-solving. Therefore, the plan is to operationalize the quality improvement and problem-solving process on one nursing unit, a 25-bed adult inpatient medicine unit, to increase nursing staff engagement in the huddle process.

Week 1

Incorporating quality improvement and problem-solving into an existing safety huddle requires well-defined standard work. While the initial phase two safety huddle training included standard work for facilitating the huddles, there are no materials for onboarding nursing staff to quality improvement and problem-solving. In addition, the two procedural units at the hospital that had previously incorporated quality improvement and problem-solving into safety huddles did so with dedicated performance improvement support that is no longer an available resource.

Because this work is successfully happening on two procedural units, the multidisciplinary project team observed their safety huddles, asked questions, and began to develop an action plan. In addition, I met with nursing staff on the pilot unit to share the vision that incorporating quality improvement and problem-solving into the safety huddle will provide accountability and a tracking process for problem-solving and engage

the nursing staff, who are the experts, in improving care. Some pilot unit nursing staff also had an opportunity to observe the procedural unit safety huddle boards and discuss the expanded safety huddle process with the procedural unit leader.

After observing quality improvement and problem-solving in action, the unit manager on the pilot unit and I met with the nursing staff members. They were excited to select an improvement process to focus on that would be the most impactful to their daily workflow. In addition, they were actively involved in reviewing the unit scorecard to determine the metric that could be used to measure the impact of their project. After selecting a topic, the unit leaders and nursing staff updated the right side of the safety huddle board. While many of the elements were correct, there was confusion about completing daily process observations, identifying obstacles, and utilizing PDSA cycles to test mitigation strategies for identified obstacles. In addition, there is no standard work for process observations of quality improvement and problem-solving to monitor and control the new process, an essential step in maintaining improvements without regression to the initial state. These knowledge and process gaps were added to the action plan timeline of the A3 document, and an action plan for the next 12 weeks was developed.

Weeks 2-4

The multidisciplinary project team will have one-hour weekly meetings to review the A3 document timeline and identify and assign action plan tasks. Unit leaders will test the facilitator's standard work for expanded huddles in weeks two through four. Obstacles will be identified for deviations from standard work and added to the A3 document. In addition, the multidisciplinary project team will identify members responsible for

creating quality improvement and problem-solving training and developing the standard work, tools, and the visual display for process observations, identification of obstacles, and the PDSA process to mitigate obstacles. The training, standard work, and visual controls will be reviewed with the pilot unit leaders and nursing staff and trialed during week four. Any identified obstacles will be added to the action plan timeline.

Weeks 5-8

Any new obstacles will be escalated and added to the A3 document during weekly multidisciplinary project team meetings in weeks five through eight. In addition, the multidisciplinary project team will identify members responsible for developing cause analysis standard work using a Pareto chart as a visual control on the safety huddle board (Whiteman et al., 2021). Finally, during week eight, the pilot unit leaders and nursing staff will review the Pareto training, standard work, and visual controls. They will trial using the Pareto template, and obstacles will be added to the action plan timeline.

Weeks 9-12

In weeks nine through 12, any new obstacles will continue to be escalated and added to the A3 document during weekly multidisciplinary project team meetings. In addition, the multidisciplinary team will identify members responsible for developing a process observation template to ensure that the standard work continues to occur following the conclusion of this project. As the patient care director of the pilot unit and the lead on this project, I will initially schedule a minimum of four huddle observations at 0700 and 1500 each week.

After the unit leaders have maintained 100% compliance with the standard facilitator and problem-solving work for two weeks, they will begin to train the unit

ACMs and charge nurses on this work. In addition, unit leaders will invite nursing staff to become leaders of quality improvement and problem-solving initiatives and welcome any nursing staff member to train as safety huddle facilitators.

After achieving target conditions, unit quality improvement and problem-solving projects will be added to a three-ring binder for monthly process observations. Filing completed process observation sheets and Pareto charts in one central location will create a tracking mechanism for nursing staff improvements. In addition, monthly process observation will ensure that processes do not revert to their original state.

