Actionable Patient Safety Solutions (APSS):

Creating a Foundation for Safe and Reliable Care

How to use this guide

This guide gives actions and resources for creating a foundation for safe and reliable care. In it, you'll find:

Patient Safety MOVEMENT

Executive Summary

The Problem

Despite 20 years of effort in improving the quality and safety of healthcare, medical error continues to result in more than 200,000 deaths in the US alone every year and is the 14th leading cause of global disease burden, comparable to tuberculosis and malaria (WHO, 2019). Most of these events are preventable and we have learned a great deal from highly reliable industries such as aviation and nuclear power about how we can reduce errors by continuously learning from mistakes and anticipating system and process breakdowns. However, implementing these best practices and working towards high reliability has been optional for healthcare up to this point. Patients will continue to die or suffer significant harm until all healthcare organizations commit to designing safer, more reliable systems.

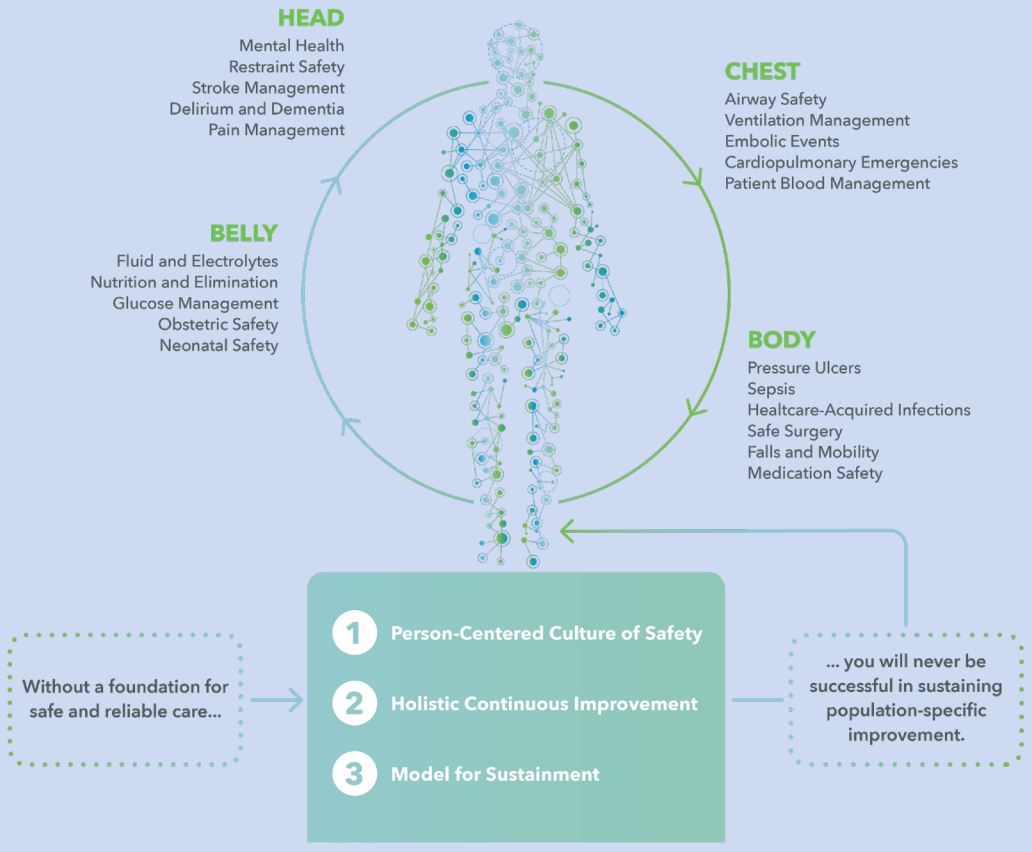
The Cost

US medical errors cost $20 billion annually (Rodziewicz and Hipskind, 2020) and globally, this number is estimated to be in the trillions (Slawomirski et al., 2017), accounting for 15% of total hospital expenditure (Slawomirski et al., 2017). Additionally, healthcare organizations routinely waste precious time and resources focusing on population- or disease-specific improvement efforts that are not sustained due to the lack of an established foundation of safety and reliability to support these efforts long-term. Although doing the hard work of changing cultural norms and redesigning care systems is difficult and can be costly initially, it is a necessary step that all healthcare organizations need to take to ensure long-term viability.

