

# IMPROVING REPORTING CULTURE THROUGH DAILY SAFETY HUDDLE

by

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## ABSTRACT

MARGARET MALAGUE MACKAY. Improving Reporting Culture Through Daily Safety Huddle. (Under the direction of DR. KATHLEEN JORDAN)

The Institute of Medicine's report "To Err is Human" remains relevant two decades later: medical error is the fourth leading cause of death in the United States and 40% of hospitalized children experience medical error. One obstacle to safer care is lack of error reporting. That omission denies the opportunity to learn from those events. Safety Culture describes a work environment conducive to reporting, and its properties are measurable using the Safety of Patients Survey (SOPS 1.0™). On a pediatric acute care unit in a children's hospital in southeastern U. S., SOPS 1.0™ scores and error reporting missed agency benchmarks. The purpose of this quality improvement project was to improve error reporting and SOPS 1.0™ scores relative to reporting through a Safety Huddle Intervention. Marshall Ganz's Change through Public Narrative Framework provided the theoretical design for this project: a story of self, a story of us, a story of now. The SOPS 1.0™ was implemented before and after the six-week intervention on the project unit and a comparison unit. Monthly error reporting was tracked before and after the intervention on those same units. The 5 composites of SOPS 1.0™ purported to measure reporting culture showed no statistically significant differences after the intervention, or between the project and comparison units. Error reporting increased after the intervention on the project unit ( $p=0.0121$ ) but not the comparison unit. Of note, this quality improvement project took place during the COVID 19 pandemic, and survey results revealed a preoccupation with staffing as an overriding concern in patient safety.

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## DEDICATION

I dedicate this work to Doug in gratitude for his humor, his patience, and his generous heart.

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## LIST OF ABBREVIATIONS

AHRQ Agency for Healthcare Research and Quality

HRO Highly Reliable Organizations

IOM Institute of Medicine

NAM National Academy of Medicine

SOPS 1.0™ The Survey on Patient Safety Culture

SPS The Children's Hospitals Solutions for Patient Safety Collaborative

TJC The Joint Commission

## CHAPTER 1: INTRODUCTION

Twenty years after the Institute of Medicine (IOM), now known as the National Academy of Medicine (NAM), first quantified the scale of medical error in its germinal report “To Err is Human: Building a Safer Healthcare System” (2000), patients are no safer. This report attributed 98,000 deaths to preventable harm in healthcare (IOM, 2000). Statistics from the past two decades continue to demonstrate that healthcare errors occur at alarming rates (Mueller et al., 2019). Such incidents cause as many as 400,000 deaths annually (James, 2013) and until eclipsed by a global pandemic, healthcare related error was the third leading cause of death in the United States (CDC, 2020; Makari & Daniel, 2016). Children are even more vulnerable, and as many as forty percent of hospitalized children experience harm related to medical error (Lyren et al., 2017; Mueller et al., 2019; Stockwell et al., 2015). All too often these errors go unreported leaving lessons unlearned (Chang et al., 2019; Duffy et al., 2019; Kagan & Barnow, 2013; Mansouri et al., 2019; Noble & Pronovost, 2010; Vrbnjak et al., 2016). Fewer than half of nurses in a study by Duffy, et al. (2019) were willing to report a colleague’s actions, and even fewer would self-report. The reasons for underreporting are varied: there is an actual or perceived punitive response to error reporting, the nurse is under the impression that because the error did not reach the patient it is not important (known as ‘good catch’ or ‘near miss’ events), the nurse believes that no actions will be taken in response to the report, or because the nurse is embarrassed (Mansouri et al., 2019).

Underreporting creates a fissure in knowledge, and the IOM determined decades ago that this knowledge gap was critical: “the most important barrier to improving patient safety is lack of awareness of the extent to which errors occur daily” (IOM, 2000, p. 157). In his seminal work about handling mishaps in industry, James Reason encouraged analysis of unplanned events as

“free lessons” to avoid similar occurrences in the future (2000, p. 768). Peter Pronovost brought this perspective to medicine, becoming a champion of patient safety in response to the IOM report through basic strategies like handwashing and use of checklists. But progress toward better reporting, in Pronovost’s words, “occurs at the speed of trust” (2017, n. p.).

Nurses report errors when they are not likely to be blamed for the error, when such events are approached from a systems perspective rather than one of human failure, and when conversation and relationships are valued (Provost et al., 2015). This type of environment is known as Safety Culture. It employs many of the tenets of High Reliability Organizations (HRO) like the airline, automotive, and nuclear power industries: they are preoccupied with failure, recognize risk, empower staff to openly discuss flaws, and actively engage in processes to improve patient safety. Using this approach has a proven track record in reducing harm (Castaldi et al., 2019). Safety Culture requires “bottom-up organizational (sic) discourse and communication by employees at all levels regarding the way ‘safety is handled around here’” (Sutcliffe et al., 2016, p. 250). One method employed by HRO is the daily “Huddle”, a meeting intended to encourage all team members to connect to a shared purpose and measure progress toward shared goals (Criscitelli, 2015).

For a unit or hospital system dedicated to a high standard of patient safety, the importance of Safety Culture cannot be overstated and reporting of events is one outward measure of such a culture. A medical surgical pediatric unit in an urban medical center in the southeastern United States (U.S.) recognized a trend of underreporting of errors and ‘good catch’ events. Additionally, a system wide survey to measure Safety Culture fell short of industry benchmarks as well as system goals. The purpose of this quality improvement project was to apply practices consistent with HRO principles to the daily operations of this unit to improve aspects of Safety

Culture related to willingness to report and to increase rates of error reporting through available electronic submission methods.

## **PROBLEM STATEMENT**

A Children's Hospital embedded in an urban medical center in the southeastern U.S. noted low rates of error reporting by nursing staff (internally known as Care Events), indicating a need to enhance Safety Culture. On one of the hospital's medical surgical pediatric units, error reports were as low as 4 per month, and have not increased by 5% each year as is the facility goal. 'Good catch' events, otherwise known as near miss events (that are discovered before they reached the patient), were reported less frequently than at any other facility in the hospital system. On this same hospital unit, Safety Culture as measured by the Agency for Hospital Research and Quality (AHRQ) Hospital Survey on Patient Safety (SOPS™ 1.0) in March 2019 calculated an Overall Safety score of 47, far short of the agency benchmark of 75.

## **PURPOSE OF THE PROJECT**

The aims of this quality improvement project were to increase error reporting and to increase composite scores intended to measure specific aspects of Safety Culture related to reporting as measured by the SOPS 1.0™ (Appendix). To accomplish these objectives, a daily Safety Huddle intervention was incorporated in the daily huddle meeting on a 24- bed acute care pediatric unit. The unit already uses daily huddle meetings native to HRO to identify problems and track patient outcomes. For this project, a safety segment was added to these daily huddle meetings, allowing transparent discussion of errors and near misses to normalize conversation about errors and foster an atmosphere that encourages shared learning. Safety Huddles were conducted on the project unit daily during their routine morning huddle meeting for a 6- week period in September

and October 2020. The impact of the intervention was measured using SOPS 1. 0<sup>TM</sup> before and after the intervention period for staff on both the project unit and a comparison unit to detect changes in composite measures specific to error reporting. The comparison unit did not receive the intervention. This comparison was used to identify if extraneous factors may have impacted results. Additionally, monthly rates of error reporting by nursing staff using established electronic formats in use at the hospital were compared 9 months before and 3 months after implementation on the project unit, with tracking of rates for the comparison unit as well.

### **PICOT Question**

The PICOT question that guided this project was: For nurses on a pediatric medical surgical unit, will a daily Safety Huddle intervention delivered daily over six weeks, as compared to nurses on a similar unit without the intervention, produce an increase in reporting of errors and an increase in metrics of Reporting Culture as measured by SOPS1.0<sup>TM</sup> after the six-week period?