Post-Implementation

Once quality improvement and problem-solving have been hardwired into the pilot unit, measuring the impact of the expanded safety huddle process on nursing staff engagement will be essential. One measurement will be nursing staff engagement, comparing November 2021 and the November 2022 engagement survey results for questions related to safety, patient experience, and empowerment (see Figure 7).

Figure 7

Focus Unit's Low Scoring Engagement Survey Questions

Question #	Category	Question
3	Safety	The culture in this work setting makes it easy to learn from the errors of others
20	Safety	I would feel safe being treated here as a patient
22	Safety	I know the proper channels to direct questions regarding patient safety in this work setting
14	Patient Experience	This organization makes patient/customer satisfaction a top priority
26	Empowerment	I have the appropriate decision-making ability to do my job well

The project's second measure of success will be the number of completed projects, including the percentage of projects that meet and maintain the target condition. For example, the pilot unit's first project is the completion of patient care boards. The target condition is that 100% of care boards will have 11 essential elements completed during weekly process observations. The nursing staff completed the first weekly observation of 25 patient care boards with 82% compliance of all 11 elements. Obstacles were identified as education deficits. Following the PDSA process, the nursing staff took a picture of a fully completed care board and added it to the right side of the board as a visual of the target condition. The effect of this plan will be studied during the second weekly observation. In addition, a Pareto chart was updated and added to the huddle board showing 82% compliance and missed items (see Appendix C).

The second weekly observation has been scheduled. The nursing staff will follow the same process of identifying obstacles, using the PDSA process to address obstacles, adding results to the Pareto chart, and scheduling the next observation. After meeting the target condition, the Pareto chart will be observed monthly to ensure the improvement does not revert to its initial state. This tracking mechanism can be used to quickly measure the number of completed projects, including the percentage of projects that continue to maintain the target condition.

Finally, the unit scorecard will be added to the right side of the safety huddle board and updated each month, allowing the nursing staff to see the long-term impact improvement projects have on unit metrics. As the nursing staff identifies improvement projects and correlates them to unit metrics, such as care board completion and patient

experience ratings, they will be able to see trending on the scorecard reflective of the impact of quality improvement projects and problem-solving.

Culture of Safety Model

This project aims to increase nursing staff engagement in safety huddles through the implementation of quality improvement and problem-solving. Using Newman's (1999) HEC theory to guide this project, it is important to recognize that the nursing staff is composed of unique, self-organizing individuals who, through the dynamic, evolving, changing pattern of interactions between person and environment, can reach new dimensions of connectedness. In addition, through pattern recognition, the nursing staff can develop increased awareness that leads to higher consciousness levels. The model in Figure 8 illustrates nursing staff reaching higher levels of consciousness through the expanded safety huddle process.

Figure 8

Culture of Safety Model

The outer cycle depicts the evolution of staff engagement through safety huddles. Initially, nursing staff are observers of the safety huddle process. As they became more comfortable, they began to participate in the huddles. With the addition of quality improvement and problem-solving, the nursing staff will start to use quality improvement methodology to identify, achieve, and hardwire target conditions. As a result, avoidable mistakes and preventable errors will be mitigated, ultimately impacting the unit safety and quality metrics. Through this expanded safety huddle process, the nursing staff will feel empowered to affect change and have higher levels of engagement in the safety huddle process.