The Solution

Organizations that want to sustain improvement long-term and eliminate harm from preventable medical error must first establish a solid foundation for safety and reliability that includes three critical components: **a person-centered culture of safety, a holistic, continuous improvement framework, and an effective model for sustainment.** The creation of this foundation must be led by the governing body (for example, the Board of Directors) and senior leadership, be embraced by everyone in the organization, and actively include patients and family members.

This document provides a blueprint that outlines the actionable steps organizations should take to successfully **implement the three critical components of a safe and reliable foundation.** This document is revised annually and is always available free of charge on our website. Hospitals who make a formal commitment to establish their foundation for patient safety and share their successes on the PSMF website have access to an additional level of coaching and consulting services.



Leadership Checklist

It is the responsibility of senior leaders and the executive team to drive and reinforce organizational change by demonstrating their personal commitment to creating a new foundation of safety and reliability. When senior leaders are genuinely engaged and supportive of the culture change, frontline leaders and staff will be more willing to openly share information, report potential problems or adverse events, and engage with the movement themselves. This work is difficult, requires strategy, and takes several years to adopt, requiring strong leadership at all levels. See the What We Know section for more tactical strategies for implementation and sustainment.

The following leadership checklist includes the 12 essential elements that organizations should focus on to become highly reliable.

Person-Centered Culture of Safety

- ☐ Clearly set the expectation that the safety of *any person who enters the facility* is the number one priority of all leaders, staff, and providers.
- ☐ Actively engage patients and families as equal members of the care team and in organizational improvement work.
- ☐ Be transparent, open, and honest about organizational problems and recognize the efforts of all.
- ☐ Establish a blame-free Just Culture that focuses on system problems rather than individual mistakes.

Holistic, Continuous Improvement

- ☐ Choose, apply, and reinforce a consistent framework for performance improvement (i.e., PDSA, PDCA, DMAIC, etc.) to ensure that everyone speaks the same language.
- ☐ Create a process to oversee, track, and communicate the impact of all organizational improvement efforts to ensure effective resource allocation and alignment of new changes. Ensure all population-specific performance improvement projects begin with a foundation for safe and reliable care.
- ☐ Use valid and reliable data to drive decision-making, maximizing the use of electronic systems.
- ☐ Make it easy for the frontline to know what to do by developing clear, succinct documents to guide practice.

Model for Sustainment

- ☐ Provide multiple opportunities for *communication* of new changes to the frontline and distinguish the difference between what requires communication versus education.
- ☐ Design an organization-wide education plan that aligns with the continuous improvement schedule.
- ☐ Focus on developing the leadership team and create succession plans.
- ☐ Make the discussion of human factors a component in all safety and improvement work.

Strategic Planning

Becoming a highly reliable organization is not easy and will require a shift in the organizational strategic planning process. The process is essentially the same as any performance improvement project but is analyzed at a higher level. The "project team" is the entire leadership team. It is important to have representation from all disciplines and to thoughtfully and methodically progress through the same PDSA process you would apply to any performance improvement project, but at a much higher level. This effort will result in the identification of both short-term and long-term organizational improvement goals.

- ☐ **Understand what is currently happening and why.** This requires a deep assessment of the current state of your organization. Teams should spend a good amount of time analyzing and validating data, but the most important action here is to go to the point of care and observe. The core components for assessment include:
  - *Data Analysis:* Assess the overall health of the organization by analyzing all performance data in a holistic fashion. If you don't already have one, create a "scorecard" of all of the data you collect and create charts and graphs so it is easy to identify trends. For example, you may find a relationship between the utilization of restraints and an increase in falls, or that your turnover rates correlate with your patient satisfaction scores. Bring your leadership team together to be sure that there is a clear understanding of how the data is collected and examine the reliability and validity of the data.

ORGANIZATIONAL SCORECARD	
Safety	Serious Safety Events (HPI, 2011) Precursor Safety Events (HPI, 2011) Near Miss Safety Events (HPI, 2011) Employee Safety Events
Quality	Adverse Drug Events (ADEs) Restraint Days Healthcare-Acquired Infections (HAIs) Patient Falls Obstetric Events Pressure Ulcers/Injuries Venous Thromboembolism (VTE) Readmission rates Mortality rates Regulatory survey compliance scores
Service	Patient Satisfaction Scores Grievances and complaints Number of patients and families on improvement committees
People	Turnover rates Vacancy rates Staff satisfaction results
Financial Health	Average Length of Stay (ALOS) Operating margin Salary and supply costs

Table 1: Sample organizational scorecard data, sometimes referred to as KPIs (Key Performance Indicators).