### **Project Aims and Objectives**

The objectives of this project were:

- Using monthly data on electronic error reporting, an increase in reporting rates will occur during and after the intervention (October 2020-January 2021) as compared to prior months on the project unit (January 2020-August 2020).
- Project unit will meet error reporting benchmark by increasing monthly error reports by 5% within three months post intervention (November 2020-January 2021) over prior months (January 2020-August 2020).

- On repeat measures of SOPS1. 0<sup>TM</sup>, unit overall safety score will increase from 47% to at least 60% in December 2020.
- SOPS1. 0<sup>TM</sup> Survey composite scores related to communication and reporting culture will increase above March 2019 levels and will increase on the project unit post-intervention as compared to pre-intervention.
  - Error reporting frequency (68 on March 2019 survey)
  - Learning from errors (66 on March 2019 survey)
  - Communication openness (66 on March 2019 survey)
  - Non-punitive response to error (33 on March 2019 survey)

## CHAPTER 2: REVIEW OF THE LITERATURE AND THEORETICAL FRAMEWORK

### Literature Review

#### *Error in Healthcare*

Efforts of multiple organizations have made patients safer, but there remains a catastrophic prevalence of medical error since the IOM report in 1999 (Ghaferi et al., 2016; Mueller et al., 2019). Preventable harm is defined as physical, psychological, emotional, moral, economic, and societal harm to patients (National Steering Committee for Patient Safety, 2020). This phenomenon is known to be the fourth leading cause of death in the U.S. and was the third until overshadowed by a pandemic (CDC, 2020). Harm of this magnitude demands analysis and mitigation, but as many 50-96% of errors go unreported (Blegen et al., 2019). A response demands culture change: It is essential to accept human fallibility and to purposefully foster a work environment where learning from mistakes is the norm. Reason (2000) and Ruchlen (2004) suggest that human variability is an asset rather than a liability, and that reduction of error should focus on systems rather than on people, and on systems thinking rather than personal vigilance (Ding et al., 2020; Provost et al., 2015).

#### *Agency Initiatives*

Several organizations are focused on improving patient safety. First, the Institute for Healthcare Improvement (IHI) employs improvement science to advance health outcomes worldwide (IHI.org). The Agency for Healthcare Research and Quality (AHRQ) is the arm of the U.S. Department of Health and Human Services whose responsibility is to create measurement tools and warehouse data for analysis by others (AHRQ.org). The Joint Commission (TJC) purports to be a “global driver of quality improvement and patient safety in health care”, and on occasion highlights specific practices that require urgent attention in what they call Sentinel

Events ([jointcommission.org](http://jointcommission.org)). While all three serve broader missions, all identify patient safety as a core value, and all have a shared commitment to changing the status quo.

IHI's National Steering Committee for Patient Safety is comprised of representatives from 27 different organizations seeking to improve safety in healthcare. Their report "Safer Together: A National Action Plan to Advance Patient Safety" gathered safety inspired strategies used discreetly by various disciplines and institutions to create an actionable guide for application to healthcare (National Steering Committee for Patient Safety, 2020). The committee's recommendations fall into four categories: culture, patient and family engagement, workforce safety, and learning systems. The first and fourth strategies best informed this project, as they encouraged wide sharing of safety data and an organizational commitment to learning and systems thinking.

For individuals and systems to freely share error data, they must function in a culture of respect, transparency, and trust. Further, "this form of transparency is not just a technical imperative, it is a moral imperative" (Leape et al., 2009, p. 425). It falls on employers to foster an organizational structure that promotes sharing and embodies a 'just culture' or 'safety culture.' Aspects of such a culture include non-punitive response to errors, opportunities to learn from mistakes, a tendency to look at errors from a systems perspective rather than focus on human failure, and assurance that actions are taken in response to reports (AHRQ, 2016). AHRQ and the Medical Errors Workgroup of the Quality Interagency Task Force together commissioned the Westat Corporation to create a tool to measure such a culture, the SOPS<sup>TM</sup> product (Sorra et al., 2016). The SOPS<sup>TM</sup> was specifically designed to measure the opinions of hospital staff about the safety of patients at their facilities. The tool was intended to raise awareness, to assess staff opinion and identify gaps, to track trends over time, to measure the

effectiveness of safety initiatives, and to compare within or across facilities (Sorra et al., 2016).

The tool is used nationally to measure characteristics of safety culture, including reporting culture, staffing, handoff communication, and teammate safety (Sorra et al., 2016).

Safety Culture is defined by TJC as “the sum of what an organization is and does in the pursuit of safety” (TJC, 2017). Blegen and colleagues (2009) offered a parallel definition: “safety culture encompasses giving safety priority over efficiency, improving care provider communication and collaboration, and creating a system that learns about and learns from errors and problems” (p. 139). A learning orientation, systems thinking, and the expectation of transparency echo IHI’s National Steering Committee recommendations: “they create the fertile soil that allows broader safety initiatives to take root and be cultivated” (National Steering Committee for Patient Safety, 2020, p.6).

Reporting Culture is just one element of the overarching Safety Culture construct in which clinicians collect, analyze, and disseminate error data (Mueller et al., 2019). TJC considers it paramount, as is evident in its Sentinel Event 60 (TJC, 2018a) which outlines the complexity and necessity of learning from errors and close calls. TJC identified the “4E’s of a Reporting Culture: ‘Establish trust, encourage reporting, Eliminate fear of punishment, and Examine errors, close calls, and hazardous conditions’ (TJC, 2018b). Examining occurrences after the fact is critical to the establishment of an organizational culture that supports and encourages reporting. (Aldawood et al., 2020; Womack et al., 2005).

### ***High Reliability Organizations***

Healthcare is not the only high stakes industry to face safety concerns. The nuclear power industry, airline and automotive companies, the U.S. Military, and hostage negotiation teams are all driven by a similarly unforgiving landscape (Womack et al., 2005). All need to exhibit high

reliability. That is, they need to perform in a way that is predictable and preoccupied by failure, even when a catastrophe is averted. If the airline industry discovered a mechanical failure “in Dallas, the sun will not set before mechanics know about it in Denver and Dubai” (Leape et al., 2009, p. 425). Systems that demand high reliability, known as High Reliability Organizations or HRO, expect this level of transparency to learn from mistakes that have already occurred elsewhere. This practice recognizes that process inconsistencies happen not because of isolated error but because of the interaction of multiple events (Provost et al. 2015). Approaching errors from a systems perspective frees workers from blame and encourages transparency about errors, near misses, and other “dynamic non-events” (Reason, 2000, p. 768).

What can the healthcare industry learn from HRO? The AHRQ gathered experts to create a guidebook specifically for that purpose in 2005 (Hines et al., 2008). HRO are sensitive to those silent errors that must be heeded: “the capability to see the significant meaning of weak signals and give strong responses to weak signals...holds the key to managing the unexpected” (Loc 107/2055). In other words, reacting to incidents before they have the opportunity to cause harm can allay harm indefinitely and lay groundwork for how individuals respond to inconsistencies in practice. But healthcare systems, and individual caregivers, may be reluctant to admit mistakes when they feel there can be consequences. Patient safety can be served through adoption of HRO principles that focus on recognizing risk, empowering staff to openly discuss flaws without repercussion, and actively engaging workers in processes to improve patient safety. The adoption of a Safety Culture allows staff to shift from a reactive response to error to one in which risk can be anticipated (National Steering Committee for Patient Safety, 2020), and this type of empowerment makes patients safer.