The inner cycle illustrates three concepts from Newman's theory that guided this project. As nursing staff move through the outer cycle, they will begin recognizing patterns. Initially, they may recognize that safety huddles raise awareness for the team at the start of each shift and that issues can be reported in a non-threatening environment. With the addition of quality improvement and problem-solving there is increased awareness that nursing staff is empowered to share ideas on how to improve care delivery and play an active role in solving problems. In addition, through the introduction of quality improvement methodology, nursing staff develop an increased awareness of metrics, goals, and measures of success. As avoidable mistakes and medical errors are prevented, and nursing staff begins to recognize correlations between projects and improved metrics, there will be increased engagement in the expanded safety huddle process and the recognition that they are empowered to affect change. As each nurse goes through this cycle, they will reach a higher level of consciousness. As these cycles continue to spin, leaders have an opportunity to begin transitioning from leading to

supporting safety huddles and quality improvement and problem-solving, securing resources, removing barriers, and supporting nursing staff who do the work to improve care and solve problems effectively. Ultimately, the spinning of these cycles supports a bottom-up, top-down culture of safety with accountability for continuous improvement and problem-solving.

Expanding an existing safety huddle with quality improvement and problem-solving will provide an avenue to improve nursing staff engagement in the safety huddle process, supporting a culture of safety. A multidisciplinary team planned this project and supported nursing staff through the first few weeks of implementation. Newman's (1999) HEC theory was used to guide this project as illustrated in the model of the simultaneous spinning cycles representing the process of nursing staff pattern recognition, increased awareness, and a higher level of consciousness. Chapter four will discuss the evaluation of the expanded safety huddles and reflect on this project's development.

Chapter 4: Project Evaluation and Reflection

Evaluation and reflection are critical steps when planning and implementing a nursing practice project. Throughout the implementation of this project, a plan-do-study-act process has been followed, allowing for ongoing evaluations to analyze outcomes and detect and respond to the root causes of obstacles. In addition, according to Betka (2012) and Silver et al. (2016), a routine evaluation process is vital when instituting quality improvement projects to ensure a measurable impact on the project goal. Furthermore, according to Houser (2018), "the credibility of a study as evidence for practice is almost completely dependent on identifying and measuring the right things" (p. 189). Likewise, Silver et al. (2016) recommend measures be simple to collect, accurate, and reproducible. In addition, reflection is an essential step in the quality improvement process resulting in a more profound insight into the experience and leading to learnings that may change future actions (Patel & Metersky, 2021). This chapter will review the evaluation process of the expanded safety huddle process and reflect on insights gained through this project.

Evaluation Process

A vital step to determining the next steps for this project is evaluating whether this quality improvement project impacted the goal of improving nursing staff engagement in the safety huddle process. Therefore, an essential step in planning this project was identifying a reproducible, reliable measure of employee engagement related to safety, patient experience, and empowerment that would not be labor-intensive to collect. The use of an existing online annual employee survey is a consistent, user-friendly method for capturing ordinal data characterized by Houser (2018) as categorical data that includes rank order. In addition, Willis Towers Watson, the third-party

administrator of the yearly engagement survey, was founded in 1828, serves more than

140 countries and markets, and utilizes advanced analytics to integrate and analyze

multiple data sources to create insights into employee engagement survey results (as cited

in Emerman, 2019). Using existing data offers an efficient, economical evaluation

method for this project.

As a patient care director, the author knows that the yearly employee engagement

survey is a 45-item instrument seeking anonymous responses to13 categories. First,

nursing staff read through each item and respond using a Likert scale, described by

Houser (2018) as a five or 7-point scale ranking agreement or disagreement to attitude

statements. Then, after a two-week survey window has closed, the third-party

administrator, Willis Towers Watson, calculates a total favorable score for each item that

can be filtered and viewed by hospital, unit, and category (as cited in Emerman, 2019). In

addition, results can be compared to other departments, the whole organization, or other

healthcare norms shared by the third-party administrator.

In addition to employee engagement survey data, the number of completed

projects that have met and continue to maintain the target condition on the pilot unit will

be used to evaluate this quality improvement project. According to Franklin et al. (2020),

data related to the number of, type of, and time to resolve issues identified during huddles

offers a standardized reporting mechanism to determine the effectiveness of daily safety

huddles. In addition, this information could be reflective of the nursing staff engagement.