  - *Leadership Safety and Reliability Assessment:* Have all leaders complete a reliability assessment with their teams and collate the results to get an overall picture of current perceptions.
  - *Process Mapping:* Create a process map of the entire continuum of care and involve the frontline to ensure its accuracy. Even if team members work in the area daily, examining existing processes from every angle is generally an eye-opening experience. Focus on what's actually happening, rather than what the policy says. Be sure to capture all points of care from both the provider and patient perspectives: admission, routine care, discharge, transition, and follow up. Have the team identify all of the potential best practice gaps. Consider following a patient through their journey or simulating the experience to understand gaps the frontline may not see. This may take several meetings to complete thoroughly. Brainstorm with the advisory team to understand why the gaps exist, using whichever root cause analysis tool your organization is accustomed to (IHI, 2019).

CARE CONTINUUM PROCESSES TO ASSES	
Preadmission • Primary care • Urgent/emergent outpatient care • Surgical outpatient care • Labor & delivery triage	• Diagnostic testing • Nutrition and meals • Therapies • Procedures • Daily planning for discharge
Admission • Admission orders • Bed request • Transfer/bed placement • Admission assessment	**Discharge** • Preparation for discharge • D/C education • D/C orders
Routine Care • Routine reassessment • Medication administration	**Transitional Care** • Transportation • Handoff communication • Follow up

Table 2: Assess these processes to understand where the gaps are in your organization

- ☐ **Prioritize the gaps to be addressed and develop your strategic plan.** Examine all of the gaps identified through data analysis, the leadership safety and reliability assessment, and the process map. Consider the cost effectiveness, time, potential outcomes, and realistic possibilities of each gap identified. Determine which are priorities of focus for the organization, and categorize according to short-term and long-term goals. The entire leadership team should participate in this exercise, as they can inform the group about ongoing or planned improvement work in their department that may be competing for the same internal resources. Share identified goals with staff, patients, and families to validate priorities.

- ☐ **Create a global improvement plan for the first year and an annual plan for subsequent years.** Include your short term goals on this plan, and develop a calendar for improvement. Develop a process for leadership oversight of all outcomes from these projects. Be sure to consider what you can realistically complete in a year; most organizations will not successfully complete 100 projects in a year, so keep the number of projects manageable. Develop an ongoing 3-year road map and revisit it annually to modify, update, or expand as needed. Establish an improvement team and identify a senior leader to act as an advisor and champion for each project.

- ☐ **Evaluate outcomes, celebrate wins, and adjust the plan when necessary.** Report both process and outcome metrics on all projects. Review progress with the leadership team at least monthly and discuss what is going well and what is not. Identify barriers to completion of action plans, and adjust the plan if necessary. Identify any other improvement work that may be happening across the organization that could impact success, especially if those projects will compete for the same resources. Once identified, determine whether these projects will be added to the strategic plan, postponed, or incorporated into an existing project. Create opportunities to share lessons learned across the organization to spread successful change. This is hard work, so take the time to celebrate with your improvement teams and disseminate your results to external healthcare networks.

Safety Responsibilities for Everyone

Quality improvement and patient safety efforts in the past have been championed by individuals within teams who are experts in their specific discipline. While this clinical expertise for best practice is essential, often, the success of these projects is compromised due to lack of effective implementation and support of a foundation within the organization.

A fundamental attribute of a foundation for safe and reliable care is the adoption of the following from **all** within the organization:

PERSON-CENTERED CULTURE OF SAFETY

- Communicate openly and suggest areas for improvement.
  - Leverage the CANDOR (Communication and Optimal Resolution) approach.
  - Participate in rounds to improve teamwork and communication and include the patient and family members whenever possible.
- Support teammates by giving positive feedback, helping others through mistakes, and encouraging others to report near misses or errors.
- Genuinely welcome the patient and family members as part of the care team.
- Report any errors or process concerns and follow up on reports made.
- Look for system causes, rather than assuming an individual mistake. Recognize that errors are normal, but that systems must be designed to avoid harm. While mistakes are inevitable, harm can be prevented.
- Question anything that doesn't seem right.
  - Understand the senior levaders' plan for process adjustments moving forward to ensure those gaps are mended and the mistakes aren't repeated.
- Take ownership of adopting a healthy work environment and don't tolerate lateral violence or bullying. Report behaviors that impact the physical or emotional well being of the team.
- Hold team members accountable and learn from yours and others' mistakes.
  - Participate in root cause analysis workshops and debriefing sessions after the event.
  - Reflect on all opportunities for personal and team improvement in the future to avoid the same error.