### ***The Ohio Collaborative***

One children's hospital in Ohio chose the fertile soil of High Reliability Principles to cultivate and nourish their campaign toward safer patient care. The team's first initiative was centered on rapid response teams, and their efforts were so fruitful that they were asked to take on broader safety initiatives system wide. That success resulted in the creation of a state-wide then international collaborative, The Children's Hospital Solutions for Patient Safety Collaborative (SPS), which has since expanded to include more than 135 hospitals who have made a collective promise to do better (Lyren et al., 2018). The SPS personifies Safety Culture: member hospitals share error reports transparently with one another so that all can learn from mistakes. After conducting thorough analysis of factors essential to patient safety, adoption of Safety Culture was identified by this group as the most critical to improving outcomes. Safety Culture includes 4 subcultures: reporting culture in which people are willing to report mistakes, just culture in handling blame, flexible culture, and learning culture (Ruchlin et al., 2004), all of which are qualities proposed by HRO. The SPS also relies on High Reliability Principles in their list of key drivers of patient safety: transparency, leadership, mission focus, and an 'all teach, all learn' mentality, all of which reflect a culture of safety (Lyren et al., 2013, p. 379). Ghaferi et al. (2016, para.12) suggested that high reliability organizing to respond to and learn from errors is the "next wave" of safety innovation.

### ***The Huddle***

One strategy used by HRO to allow workers the opportunity to connect to purpose and share lessons learned is the Huddle: Healthcare Utilizing Deliberate Discussion Linking Events. Huddle is a brief group meeting to share pertinent information before engaging in a shared task, a practice integral to HRO that lends itself to healthcare practice (Criscitelli, 2015). A Daily

Huddle Meeting serves to infuse data into practice (Mueller et al., 2019) and promote daily learning from that data (Provost et al., 2015). Huddle can be used as a ‘highly visible lessons learned program’ (Muething et al., 2012, p. 426e) and a ‘light touch’ mechanism for peer-to-peer accountability (Birk, 2015, p. 22). The meeting can be used to expose factors that contribute to patient harm (Goldenhar et al., 2013) and has proven capacity to increase situational awareness and promote safety (Chapman et al., 2019). Use of the Huddle format has resulted in increased reporting of errors and near miss events (Fleischman et al., 2016R; Muething et al., 2012; Wilbur & Scarborough, 2005), and reduction of Serious Safety Events, which are those that cause the most catastrophic of harm (Goldenhar et al., 2013; Lingard et al., 2011). Hines and colleagues suggested that Safety Huddles ensured that staff would think and speak about safety on a reliable basis (Hines et al., 2008). Efforts to improve communication about error are the most promising strategy to promote error reporting (Blegen et al., 2009) and incorporation of a Safety Huddle segment into an existing Daily Huddle Meeting, from this point forward referred to as the Safety Huddle, could meet that goal.

This Huddle practice is not unlike ‘Safe Table’ discussions held by SPS, which allow open dialogue about errors made in member facilities and sharing collaborative strategies to close gaps in care (Lyren et al., 2018). This level of transparency must trickle down to the bedside nurse to have maximum impact on care. The bedside nurse is not, in general, privy to safety statistics for a given unit, let alone a hospital. Knowing what mistakes occur and how they happen are essential to improving patient outcomes (Lee, 2016). Huddles have been utilized in hospitals to mimic the repetitive procedural reinforcement known to sustain HRO (Womack et al., 2005). This reliable daily forum is ideal for sharing error data and the importance of error reporting to create the required sense of urgency to improve patient safety.

Huddle is an opportunity for leadership to identify concerns, gather information, coach, and provide guidelines. This leadership may be transactional or unidirectional, since a “safety critical” environment relies on staff compliance with procedures and structured performance expectations (Clarke & Taylor, 2017, p.315). But moving beyond compliance to motivation requires more. In a more transformational interaction, leaders listen to safety concerns, encourage bidirectional learning, and role model their personal commitment to safety. Birk (2015) described cultural transformation in the Swedish Health Services using a similar approach: “We reflect on these stories in meetings and safety huddles so we can apply what we’ve learned...to live and breathe the culture and stay grounded in the ‘why’ and meaningfulness of what we do.” (Armada, in Birk, 2015, page 24). This in turn leads to increased engagement in safety activity and a higher level of personal commitment on the part of team members to safety initiatives (Clarke & Taylor, 2017).

On the project unit, the Daily Huddle Meeting is held at the morning change of shift to discuss day to day achievement of targeted outcomes. These outcomes change over time and have included patient and medication scanning compliance, discharge efficiency, and handoff communication with the emergency department. This project incorporated Safety Huddle into this existing meeting to normalize staff conversation about patient safety, encourage dialogue about error reporting to increase transparency, and create an “all teach, all learn” atmosphere that would encourage reporting (Lyren et al., 2018, p. 379).

### **Theoretical Framework: Change Through Public Narrative**

Mitigation of safety risk among hospitalized children is daunting. While reports of statistical magnitude of the problem vary, “we can all agree that behind each number are people and a story” (National Steering Committee for Patient Safety, 2020, p. 11). It seemed fitting to

use the Marshall Ganz Change Through Public Narrative Theory to build a learning orientation and to tell that story (Ganz, 2010).

When Womack et al. (2005) created a guide for the application of HRO principles in the healthcare industry, they suggested that changing the mindset of a workforce requires that team members understand the logic of the change. Like HRO, the healthcare industry is one of “contingency” in Marshall Ganz’s words (2010, p. 32): one in which uncertainty is a given, the work is daunting and pressured, and “disaster lurks just around the corner”. Uncertainty is best addressed with a learning orientation, and Ganz (2010) suggested the use of meetings designed to foster shared learning. Such meetings could “become the eye of the hurricane, the order at the core of what can feel like a chaotic enterprise” (Ganz, 2010, p. 32). This project looked to the Daily Huddle Meeting as that storm: Safety Huddle would foster transparency through storytelling. Ganz’ Public Narrative Change Theory was ideally suited to support the aims and strategy of this initiative (Ganz, 2010).

Ganz’ Change Theory has inspired farmers’ unions and presidents looking for a framework to guide culture change. The first step, Ganz claims, is to disrupt the inertia of routine to get the attention of members (Ganz, n.d.). That is accomplished through creating a sense of exigency by comparing what could be (ideal practice) with what is. For example, transparent conversation about errors and good catch events is not a practice to which nurses are accustomed. Open conversation about actual events that occur despite best intention could inspire urgency in the team, reinforce the idea that learning can take place in the face of error, and reveal that errors can happen to anyone. Errors, as James Joyce put it, are “the portals of discovery” (Joyce, 1922, p. 174).

Ganz suggested that change can be inspired and sustained through “public narrative” (Ganz, n.d.). A public narrative consists of three parts: The Self, the Us, and the Now. Storytelling is how individuals identify shared values, coach, console, and inspire one another. To carry his metaphor forward, each story contains a plot, a character, and a moral (Ganz, n.d.). The plot of a story presents a dilemma or challenge, a choice made by the protagonist, and the outcome that occurred. In Ganz paradigm, this is the “head,” relying solely on factual occurrences and their consequences. The character reveals the values shared among players in the story, and the motivation behind choices they make. Ganz would call this ‘the heart’. Finally, the moral of the story outlines the impact it will have on the listeners going forward, “the hands” (Ganz, 2010). The Safety Huddle Intervention was designed to encourage public narrative around head, heart, and hands of patient safety.

For this project, each Safety Huddle was a scripted conversation that showcased an actual event or near miss that had happened recently to encourage conversation about systems changes that could better protect patients. By creating dialogue around patient safety as a shared endeavor and one without blame, there was potential to foster culture change and encourage reporting of events (Richter et al., 2015). Reporting of errors, even those that never reached the patient, allows systematic response to weak signals to promote safer patient care. Additionally, members of the unit staff and leadership were invited to champion the project by leading the Safety Huddle, aiming to foster buy-in and sustainability.