This measure can be easily obtained by establishing standard work that includes filing

completed projects for monthly review.

Lastly, changes to patient safety and patient experience metrics on the unit scorecard will be included in the evaluation of this project. Improvements to these metrics could be correlated with improved nursing staff engagement in the safety huddle process. Falls with harm data consists of the number of patient falls resulting in any injury. This data is collected using the electronic Patient Visitor Safety Reports filled out by staff after a fall with harm. The safety and quality department reviews all falls with harm and updates unit scorecards each month. Patient satisfaction data is collected using a patient experience survey sent to patients after discharge. Responses to the Likert scale questions result in a monthly net promoter score updated on unit scorecards. These metrics are compiled by the safety, quality, and patient experience departments and reported each month.

Reflection

Reflecting on the process of developing and implementing a project allows for new insights to be discovered. This project, not yet completed, continues to be a learning experience for the multidisciplinary team that developed and supported the project and the nursing staff on the pilot unit. As the project lead, it was challenging to identify the project's scope and measures of success, and I appreciate the guidance I received during class. Taking a large project and breaking it down into logical steps allowed me to determine that improving nursing staff engagement in the safety huddle process was vital to the success of a larger project of expanding the safety huddles in all inpatient nursing units. Further narrowing the scope to one nursing unit created an opportunity to work through the PDSA process and create standard work to ease the transition to the expanded safety huddle process for future teams.

As the project lead, I gained a new appreciation for the importance of bringing together a diverse team with key stakeholder representation. Each multidisciplinary team member offers a unique perspective, allowing us to identify and work through complexities that could have easily been missed. Involving nursing staff early in the project benefited the multidisciplinary team, as those that do the work are in the best position to improve processes and outcomes. As we begin week five of project implementation, weekly meetings with the multidisciplinary team will allow us to identify obstacles, work through the PDSA process, and develop standard work to support the expanded safety huddle process.

One thing I would change if I were to start over would be to include others earlier in the process. For example, it would have been helpful to have established the multidisciplinary team before completing the pre-planning phase. Having a more diverse group complete this initial step in the process would likely have led to earlier identification of obstacles and deeper insight into the state of current conditions, root cause analysis, and the initial project action plan and timeline. In addition, it would have been advantageous to have nursing staff representation at each weekly team meeting. Including someone doing the work on the unit each week would have provided additional insight and helped support buy-in.

Future evaluation will indicate this project's impact on nursing staff engagement in the safety huddle process. Comparing the 2021 and 2022 employee engagement survey scores will be used to measure the project's impact on employee engagement in the safety huddle process. In addition, secondary measures, including the number of completed projects, falls with harm, and the patient experience scores, may reflect the project's

impact on nursing staff engagement. Expanding one nursing unit's safety huddle process to include quality improvement and problem-solving may be step one of a larger project. Chapter five will examine the possibilities of expanding this project and the impact this project will have on nursing practice.

Chapter 5: Future Plans and Implications for Practice

Transformational leaders need to consider the next steps, plans for the future, and implications for practice when completing quality improvement projects. Improving nursing staff engagement in the safety huddle process must begin somewhere. This project started with expanding a safety huddle process on a 25-bed adult inpatient medicine unit at a Midwest hospital. This project requires a dedicated multidisciplinary team and nursing staff, who are part of a universal process of expanding consciousness. Newman's (1999) theory speaks to the steps of pattern recognition leading to increased awareness resulting in a higher level of consciousness that guided this project. If this project is successful, the expanded safety huddle process will be spread to other nursing staff working in inpatient nursing units at this hospital. This chapter will outline the next steps and implications for advancing nursing practice.

Next Steps

This project is currently in week five of implementation. The multidisciplinary team will continue to meet weekly to review the A3 document, focusing on the facts and ensuring consistency throughout this continuous improvement initiative. Each week new obstacles will be escalated and added to the A3 document. In addition, the multidisciplinary project team will address educational needs while creating standard work for incorporating quality improvement and problem-solving into a unit safety huddle.