HOLISTIC, CONTINUOUS IMPROVEMENT

- Leverage the organization's chosen method of communication in all interactions: written, digital, and verbal. Make every effort to learn this 'improvement language'.
- Follow the organization's policies. If the policy isn't right or can be improved, organize a meeting with leaders to suggest changes to the policy.
- Understand and use the resources available.
  - Critically think about how your expertise in your role can be leveraged to offer further improvement.
- Help leadership understand the day-to-day barriers. Speak up if something doesn't make sense.
  - Suggest any opportunity for process improvement for patient safety.
  - Adopt risk management thinking and be conscious about unsafe dynamics in a day to day routine.
  - Act as you normally would when members of leadership are rounding- they are there to understand how to help!
- Participate in educational and improvement activities and ask questions.
  - Share educational material with teammates.
  - Reflect on how these teachings can be applied in your practice.
- Prepare for weekly senior leadership rounds by maintaining a mental log of issues or concerns to voice.
  - Utilize the feedback loop process established by leaders for open and honest communication and reporting.
- Follow your organization's progress.
  - Watch for and share the metrics published around the performance improvement plans of focus.
- Treat everyone as your equal.

MODEL FOR SUSTAINMENT

- Continue reporting opportunities for improvement.
  - Report any variations from the established protocol.
  - Use the electronic adverse event reporting software platform and response system.
- Listen for and learn from performance improvement initiatives throughout the organization and speak up if you have an idea for synergy with your own department's projects.
- Expect ongoing change. Improvement is never stagnant. Commit to lifelong learning.
- Schedule and participate in facilitated debriefs and daily safety huddles for enhanced teamwork and communication.
- Ask to receive routine briefings and follow-up on safety culture performance indicators and significant events.
- Take ownership of the organization's culture of safety when onboarding and interacting with new team members.

What We Know About Creating a Foundation for Safe and Reliable Care

History: Throughout much of history, medical errors went unacknowledged and unchallenged. These adverse events were thought to be the 'cost of doing business'. More recently, although increasingly acknowledged, this newfound recognition of the unacceptability of medical error was accompanied by a culture of blame. Although these medical errors were starting to be seen as unacceptable, the processes for addressing and resolving medical errors upon their occurrences were inadequate. Often, the behaviors of those in leadership did not match the verbal statement, public facing image, or expectations of the frontline staff. Additionally, patients were rarely treated as an essential component of their own care team.

These problems are rooted in our paternalistic professions in healthcare. Consider the religious and militaristic overtones and the gender roles within medicine. Clinicians historically have viewed themselves as there to heal the patient and patients and family members accepted this with admiration. At the same time, they learned how to care for patients through fear and intimidation.

Upon release of the Institute of Medicine's *To Err is Human* in 1999, healthcare organizations quickly identified patient safety as a key issue of concern. Hospitals begin instituting performance improvement projects focused on improving patient safety in key areas, such as sepsis, healthcare-associated infections, postpartum hemorrhage, delirium, and medication safety. These efforts were fragmented, did not consider holistic improvement, and were often unsustainable if the champion of the improvement project left the institution or received a promotion. Therefore, these siloed efforts have exacerbated the fragmentation and complexity of the already-nuanced healthcare system.

We have learned a great deal over the past two decades from highly reliable industries, such as nuclear power and aviation, about the importance of establishing a safe culture and a solid foundation that supports ongoing improvement work. However, this has not been a requirement for hospitals, and many organizations "talk the talk", but don't necessarily "walk the walk". This can be hard to accept, because everyone in healthcare has been working so hard, and people really do believe that what they are doing is the right thing. Many healthcare systems have spent a great deal of time and money hiring consultants, developing safer processes, and creating new positions in quality and safety, and yet medical error continues to occur. It's important to be proud of how far we have come, while also realizing that we still have a very long way to go. Real, fundamental change is now essential, and becoming highly reliable should no longer be optional for healthcare organizations.