Safety Huddle had 3 portions, all delivered in under 4 minutes. Daily Huddle Meetings are most successful when concise given the time pressures at start of shift (Criscitelli, 2015). First, an actual near miss or error in the facility was presented to illustrate lack of situational awareness, failure to recognize, procedural errors, or a communication gap (Lyren et al., 2018).

Using Ganz's framework, this portion of Safety Huddle was the "story of self" (Ganz, n.d.). Second, nurse participants were asked to share similar instances in their own practice, the "story of us" (Ganz, n. d.). Finally, team members discussed how such an event could be avoided, or how the next patient could have been harmed, the "story of now". Error reporting is associated with improved patient outcomes (Richter, 2015), so an increase in error reporting would represent as a small, incremental, and potentially sustainable win. Because Daily Huddle Meetings are held on the project unit routinely, throughout the project hospital system, and in many healthcare settings, Safety Huddle is potentially sustainable by unit leadership and is scalable and replicable both within the project system and elsewhere.

## CHAPTER 3: PROJECT IMPLEMENTATION PLAN

### Design

This Quality Improvement (QI) project used a Plan, Do, Study, Act design which has known success bringing about incremental improvements (Knudson et al., 2019) and is recommended by IHI (IHI.org).

### *Plan*

- Existing survey data from the project unit revealed that the SOPS 1.0<sup>TM</sup> ‘overall safety score’ in 2019, which is a simple average of all survey composite scores, was 47% while the facility benchmark was 75%. Monthly error reporting rates via electronic ‘care event’ forms ranged 3-13 on the project unit during the 8 months prior to the project, and good catch events, logged separately and at the facility level only, were rare. At the time of this project’s inception, the children’s hospital accounted for fewer good catch events than any hospital in the system.
- SOPS 1.0<sup>TM</sup> was administered on project unit and comparison unit August-September 2020. This version of the SOPS<sup>TM</sup> tool was chosen over a more recent version to maintain consistency with prior measures in 2019. Incentivization was provided to encourage staff participation.
- Error reports were obtained from Nurse Managers on the project and comparison units January 2020-January 2021 to analyze changes in monthly reports before, during, and after the intervention.
- Error reports submitted in prior or current months, in addition to personal experiences of the project lead and other staff, were used to script daily Safety Huddle. All scripts were written

in advance by the project lead.

***Do:***

- Safety Huddles were implemented on the project unit during the Daily Huddle Meeting held at 6:45am 9/15/20-10/26/20. The Daily Huddle Meeting included day and night shift nursing staff, and each Safety Huddle encouraged open dialogue to normalize conversation about safety and to role model transparency. Safety Huddles were conducted by the Project Lead or volunteer members of the nursing staff and unit leadership. A training video was created and available to all leadership and staff to describe the format for Safety Huddle. All staff members on the project unit working their normally scheduled shift attended daily Safety Huddles as per typical unit routine and as patient care needs allowed. Each Safety Huddle included:

- A story of an actual error or good catch.
- Nurses volunteered examples of similar occurrences in their practice, and participation was encouraged with one restaurant gift card each day.
- Guided dialogue and brainstorming among team members explored ways to avert similar occurrences.

***Study:***

- SOPS™ 1.0™ survey results were compared before and after the intervention on the project and comparison units with attention to aspects of reporting culture as identified by TJC (2018a &b), overall perceptions of patient safety, and overall safety score.
- Monthly data on error reporting (electronic reports obtained through Nurse Managers) on project and comparison units were analyzed before and after implementation.

***Act:***

At the conclusion of the project, data was analyzed to determine the effectiveness of the QI project in improving positive answer percentage scores on the composites of the SOPS1.0™ related to reporting culture and error reporting rates. The impact of Safety Huddle on the Project Unit outcomes can then be used to inform other units and facilities within the system facing similar gaps in error reporting. A planned presentation in April 2021 will review the results of this project system wide, and potentially suggest a strategy for addressing Safety Culture and encouraging reporting overall.

### **Subjects and setting**

Participants for this project were staff nurses employed on a 24- bed pediatric medical surgical unit in a 245 bed children's hospital within a larger urban hospital system in the Southeastern U.S. During the pre-intervention phase, 36 Registered Nurses (RN) were employed on the project unit and in the post-intervention phase, there were 44 RNs employed. All were invited to participate in the Safety Huddle when present during change of shift, and all were invited to participate in survey completion. The intervention was implemented in the same location that Daily Huddle Meetings occurred on the project unit, namely the hallway on the "A-side" of the unit in front of the Huddle board. The board is used by staff to track progress toward shared objectives and is a focal point updated daily during the routine Huddle meetings. Huddles took place at 6:45 every morning with both day and night shift nurses present. Nurses who participated in the Safety Huddle discussions or offered practice examples were rewarded with a restaurant gift card (i.e., one gift card distributed per day). The staff nurses employed on the comparison unit also participated by completing surveys and nurses on both units received incentive for doing so; however, they did not receive the Safety Huddle intervention (42 RNs at both intervals). The comparison unit has identical bed allocation and had a similar patient

population as the project unit during planning of this project. Prior to implementation however, the project unit became the cohort unit for patients and families suspected of or affected by COVID-19. This change had ramifications on patient acuity and nurse workload, and likely had impact on the outcome of this project.

## Measures

The SOPS 1.0™ tool was created to measure hospital staff opinion about patient safety and to evaluate the effectiveness of a safety-inspired intervention (Sorra et al., 2016). The survey is available in the public domain and does not require permission for its use. The survey consists of 42 items which are separated into 12 composite dimensions. Within each dimension, staff members are asked to rate the degree to which they agree with statements about patient safety on a Likert scale of 1 to 5; some of the items are negatively worded to ensure that respondents are reading the items. Eight of the question groups or composites are on the unit level: teamwork within units, organizational learning, supervisor expectations and actions promoting patient safety, communication openness, error feedback and communication, staffing, and nonpunitive response to error (Sorra et al., 2016). Hospital dimensions include teamwork across units and hospital hand-offs, and safety outcomes measure overall perception of safety and frequency of event reporting. AHRQ provides a user's manual that cross references each composite with the questions intended to measure it (Sorra et al., 2016). The questions designed to measure reporting culture ask about frequency of event reporting, communication openness, feedback and communication about error, nonpunitive response to error; overall perceptions of patient safety is its own composite. The Safety Culture score is an average of all sub-scores on the survey. Responses are sorted into positive and negative; those that respond agree or strongly agree to positive statements about patient safety and disagree or strongly disagree to negatively worded

statements are considered positive. Responses in the negative, that is those that disagree with positively worded items and agree with negatively worded items, are also averaged. Then the positive and negative responses to each item are weighted against one another to create a composite percentage positive score (Sorra et al., 2016). Three additional items collect demographic data, specifically role and length of time in that role, and number of hours worked during the week the survey was taken (Blegen et al., 2009; Sorra & Dyer, 2010). No other demographic information was collected. The survey dimension Cronbach alpha coefficients range from 0.53 to 0.78; those items on the survey that are negatively worded have over time demonstrated lower internal consistency than the others (Blegen et al., 2009). Nonetheless, the tool is described as “sensitive and able to detect change over time” (Blegen et al., 2009 p. 143) The composites related to reporting culture were the central interest of this project, but the tool was administered in its entirety to maximize its validity.

Unexpected events, or errors, are recorded electronically by nurses at the project site using a Care Event reporting system accessed online. The event is categorized by type of event (fall, medication delivery error, pressure injury, mislabeled specimen, etc.). These occurrences may or may not have reached the patient but are not categorized as ‘good catch’ instances within this system. The electronic form specifically identifies the patient by account and medical record numbers, as well as the nurse and any additional witnesses to the event. These event reports go directly to the Nurse Manager of the Unit. Additionally, a detailed monthly report of events with total number and specific events in each category is also sent to Nurse Managers. Good catch events are also reported by nurses using an entirely separate system and are not tracked by or reported to the unit level. Instead, they are tracked for each facility in the hospital system.