As the project nears completion, multidisciplinary team members will observe the expanded safety huddle process each week in the pilot unit and provide coaching for any deviations from the standard work. In addition, once the patient care manager and patient

care supervisor have maintained 100% compliance with the standard facilitator and problem-solving work for two weeks, they will begin to train the unit ACMs and charge nurses on this work. Unit leaders will invite nursing staff to become leaders of quality improvement and problem-solving initiatives and welcome nursing staff members to train as safety huddle facilitators. As projects are completed, they will be filed in a binder and revisited each month to identify and mitigate any regression to the initial state.

If this project results in improved nursing staff engagement in the safety huddle process, the process for expanding a safety huddle to include quality improvement and problem-solving will be spread to remaining inpatient units at this hospital. As the patient care director responsible for this work, I would form a new or expanded multidisciplinary team to develop an A3 document for this large project. In addition, key stakeholders from the impacted nursing units would be invited to join the multidisciplinary team. The multidisciplinary team would review the A3 document weekly and support nursing staff throughout the project. Upon completion of the project, measures of success will be reviewed. If improved employee engagement in the safety huddle process is not achieved, the multidisciplinary team will continue working through the A3 process to identify and mitigate obstacles.

Implications to Advance Nursing Practice

This project aims to improve nursing staff engagement in the safety huddle process. Focusing on one inpatient unit, a multidisciplinary team and nursing staff are learning to use quality improvement methodology to address problems and work through quality improvement initiatives as part of the safety huddle process. Through this project, nursing staff has an opportunity to develop a greater understanding of their empowerment

to affect change and the metrics and measures of success related to patient experience and safety. In addition, improved nursing staff engagement in the safety huddle process creates a foundation for a culture of safety.

As nursing staff participate in the expanded safety huddle process and begin to use quality improvement methodology to hardwire improvements, they are creating a culture of safety. Shea (2020) described a culture of safety as one in which safety concerns are reported without fear of reprisal and emphasized the importance of a bottom-up, top-down continuous improvement framework. A culture of safety improves patient safety and is vital to promoting positive health outcomes (Bacon et al., 2021; Ulrich & Kear, 2014; Weaver et al., 2014). In addition, Berry et al. (2020) linked an improved safety culture with harm reduction, and Kavanagh et al. (2017) and Mardon et al. (2010) found a positive culture of safety was associated with fewer adverse hospital events. Likewise, a positive patient safety culture has been shown to reduce surgical site and central line-associated bloodstream infections (Fan et al., 2016; Weaver et al., 2014). Finally, an improved culture of safety results in increased employee satisfaction (Sorra et al., 2014; Alves & Guirardello, 2016), enhanced nurse-patient safety competency (Cho & Choi, 2018), and improved employee safety (Pousette et al., 2017). Harnessing the expertise of nursing staff to identify and hardwire improvements can help hospitals become high-reliability organizations.

As hospitals strive to achieve nearly error-free performance, despite the complex nature of healthcare, many begin the journey with safety huddles. A key element to the success of safety huddles is for nursing staff to feel safe in escalating concerns and ideas as part of the huddle process. The current safety huddle process achieves this element;

however, as a patient care director, the author recognized that the safety huddle process

lacked clear accountability and consistent discipline to mitigate escalated issues. In

addition, there was no mechanism for acting on ideas shared during safety huddles. As a

result, minor issues continued to become catastrophes, leaders were managing patient

safety reactively versus proactively, and the nursing staff was likely not feeling heard.