Current State

Despite widespread efforts among healthcare organizations to improve patient safety and healthcare quality, preventable patient deaths still happen. Such events cause unnecessary human suffering for those giving and receiving medical attention, and waste billions of dollars each year.

Studies show:

- More than 200,000 preventable patient deaths may happen each year in US hospitals
- Preventable medical harm ranks as the 3rd leading cause of death in the US (Makary & Daniel, 2016).
- Patient safety is the 14th leading cause of global disease burden (WHO, 2019)
- Approximately 1 in 10 adverse events occur in hospitalized patients in high income countries but, overall, two-thirds of adverse events occur in low and middle income countries (WHO, 2019)
- Up to one-third of patients are unintentionally harmed during a hospital stay (James, 2013; Classen et al., 2011)

A combination of continued preventable safety events, growing public vigilance, patient and provider/staff dissatisfaction, and payment systems that penalize poor outcomes all serve as leverage to change how hospitals address quality and safety. However, even with this strong motivation and focused effort to improve safety and quality, evidence suggests that the risk of harmful error may be increasing. Many organizations are still pursuing patient safety improvement projects through a disease- or population-specific lens. Without a foundation of safety and reliability, these improvements will remain fragmented and unsustainable.

The Highly Reliable Organization

Being "highly reliable" means operating for extended periods of time without any errors. Such organizations anticipate problems before they occur and focus on system and process breakdowns rather than individual mistakes. They are preoccupied with anticipating failure and are reluctant to simplify explanations for successes and failures, while also focusing on reducing the complexity of care processes. By recognizing the interdependence of organization-wide patient initiatives and the need for a fortified backbone, supported by person-centered-culture, involved leadership, support for workers, and ongoing learning systems, organizations can build sustained patient safety systems (IHI, 2020). Leaders across the organization are keenly aware of what is happening operationally and defer to the expertise of the frontline. The entire organization is committed to resilience, meaning that errors are quickly contained when they occur, and the team is empowered to quickly and nimbly improvise as needed (AHRQ, 2008). For more information around applied reliability strategies, see the "Tactical Strategies for Application of Leadership Checklist Principles".

Organizations that effectively create a person-centered culture of safety, a holistic, continuous improvement framework, and an effective model for sustainment will embody these characteristics of highly reliable organizations.

A Person-Centered Culture of Safety

There has been much discussion over the past few decades in healthcare about the importance of person-centered care. There is ongoing debate about what this really means: should we be striving for person-centered care, patient-centered care, or patient and family-centered care? Highly reliable organizations recognize that all three are necessary.

In healthcare, the safety of everyone in the organization should be the focus: patients, families, visitors, staff, leaders, independent practitioners, and vendors. Patient safety isn't possible without focusing on safety for all, and improvement teams should consider this for every project. At the same time, a shift to patient and family-centered care (PFCC) is also necessary. This is not easy to do, as healthcare has traditionally been very patriarchal and clinician-focused. Creating a mission or vision statement that proclaims that your organization provides patient-centered care and displaying this on banners throughout the facility does not change the deeply embedded clinician-centered culture that is healthcare. True change will only occur when this shift in mindset is also accompanied by a focus on creating a culture of safety. (See our Patient and Family Engagement APSS for more information.)

AHRQ PSNET states that the following are key factors to a culture of safety (AHRQ, 2019):

- Acknowledgment of the high-risk nature of an organization's activities and the determination to achieve consistently safe operations
- A blame-free environment where individuals are able to report errors or near misses without fear of reprimand or punishment
- Encouragement of collaboration across ranks and disciplines to seek solutions to patient safety problems
- Organizational commitment of resources to address patient safety concerns

It is important to recognize that employees and providers do not purposefully commit errors and that most errors are failures of complex systems and processes. Respect is essential for effective communication, collaboration, teamwork and decision-making. These are the safety behaviors that drive safety culture and are critical components of every actionable patient safety solution created by the PSMF.

A strong safety culture encourages the care team to identify and reduce risk, as well as to prevent harm. In a poorly defined and implemented culture of safety, staff may conceal errors and fail to learn from them. According to the Institute of Medicine, "The biggest challenge to moving toward a safer health system is changing the culture from one of blaming individuals for errors to one in which errors are treated not as personal failures, but as opportunities to improve the system and prevent harm" (Wall, 2000).