## **Data Collection Methods**

This project was approved by the Institutional Review Boards at Atrium Health and University of North Carolina Charlotte prior to implementation. Monthly error report data was collected starting 10 months prior to and during the project and for 3 months after it ended, namely January 2020 through January 2021. Nurse Managers on both the project unit and the comparison unit provided error reports at the end of each month to the project lead via password-secured hospital system email.

Following three weeks of project advertisement using posters, Daily Huddle Meeting announcements, and email communication on both the project and comparison units, the paper SOPS 1. 0<sup>TM</sup> (Appendix) was administered in August-September 2020 with an 75% response rate on the project unit and a 50% response rate on the comparison unit. The post intervention SOPS 1. 0<sup>TM</sup> survey had lower response rates at 45.24% and 43.18% respectively. All survey participants received incentive for completing each survey.

With the small number of staff nurses on the project unit, reliable results depended heavily on response rates. Both surveys were administered on paper to maximize response rates in a small convenience sample. It has been shown that paper surveys have a superior response rate to those electronically administered to nurses (Sorra et al., 2016), particularly when those surveys are collected face to face (Munn & Jones, 2020), and that nurses are most influenced by issue salience in choosing to respond. Surveys were distributed personally by the project lead to increase salience and importance of the project (Kramer et al., 2009), and anonymously collected in lockboxes on the two units. Data was then entered by a statistical consultant into REDCap, which is a secure online data storage and analysis program used by the project hospital system.

## **Data Analysis Plan**

The data was exported for analysis into Stata 15. Each item was evaluated by calculating the percent positive response out of the total number of responses. Each composite was calculated by averaging the positive response rates of items within that composite. Finally, the overall Safety Culture score was calculating by averaging positive response rates on the entire survey. The Wilcoxon Rank Sum test was used compare survey responses before and after intervention on the project unit because it was assumed that the respondents were the same individuals; the same strategy was employed on the comparison unit before and afterward. When the two units' responses were compared to one another, the Mann Whitney test was used for independent groups. Error reporting between the two units was analyzed by comparing median report differences and the data was not expected to be normally distributed. Fisher's Exact Comparison of Proportions Test was used to compare the responses of part time vs. full time nurses since they were discreet categories. Significance level was set at  $p < 0.05$ .

## CHAPTER 4: FINDINGS

The purpose of this project was to normalize conversation about error and increase error reporting and Safety Culture survey scores among acute care pediatric nurses in a children's hospital in the Southeastern United States. A Safety Huddle was added to the Daily Huddle Meeting to share stories of recent errors or irregularities in care and to encourage dialogue about how to mitigate risk. Five objectives were planned to quantify success of the project, but only four were used. Good catch events were not trackable on a unit level and were omitted as a measure. The other four objectives used two data collection methods: monthly Error Report numbers and SOPS 1.0<sup>TM</sup> interval results with special attention to reporting culture composites were used as planned. Each of the four project objectives is addressed here and supporting evidence provided.

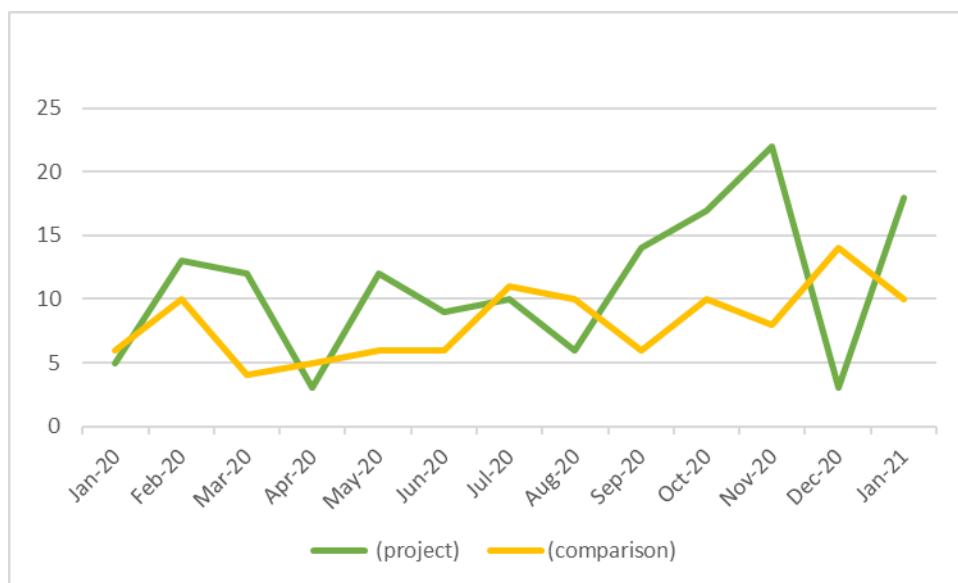
### ***Error Reports***

The first project objective was an increase in error reporting after the intervention, and a 5% increase within three months after the intervention. Monthly Error Reports were logged from January 2020 through January 2021 on the project unit and for the same months on the comparison unit as made available by unit managers. Those monthly numbers were compared for incremental change on the project unit in response to the intervention, and with the comparison unit to identify extraneous factors that may have contributed to a change in reporting. Figure 1 illustrates Error Report numbers on the project unit as compared to the comparison unit over the specified timeframe. For the project unit, it is notable that there was a 21% increase in the number of error reports in the month during the intervention and a 57% increase in the first month after the intervention as compared with the highest monthly event number for the year prior. The significance of this change on the project unit was measured using the Mann-Whitney

test (Figure 2). The increase in number of monthly reports on the project unit in the intervention month and the following month was statistically significant ( $p=0.0141$ ). The second month following the intervention saw a sharp decline in reporting on the project unit (December 2020) followed by a rebound number in January of 2021. This temporary dip may be explained by COVID surge in the project community during that time frame given the fact that the project unit cared for affected patients while the comparison unit did not. For those same months, the comparison unit saw no significant change in Error Reporting when analyzed with the Mann Whitney ( $p= (0.5979)$ ). The second project objective related to error event reporting, a 5% increase in monthly reports, was achieved on the project unit in the month during and just after the intervention but was not sustained beyond that. A 5% increase in error reports did not occur on the comparison unit.

### **Figure 1**

*Error Reporting by Month and Unit*



## Figure 2

*Mann Whitney Analysis of Care Events January-August 2020  
and September-November 2020*

Two-sample Wilcoxon rank-sum (Mann-Whitney) test			
prepost	obs	rank sum	expected
0	8	36	48
1	3	30	18
combined	11	66	66
unadjusted variance		24.00	
adjustment for ties		-0.11	
<hr/>			
adjusted variance		23.89	
 Ho: project(prepost==0) = project(prepost==1)			
z = -2.455			
Prob >  z  = 0.0141			
Exact Prob = 0.0121			
p value is 0.0141			

### SOPS 1.0<sup>TM</sup> Composite Scores

The third and fourth project objectives relied on the SOPS 1.0<sup>TM</sup> for measurement of the Overall Perception of Patient Safety Composite, and several composites related to Reporting Culture: Error reporting frequency, Learning from errors, Communication openness, and Non-punitive response to error. Additionally, the ‘overall safety culture score,’ which is an average of all positive survey responses, was compared over time on both the project and comparison units. Analysis of survey findings is illustrated in Table 1.