The safety huddle process had become merely a ritual at the start of each shift with low

nursing staff engagement, as evidenced by low nursing staff scores related to safety,

patient experience, and empowerment on the 2021 employee engagement survey. Initially

introduced as phase one of a two-phase process, there is no longer dedicated performance

improvement support for nursing staff to implement phase two of the safety huddle

process. As a transformational nursing leader, the author identified an opportunity to

expand a safety huddle process to include quality improvement and problem-solving,

moving decision-making to grassroots levels to engage and empower nursing staff to

improve care delivery. Focusing on one 25-bed medicine unit, bringing together a

multidisciplinary team, and using an A3 problem-solving document based on Lean

principles for this project has maintained focus on the facts and ensured consistency as

we continue to complete this improvement initiative. If the expanded safety huddle

process results in increased nursing staff engagement, this project will be spread to other

inpatient nursing units at this hospital and could help foster a culture of safety and

potentially lead to improved patient safety and experience metrics.

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Appendix A

Problem-Solving Document (A3)

Project A3

		Owner:	Team Members:		Date:
1. Project Name: *What is the project focus, i.e. "Do what, to what"?*		Sponsor:			
Next Level Safety Huddles					

5. Future State: *What will the improved process look like in 30-90 days?*

• Work will begin on unit XXX to reset the Tier 1 huddle and operationalize the problem solving process.

2. Problem Statement: *What is the gap between target and actual condition? What impact is it having? How do you know?*

Target: Tier 1 Safety Huddles adhere to all the steps outlined in the standard work, and incorporate the improvement Problem Solving process observations

Actual: Currently there is variation across units in adherance of the standard work. Most often, units are not incorporating "Step 5 - Review Improvement Problem Solving"

Impact:

In-scope: Work will be limited in scope to Unit 4500

Out-of-scope:

Sponsor Sign Off Boxes 1-2:

3. Current Condition: *What is currently happening? What issues are occurring and where?*

• There are gaps in the adherance of Tier 1 Standard Work across the departments within United Hospital.

• United implemented the Tier 1 huddle boards in 2019 with a focus on the left side of the board, which includes the Daily KPI's like the operational stats and safety concerns.

• The next phase was to have the performance improvement team coach leaders on incorporating the "right side" of the board, the improvement work. This phase was disrupted by the pandemic and only some units implemented the "right side of the board".

Sponsor Sign Off Boxes 1-6:

6. Action Plan: *What will it take to test and put the future state into action?*

	Activities/Tasks	Who	Timeline (Weeks)										
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
11													
12													

Key: • task in progress X task completed

Status Update: Green shading task on track Red shading task not on track

4. Root Cause Analysis: *What is causing the main/prioritized issues to occur?*

There are gaps in the adherance of Tier 1 Standard Work do multiple factors:

• Hospital was one of the last business units to implement the Tier 1 - Right Side of the Board standard work, and the implementation was disrupted by the Covid pandemic.

• There is not a standard onboarding process for new leaders that includes training on the Tier 1/2 huddles.

• Competing priorities

7. Measurement: *Check if process changes achieving expected results*

Measures	Baseline	Target	Monitor Timeline (days or weeks)										
			1	2	3	4	5	6	7	8	9	10	11
Adherence to Tier 1 Standard Work (12 Steps)													

8. Adjustments and Standardization: *adopt (adjust based on learnings), adopt (spread), or abandon (return to root cause)*

Appendix B

Collected Data

Unit	Improvement Problem Solving Displayed?	Improvement Problem Solving Standard Work Followed?
1	no	no
2	no	no
3	no	no
4	no	no
5	no	no
6	semi	no
7	semi	no
8	yes	yes
9	yes	yes
10	no	no

Appendix C

Pareto Chart

Pareto Chart

| Month: April | Team: 4500 | | Metric: Care Board Completion | Goal: 100% compliance | Actual: % | Reporter: |

Monthly Actual Graph

Goal: 100%

50%

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |

Day of Month

Correct

Total

Number

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 |

Reasons for Miss — Highlighted blocks = Running total for the current month

Reasons for Miss				
No anticipated d/c date	X	X	X	
No family spokesperson	X			
No pain info	X			

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