A Holistic, Continuous Improvement Framework

Twenty years ago, quality and safety departments in healthcare were staffed by a handful of individuals, and tasked with preparing the organization for regulatory surveys or mitigating financial risk. Most organizations have since realized how important these departments are, and have made continuous improvement a priority. This was mostly in response to financial incentives and public demand to improve quality, and so our efforts have focused on those metrics that were being scrutinized at any given moment. Teams were created to address the outcomes of specific populations, and improvement generally occurred in siloes.

In most organizations, this has resulted in a "patchwork quilt" of improvement, where the right hand doesn't know what the left hand is improving. Not only does this create confusion for the frontline and add to the complexity of the care environment, it can also be highly inefficient and wasteful for the organization. Consider how many improvement projects require the same resources: time, money, changes to EHR documentation, tools, equipment, supplies, etc. When continuous improvement is happening across the organization, but the results are not evaluated holistically, teams must compete for these resources. Generally, that means that whichever team has the most power or has relationships with the right people are the ones who get the resources they need.

A holistic approach means examining all of the improvement that is occurring across the organization at the same time, just as clinicians do when assessing a patient's treatment needs. In clinical terms, this means completing a head-to-toe assessment and identifying all patient problems, and then evaluating the impact of the treatment for one system on another. The same is true for improvement systems. It is critical that organizations are able to perceive the impact not only on the outcomes each project is measuring individually, but also on how each of those improvement efforts affects each other. Creating a framework that allows visibility of all improvement work at the same time (including department-level projects) allows the organization to better establish priorities, combine efforts when possible, and more effectively allocate resources.

An Effective Model for Sustainment

One of the most difficult tasks for healthcare leaders is sustaining the hard-won changes that are implemented by improvement teams. Most improvement requires people to change their behavior, which is often met with resistance. In addition, the complexity of today's care processes makes it very difficult for the frontline to know what is expected of them. New team members may bring habits from their previous organizations that are not in line with the expectations established in yours. Leaders need to have a deep understanding of how to change the hearts and minds of those whom they are asking to do things differently. This can only be accomplished through establishing effective relationships, including the people who do the work in improving the work, and learning how to motivate change (IHI, 2018).

Leaders must also make it easier for the frontline to know what is expected of them. Healthcare workers are often inundated with policies, procedures, protocols, pathways, order sets, "tip sheets", standard work, and any other number of documents that are intended to guide standardized practice. Consider how many such documents you have in your organization. If you are like most, this can number in the thousands. Also, consider how these documents are written: are they only understandable to attorneys and risk managers, or are they clear and succinct to the average staff member? How many pages of "legalese" must the frontline scroll through before they can find out what it is they are supposed to do?

Is the ability to locate, review, and apply the information in these documents incorporated into training, or does "education" consist of a series of powerpoint presentations and other online training that summarizes the contents and never reinforces *where* to find this information when it is needed later? If this sounds familiar, then your frontline clinicians are likely relying on "group think", rather than practicing according to policy.

Very often, improvement teams will examine a problem and determine that "education" is the solution. This is rarely the case, as generally there are process and system reasons why people don't follow expectations. However, once the system root causes are addressed, the frontline needs to understand what is changing, why, and where they can find more information. Leaders should clearly define the difference between *communication* and *education* and standardize the processes for each.

Leaders must clearly establish *how* information will be communicated (email, newsletter, etc.), and hold staff accountable for the receipt of the information. At the same time, it is important to be judicious in the number of communications sent. Expecting that clinicians care for patients for their entire shift, but also be responsible for reading hundreds of emails each week is unrealistic.

It has long been established that each organization should have a standardized way of communicating patient information during hand-off to reduce errors and ensure that information is not missed. The same concept holds true for the communication of organizational changes and news. Consider applying the SBAR format (or whichever method you choose for clinical interactions) to *all* communications across the organization. Whether information is sent via email, internal memos, or verbally in a meeting, strive to be concise and clear:

- **Situation:** What is the problem we are trying to solve?
- **Background:** Why is it important? What have we learned from the past?
- **Assessment:** What is the current state? What is the expectation? What is the gap?
- **Recommendations:** What is the new process? What are all of the changes you can anticipate?