One goal was that the survey would reflect an overall *Safety Culture Score* of 60% on the project unit after the intervention, an improvement over its 2019 score of 47% and that that same

score would show improvement after the intervention as compared to before. The project unit fell just short of this goal on both measures: with an overall composite score of 59.19% after the intervention as compared to 60.83% before. Both before and after survey scores reflect an improvement over the 2019 survey.

The fourth objective for this project focused on sets of SOPS 1.0<sup>TM</sup> survey questions related to *Overall Perceptions of Patient Safety* and to *Reporting Culture* specifically. The goals related to reporting culture were that composite scores would rise above those measured in the March 2019 survey, that the project unit would show improvement in post-intervention survey composites related to overall perceptions of patient safety and reporting over pre-intervention survey, and that the comparison unit would not show that improvement.

The *Overall Perceptions of Patient Safety* composite declined on both project and comparison units after the intervention when compared to before: the project unit's percent positive responses fell from 46.43% to 43.42 % while the comparison unit fell from 61.05% positive to 56.58%. The first of the 4 specific reporting culture composites was *Frequency of Events Reported*. Not only did this composite value not rise after the intervention on the project unit (42.86% pre-intervention and 41.07% post, p=0.8342), but both scores were noted to be well below that measured in 2019 (68%). On the comparison unit, responses to the *Frequency of Events Reported* composite fell also, but to statistically significant degree from 58.33% to 40.35% (p=0.0432). For the *Feedback and Communication about Error* composite, positive responses declined in the post- survey on both units when compared to the pre-intervention survey, but to a lesser degree on the project unit (61.94% before and 57.89% afterward). For the *Communication Openness* composite, the project unit positive responses rose from 61.91% to 68.42% which is notable but not statistically significant (p=0.4294). This was the only reporting

composite item to increase after the intervention, and a comparable rise did not occur on the comparison unit, instead there was a decrease noted (72.22% before and 64.91% after) (p=0.3742).

**Table 1**

***SOPS 1.0<sup>TM</sup> Pre-Intervention and Post-Intervention on Project/Comparison Units: Overall Perceptions of Patient Safety, Reporting Composites***

<b>Composite</b>	<b>2019 survey</b>	<b>Pre-Intervention %Positive Responses (positive/total responses)</b>	<b>Post-Intervention % Positive Responses (positive/total responses)</b>	<b>p-value (*statistically significant change)</b>
<b><i>Overall safety culture score</i></b>				
Project Unit	47	60.83%	59.19%	0.9112
Comparison Unit		64.72%	58.10%	0.6111
<b><i>Overall perceptions of patient safety</i></b>				
Project Unit	47	46.43% (52/112)	43.42% (33/76)	p = 0.6848
Comparison Unit		61.05% (58/95)	56.58% (43/76)	p = 0.5559
<b><i>Frequency of events reported</i></b>				
Project Unit	<b>68</b>	42.86%	41.07%	p = 0.8342
Comparison Unit		58.33%	40.35%	p = 0.0432*
<b><i>Feedback and communication about error</i></b>				
Project unit	<b>66</b>	61.90% (52/84)	57.89% (33/57)	p = 0.6342
Comparison Unit		69.44% (50/72)	56.14% (32/57)	p = 0.1205
<b><i>Communication openness</i></b>				
Project Unit	<b>66</b>	<b>61.91% (52/84)</b>	<b>68.42% (39/57)</b>	<b>p = 0.4294</b>
Comparison Unit		<b>72.22% (52/72)</b>	<b>64.91% (37/57)</b>	p = 0.3746
<b><i>Nonpunitive response to error composite</i></b>				
Project Unit	<b>33</b>	70.24% (59/84)	50.88% (29/57)	p = 0.0203*
Comparison Unit		77.78% (56/72)	66.67% (38/57)	p = 0.1603

Aside from the Reporting Culture composites that were the focus of this project, the SOPS 1.0<sup>TM</sup> also uses structured questions to measure the other mentioned composites related to teamwork within and between units, supervisor expectations and actions about patient safety,

organizational learning, hand-offs and transitions, as well as a section for free text responses. It is noteworthy that the few participants who chose to add free text responses, made comments related to staffing shortages (66%). Also striking is that when surveys were sorted by number of hours worked using a Fisher's exact test, part-time RNs who had worked between 20 and 39 hours were less positive in their survey responses than were staff who had worked 40-59 hours as illustrated in Figure 3 ( $p= 0.038$ ).

**Figure 3**

*Fisher's Exact Comparison of Percent Positive Responses in Nurses Who Worked >40 hours as compared to RNs Who Worked <40 hours.*

comm_5	background_3		Total
	2	3	
3	3 23.08	0 0.00	3 15.79
4	9 69.23	2 33.33	11 57.89
5	1 7.69	4 66.67	5 26.32
Total	13 100.00	6 100.00	19 100.00
Fisher's exact =			0.038

## CHAPTER 5: SIGNIFICANCE, LIMITATIONS, AND RECOMMENDATIONS

Like all contemporaneous projects, the success of this project was likely impacted by the long shadow cast by the COVID-19 pandemic. Response rates on the post-intervention surveys were lower on both units, which may have been due to staffing shortages causing increased workload (less time to complete survey). Nurses' responses to both pre-intervention and post-intervention surveys clearly indicated preoccupation with larger safety issues related to patient acuity and stretched staffing. The project unit was the home to patients under investigation for COVID-19 or had tested positive for COVID-19, and some staff had chosen to redeploy to other work environments due to personal risk factors. Nurses had not only patient risks to consider but personal risks as well. They recycled personal protective equipment, wore hospital-issued scrubs while working, and continually changed workflow with fluid system and national guidelines. It is possible that these circumstances affected the SOPS 1.0<sup>TM</sup> survey results and rates of error reports.

The most hopeful result of this project was the substantial increase in error reporting on the project unit during and shortly after the intervention that was not mirrored on the comparison unit. Event reporting reflects understanding of its value and commitment to the safety of patients. This was the overriding goal of this project. Coupled with the increase in the Communication Openness composite on the project unit, though not statistically significant, these findings give the indication that the intervention had some impact on nurse behavior (completing error reports) and on perceptions of safety culture. The Communication Openness composite was the only composite that rose from pre- to post- surveys and this increase only occurred on the project unit; all other composite values on both units fell potentially indicating extraneous influences on survey scores. Such cultural decline in a short timeframe begs the question about what other

factors may have influenced nurse perceptions of patient safety. The timing of this project during a regional peak on COVid cases and heavy workflow for hospital staff may be implicated.

It was worth mentioning that there appeared to be a counter-intuitive correlation between hours worked and survey responses: nurses that worked more hours were more likely to rate reporting culture composites more favorably, which may imply that nurses who worked more hours were more likely to have been present for the intervention on one or more occasions ( $p=0.038$ ). Additionally, the overall Patient Safety Culture score did not increase to the desired level but came remarkably close to doing so the overall score did increase to a level above that indicated on the 2019 survey that inspired this project.

Regardless of unit, the post- intervention survey had more neutral responses which could indicate a lack of motivation to think about or consider the responses (Denman et al., 2018). This may have resulted in part from an error in data collection that necessitated repeating the post-intervention survey on both units. While necessary to maintain integrity of collected data, the repetition may have had an impact on nurse fatigue and motivation to provide thoughtful response.

## **Significance**

The literature supports error reporting as a powerful means of making patients safer. In the spirit of HRO, the more attention paid to ‘weak signal’ the better. If low level ‘weak signal’ events are tended to, they have the power to prevent more catastrophic events entirely. SPS lives this truth through committed transparent interaction among hospital systems so that all can learn from one event. But as Paul Pronovost said, “change occurs at the speed of trust” (2017, para.5) Whether on the individual level, the unit level, or the hospital level, there must be a milieux of

trust that empowers disclosure and reporting. SPS has stated that development of this environment, a Safety Culture, is the most critical step toward addressing patient safety in a meaningful and sustainable way (Lyren et al., 2018). Willingness to report indicates safety motivation (Faraq et al., 2019) and information sharing within an organization enhances workers' commitment to patient safety (Clarke & Taylor, 2018). While the goals for this QI project were not met in their entirety, the increase in event reporting on the project unit following the intervention (without change in the comparison unit) and the change in survey responses related to Communication Openness lead one to optimism.

### **Implications and Recommendations**

The moral and practical imperatives to report are real: systematic tracking of events and near events allows learning and informs process change to keep patients safer. Few interventions have a proven track record to reduce harm (Gleeson et al., 2020). An intervention that engages team members on a human level to create a trusting and transparent environment (the Safety Huddle) brought about some degree of success in measures of communication and in actual reporting. Were one to implement this project on a single unit while maintaining all others the same, new knowledge could be created on the power of personal narrative to increase reporting even without use of the SOPS survey. The goal of this QI project was to inspire a small incremental change in care event reporting and in reporting culture as measured by the SOPS 1.0™. The increase in care event reporting and increase in perceived Communication Openness on the project unit create impetus to repeat the project and to scale the projects to other units in the system. The Safety Huddle Intervention could readily be included in the daily huddle meeting on an ongoing basis as a crucial conversation about daily work. Sustained daily conversation about patient safety may increase reporting of events in a more consistent way and

garner change in the culture of the facility in regard to patient safety. This project should be repeated in an environment free from the stress and preoccupation of a pandemic. Using reporting only as a measure of success would streamline the process and make progress toward goals simpler to measure for members of the team. It may also be helpful to conduct focus group interviews with nurses who partake in the intervention to gain further insight and ideas for ongoing improvement.

## **Sustainability**

A brief educational video was created to onboard staff members willing to assist with Safety Huddle delivery. Five individuals in addition to the project lead conducted Safety Huddle over the course of the project. The Huddle scripts were written by the project lead using a template that could readily be used by others to present events identified in monthly reports. These efforts helped ensure the Safety Huddle could be implemented daily during this project. A similar video and template could allow the project unit to sustain this QI effort post-project. Those same tools could arm other hospital units and facilities to replicate this project.

## **Limitations**

There were several limitations to this project. First, the project and comparison units employ relatively few nurses for a sample population, and it was undetermined whether the participants constituted a representative sample of the group as a whole. It is also possible that nurses from elsewhere (travel, float, etc. which were utilized more often during the pandemic) participated in one of the surveys but not on the other or that a single nurse completed the survey twice. Team members with negative commentary may have been more likely to complete the survey than those with positive responses, reflecting self-selection bias. Project results may also have been

affected by response bias because nurses were personally acquainted with the project lead. The two patient units were high acuity areas caring for sick children and their families, so a paper survey may have seemed low on the list of priorities for a given shift, especially for those on the comparison unit who did not experience Safety Huddles. The monthly error reports gave varying details about types of errors, and it may have been possible to distinguish ‘good catch’ from error that reached the patient, but the project lead chose to attend to reporting numbers only as a reflection of intent. Further, COVid testing for potential exposure was reported, which may have inflated numbers during the disease surge.

AHRQ commissioned the Westat corporation again to revise the SOPS tool in 2019, the SOPS 2.0<sup>TM</sup>. The newer version of the survey had fewer items, clarified wording, and fewer negatively worded items (Sorra et al., 2019). Use of the updated tool may have provided more valid information than the older tool, which had been chosen in the interest of consistency (to be able to compare responses to 2019).

## **Summary**

It has been 20 years since “To Err is Human” made the truth known about the prevalence of medical error (IOM, 2000). One might draw a parallel between the epidemic of health care related error and the pandemic the world now faces. Mitigation requires intention, humility, collaboration, disclosure, and empowerment. Those closest to the work must lead solutions, and a paradigm shift is required. The choice of theoretical framework for this project was deliberate. Marshall Ganz is a revolutionary who led civil rights protests, California farm workers’ unionization, and most recently championed the election of the first African American President of the United States (Ganz, 2010). The use of public narrative personalizes shared values and solidifies the relationships that make change possible.

Culture change requires both transactional and transformational leadership, and HRO principles can inform the healthcare industry through their preoccupation with failure and ready disclosure. The use of the Huddle Meeting is one example of the influence HRO has had on the healthcare industry, but the nature of that meeting determines its effect on participants. It has been previously stated that transformational leadership, that which engages staff in bidirectional exchange, has potential to improve team members' commitment to patient safety activities (Clarke and Taylor, 2018). A public narrative Safety Culture intervention (the Safety Huddle) during a pandemic had some positive effect on one composite of the SOPS 1.0<sup>TM</sup> related to Communication Openness and resulted in an increase in error reporting by nurses. These positive findings indicate value in the Safety Huddle Intervention, and it is recommended that the project be repeated after the pandemic to gain further data on its potential for improving safety culture and error reporting to ultimately improve patient outcomes.

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## Appendix

# SOPS™ Hospital Survey

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**Version: 1. 0**

**Language: English**

### Note

- For more information on getting started, selecting a sample, determining data collection methods, establishing data collection procedures, conducting a Web-based survey, and preparing and analyzing data, and producing reports, please read the [Survey User's Guide](#).
- For the survey items grouped according to the safety culture composites they are intended to measure, please read the [Items and Composites](#) document.
- To participate in the AHRQ Hospital Survey on Patient Safety Culture Comparative Database, the survey must have been administered in its entirety without significant modifications or deletions:
  - No changes to any of the survey item text and response options.
  - No reordering of survey items.
  - Questions added only at the end of the survey after Section G, before the demographic questions in Section H.

For assistance with this survey, please contact the SOPS Help Line at 1-888-324-9749 or [SafetyCultureSurveys@westat.com](mailto:SafetyCultureSurveys@westat.com).



# Hospital Survey on Patient Safety

## Instructions

This survey asks for your opinions about patient safety issues, medical error, and event reporting in your hospital and will take about 10 to 15 minutes to complete.

If you do not wish to answer a question, or if a question does not apply to you, you may leave your answer blank.

- An “**event**” is defined as any type of error, mistake, incident, accident, or deviation, regardless of whether or not it results in patient harm.
- “**Patient safety**” is defined as the avoidance and prevention of patient injuries or adverse events resulting from the processes of health care delivery.

## SECTION A: Your Work Area/Unit

In this survey, think of your “unit” as the work area, department, or clinical area of the hospital where you spend most of your work time or provide most of your clinical services.

What is your primary work area or unit in this hospital? Select ONE answer.