Communication is effective when you are seeking to provide new or updated information. However, if behavior change is required, then education becomes necessary. In most organizations, the individuals who create education modules do not have any formal training in the development of these activities. If you truly want to change behavior, then a thorough assessment of learning needs must be completed, and the most appropriate activities to meet those needs must be determined. Rarely are these learning objectives met through the completion of an online powerpoint module and an accompanying multiple choice test. Such an approach may be helpful to check the box and "prove" that education was completed, but if you truly want to change behavior, then consider creative ways that you can incorporate simulation into your education curriculum.

This becomes much easier to do when education efforts are aligned with a holistic approach to improvement: instead of each project team and/or department developing educational activities in silos, consider how these efforts can be combined into a handful of simulated scenarios. Additionally, examine your overall educational objectives: if orientation, competency validation, and continuing education activities are not planned as components of an overall curriculum, then the risk of duplication and inefficiency becomes significant.

Finally, an effective leadership development program and incorporation of human factors training across the organization is an essential component of sustainment. Leaders need valid and reliable processes to track compliance while new changes are being implemented, and afterwards on a periodic basis. It is critical that leaders are aware when behaviors begin to slip so that adjustments can be made immediately and that they possess the skill to effectively hold staff accountable for adhering to organizational policy. As with the frontline, strive to make this easy for them to do. Ensure that senior leaders have a clear understanding of what is being asked of the leaders who report to them. It is easy for department managers, especially frontline nursing leaders, to become overwhelmed with staffing, budgeting, rounding, and all of their other responsibilities. In healthcare, there is always too much to do and not enough people to do it, making it difficult to effectively ensure accountability.

All three of these components are necessary to become a highly reliable organization. Begin by honestly assessing your current state, and then create a strategic plan to systematically address any gaps you identify. Consider implementing the following tactical strategies to meet both short- and long-term goals.

Tactical Strategies for Application of the Leadership Checklist Principles

Person-Centered Culture of Safety

Clearly set the expectation that the safety of *any person who enters the facility* is the number one priority of all leaders, staff, and physicians.

Encourage safety as the #1 priority for all staff and teammates.

- ☐ Clearly communicate the new organizational direction to everyone.
- ☐ Obtain a written commitment to safety from leaders, staff, and external physicians.
- ☐ Ensure that safety is the number one topic on all meeting agendas.
- ☐ Make organizational safety goals and initiatives as high a priority as productivity and financial goals.
- ☐ Encourage team members to speak up and "stop the line" when something isn't right.
- ☐ Ensure that newly hired employees in every part of the organization understand the expectations regarding safety.
- ☐ Include the adoption of safety practices as a critical component in performance appraisals.
- ☐ Prioritize health worker and patient safety equally.

Support teammates and other professionals.

- ☐ Create a healthy work environment. Address lateral violence and bullying, and clearly communicate that such behavior will not be tolerated.
- ☐ Empower the frontline to speak up respectfully when errors occur.
- ☐ Make time to debrief with new staff members about their experience.
- ☐ Give positive feedback for safe behavior and recognize individuals or teammates on even seemingly small successes (for example, recognizing the frontline for their ideas, demonstration of safety behaviors, and consistency in process adoption).
- ☐ Build trust by admitting your own errors and praise others who do the same.
- ☐ Encourage teammates to report near misses or errors.
- ☐ Promote resilience, defined as the ability to adapt to the operating environment as needed (Cantu, Tolk, Fritts & Gharehyakheh, 2020).
- ☐ Use tools to promote peer to peer process and outcomes monitoring (for example, Kamishibai Cards).
- ☐ Acknowledge individual mistakes, learn from them, and incorporate the lesson into daily practice thereafter.

Create a simple, standardized reporting system. Emphasize the non-disciplinary nature of the reporting system.

- ☐ Simplify the process of reporting errors and near misses. Devise a process to collect not only clinician feedback, but also feedback from the patients and family members. Plan for how each report will be acknowledged and handled by leadership.
- ☐ Ensure anonymity.
- ☐ Emphasize that reporting an event is not optional, it is part of everyone's job.
- ☐ Implement a "non-retaliation" policy for all staff reporting safety concerns and adopt a psychological safety approach (Edmondson, 2019).
- ☐ Initiate a "Good Catch" program to increase reported events and continuous improvement.
- ☐ Collect and review data about common causes you find when investigating harm events and near-miss events. Use them to identify which systems are most in need of process improvement.
- ☐ Follow up and offer a resolution on reports made with the individual who reported or the larger team, if needed.
- ☐ Use patient stories to serve as examples of how the specific scenario can and should be handled.
- ☐ Use communication tools, such as TeamSTEPPS, to build an infrastructure that supports near miss reporting and accountability.