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> a. Many different hospital units/No specific unit | <input type="checkbox"/> h. Psychiatry/mental health | <input type="checkbox"/> n. Other, please specify<br><div style="border: 1px solid black; width: 150px; height: 30px; margin-top: 5px;"></div> |
| <input type="checkbox"/> b. Medicine (non-surgical)                        | <input type="checkbox"/> i. Rehabilitation           |  |
| <input type="checkbox"/> c. Surgery  | <input type="checkbox"/> j. Pharmacy                 |  |
| <input type="checkbox"/> d. Obstetrics                                     | <input type="checkbox"/> k. Laboratory               |  |
| <input type="checkbox"/> e. Pediatrics                                     | <input type="checkbox"/> l. Radiology                |  |
| <input type="checkbox"/> f. Emergency department                           | <input type="checkbox"/> m. Anesthesiology           |  |
| <input type="checkbox"/> g. Intensive care unit (any type)                 |  |  |

### **SECTION A: Your Work Area/Unit (Continued)**

**Please indicate your agreement or disagreement with the following statements about your work area/unit.**

Think about your hospital work area/unit...	Strongly Disagree ▼	Disagree ▼	Neither ▼	Agree ▼	Strongly Agree ▼
1. People support one another in this unit .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. We have enough staff to handle the workload.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. When a lot of work needs to be done quickly, we work together as a team to get the work done.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. In this unit, people treat each other with respect .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5. Staff in this unit work longer hours than is best for patient care .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
6. We are actively doing things to improve patient safety	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
7. We use more agency/temporary staff than is best for patient care .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
8. Staff feel like their mistakes are held against them .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
9. Mistakes have led to positive changes here .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
10. It is just by chance that more serious mistakes don't happen around here.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
11. When one area in this unit gets really busy, others help out .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
12. When an event is reported, it feels like the person is being written up, not the problem .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
13. After we make changes to improve patient safety, we evaluate their effectiveness .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
14. We work in "crisis mode" trying to do too much, too quickly .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
15. Patient safety is never sacrificed to get more work done .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
16. Staff worry that mistakes they make are kept in their personnel file.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
17. We have patient safety problems in this unit .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
18. Our procedures and systems are good at preventing errors from happening.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

## **SECTION B: Your Supervisor/Manager**

Please indicate your agreement or disagreement with the following statements about your immediate supervisor/manager or person to whom you directly report.

	Strongly Disagree ▼	Disagree ▼	Neither ▼	Agree ▼	Strongly Agree ▼
1. My supervisor/manager says a good word when he/she sees a job done according to established patient safety procedures.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. My supervisor/manager seriously considers staff suggestions for improving patient safety .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. Whenever pressure builds up, my supervisor/manager wants us to work faster, even if it means taking shortcuts .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. My supervisor/manager overlooks patient safety problems that happen over and over .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

## **SECTION C: Communications**

How often do the following things happen in your work area/unit?

Think about your hospital work area/unit...	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼
1. We are given feedback about changes put into place based on event reports.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. Staff will freely speak up if they see something that may negatively affect patient care .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. We are informed about errors that happen in this unit .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. Staff feel free to question the decisions or actions of those with more authority.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5. In this unit, we discuss ways to prevent errors from happening again .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
6. Staff are afraid to ask questions when something does not seem right .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

## **SECTION D: Frequency of Events Reported**

In your hospital work area/unit, when the following mistakes happen, how often are they reported?

	Never ▼	Rarely ▼	Some-times ▼	Most of the time ▼	Always ▼
1. When a mistake is made, but is <u>caught and corrected before affecting the patient</u> , how often is this reported? .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. When a mistake is made, but has <u>no potential to harm the patient</u> , how often is this reported? .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. When a mistake is made that <u>could harm the patient</u> , but does not, how often is this reported? .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

## **SECTION E: Patient Safety Grade**

Please give your work area/unit in this hospital an overall grade on patient safety.

<input type="checkbox"/>				
<b>A</b> Excellent	<b>B</b> Very Good	<b>C</b> Acceptable	<b>D</b> Poor	<b>E</b> Failing

## **SECTION F: Your Hospital**

Please indicate your agreement or disagreement with the following statements about your hospital.

<b>Think about your hospital...</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neither</b>	<b>Agree</b>	<b>Strongly Agree</b>
	▼	▼	▼	▼	▼
1. Hospital management provides a work climate that promotes patient safety.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. Hospital units do not coordinate well with each other .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. Things "fall between the cracks" when transferring patients from one unit to another.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. There is good cooperation among hospital units that need to work together .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5. Important patient care information is often lost during shift changes.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
6. It is often unpleasant to work with staff from other hospital units .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
7. Problems often occur in the exchange of information across hospital units.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
8. The actions of hospital management show that patient safety is a top priority .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
9. Hospital management seems interested in patient safety only after an adverse event happens .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
10. Hospital units work well together to provide the best care for patients .....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
11. Shift changes are problematic for patients in this hospital.....	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

**SECTION G: Number of Events Reported**

**In the past 12 months, how many event reports have you filled out and submitted?**

- |  |  |
|--|--|
| <input type="checkbox"/> a. No event reports     | <input type="checkbox"/> d. 6 to 10 event reports    |
| <input type="checkbox"/> b. 1 to 2 event reports | <input type="checkbox"/> e. 11 to 20 event reports   |
| <input type="checkbox"/> c. 3 to 5 event reports | <input type="checkbox"/> f. 21 event reports or more |

**SECTION H: Background Information**

This information will help in the analysis of the survey results.

**1. How long have you worked in this hospital?**

- |  |  |
|--|--|
| <input type="checkbox"/> a. Less than 1 year | <input type="checkbox"/> d. 11 to 15 years   |
| <input type="checkbox"/> b. 1 to 5 years     | <input type="checkbox"/> e. 16 to 20 years   |
| <input type="checkbox"/> c. 6 to 10 years    | <input type="checkbox"/> f. 21 years or more |

**2. How long have you worked in your current hospital work area/unit?**

- |  |  |
|--|--|
| <input type="checkbox"/> a. Less than 1 year | <input type="checkbox"/> d. 11 to 15 years   |
| <input type="checkbox"/> b. 1 to 5 years     | <input type="checkbox"/> e. 16 to 20 years   |
| <input type="checkbox"/> c. 6 to 10 years    | <input type="checkbox"/> f. 21 years or more |

**3. Typically, how many hours per week do you work in this hospital?**

- |   |  |
|---|--|
| <input type="checkbox"/> a. Less than 20 hours per week | <input type="checkbox"/> d. 60 to 79 hours per week    |
| <input type="checkbox"/> b. 20 to 39 hours per week     | <input type="checkbox"/> e. 80 to 99 hours per week    |
| <input type="checkbox"/> c. 40 to 59 hours per week     | <input type="checkbox"/> f. 100 hours per week or more |

**SECTION H: Background Information (continued)**

**4. What is your staff position in this hospital? Select ONE answer that best describes your staff position.**

- |  |   |
|--|---|
| <input type="checkbox"/> a. Registered Nurse                             | <input type="checkbox"/> j. Respiratory Therapist   |
| <input type="checkbox"/> b. Physician Assistant/Nurse Practitioner       | <input type="checkbox"/> k. Physical, Occupational, or Speech Therapist   |
| <input type="checkbox"/> c. LVN/LPN                                      | <input type="checkbox"/> l. Technician (e.g., EKG, Lab, Radiology)  |
| <input type="checkbox"/> d. Patient Care Asst/Hospital Aide/Care Partner | <input type="checkbox"/> m. Administration/Management   |
| <input type="checkbox"/> e. Attending/Staff Physician                    | <input type="checkbox"/> n. Other, please specify:<br><div style="border: 1px solid black; height: 30px; width: 100%;"></div> |
| <input type="checkbox"/> f. Resident Physician/Physician in Training     |   |
| <input type="checkbox"/> g. Pharmacist                                   |   |
| <input type="checkbox"/> h. Dietician                                    |   |
| <input type="checkbox"/> i. Unit Assistant/Clerk/Secretary               |   |

**5. In your staff position, do you typically have direct interaction or contact with patients?**

- |  |
|--|
| <input type="checkbox"/> a. YES, I typically have direct interaction or contact with patients.       |
| <input type="checkbox"/> b. NO, I typically do NOT have direct interaction or contact with patients. |

**6. How long have you worked in your current specialty or profession?**

- |  |  |
|--|--|
| <input type="checkbox"/> a. Less than 1 year | <input type="checkbox"/> d. 11 to 15 years   |
| <input type="checkbox"/> b. 1 to 5 years     | <input type="checkbox"/> e. 16 to 20 years   |
| <input type="checkbox"/> c. 6 to 10 years    | <input type="checkbox"/> f. 21 years or more |

**SECTION I: Your Comments**

Please feel free to write any comments about patient safety, error, or event reporting in your hospital.