Actively engage patients and family members as equal members of the care team and in organizational improvement work.

Genuinely welcome the patient and family members as part of the care team by encouraging staff to understand their specific health and home situations, to learn about what matters to them as it pertains to health goals, and to involve them in as many plan of care discussions as possible.

- ☐ Design processes that encourage staff to converse with patients and family members about goals, outcomes, and next steps in their care.
- ☐ Invite patients to participate on improvement committees.
- ☐ Ensure that every patient has an individualized, interdisciplinary plan of care that is well coordinated across the care continuum.
- ☐ Accommodate patient preferences wherever possible.
- ☐ Include the patient and family members as essential parts of the care team.
- ☐ Help staff anticipate a patient's personal barriers to sustained care post-discharge.

- ☐ Employ the points in the "Frontline Professionals" section of the "Person and Family Engagement" Actionable Patient Safety Solution.
- ☐ Teach staff how to understand the discrepancy between provider confidence in their communication with patients the patient and family members as essential parts of what has been communicated.
- ☐ Address social disparities at the community level and upon admission to the hospital. Consider the impact of these disparities in every population-specific improvement project.

Create a partnership between patients and providers to create global healthcare systems that are compassionate and person-centered.

- ☐ Promote platforms such as OpenNotes to promote patient involvement in their care.
- ☐ Welcome patient and family member involvement in board activities. Employ the points in the "Governing Body and Executive Leadership" and "Senior Leaders" sections of the "Person and Family Engagement" Actionable Patient Safety Solution.

Be transparent, open, and honest about organizational problems and recognize the efforts of all.

Communicate openly with staff and patients.

- ☐ Endorse the CANDOR (Communication and Optimal Resolution) approach.
- ☐ Support open discussion of incidents and transparency as essential performance improvement tools.
- ☐ Implement a process for raising concerns, such as the CUS Tool.
- ☐ Allocate specific and consistent time for open dialogue between senior leaders and frontline staff. Ask staff to maintain a mental 'log' of items and thoughts to bring to discussions. These items should be collected and recorded throughout the week to optimize discussion.
- ☐ Ensure team members feel safe admitting they made a mistake. Make time for one on one discussions with team members.
- ☐ Equally recognize efforts made by all, including part time staff and ancillary staff.

When there is an unexpected outcome, including if a preventable medical error causes patient harm, address it with open disclosure among the healthcare team, patient, and family.

- ☐ Provide the needed care, treatment and written and verbal explanations for patients with known cases of medical error.
- ☐ Listen to them. Understand their perspective.
- ☐ Utilize multidisciplinary debriefing models to conduct post-event analysis and participate in immediate informal debriefs as well as formally facilitated debriefs.

Establish a blame-free Just Culture that focuses on system problems rather than individual mistakes.

Embody a "Just Culture" by evaluating all team members and staff by the same standard, regardless of rank (Duthie, 2015).

- ☐ Examine every safety event and determine if it was caused by human error, at risk behavior, or reckless behavior.
- ☐ Console those who make mistakes and counsel those who display at risk behavior, while also drilling down to system and process breakdowns that may have contributed to the event. Discipline reckless behavior and report to state, regional, or national authorities as appropriate.
- ☐ Recognize that authority gradients and power hierarchies exist in all organizations and may inhibit open communication.
- ☐ Ensure nurses and technicians feel comfortable respectfully challenging others with a higher level of perceived authority.
- ☐ Evaluate the team members to ensure that all contribute to a healthy, collaborative work environment and culture.
- ☐ Do not display behaviors that can be considered revenge or favoritism.
- ☐ Ensure that leaders have the skills to hold staff accountable.

Recognize successes and all improvement efforts.

- ☐ Celebrate small wins and reward success.
- ☐ Continuously provide feedback.

Learn from mistakes and hold staff and team members accountable.

- ☐ Acknowledge that human errors are normal, and everyone makes mistakes. Promote a positive perspective instead of a strict focus on what went wrong.

- ☐ After an event or near-miss, have staff take part in finding the root cause and assign staff to specific performance improvements. Offer an actionable, clear resolution after each report of a near miss or medical error to ensure it won't happen again.
- ☐ Track and trend common cause analyses.

Holistic, Continuous Improvement

Choose, apply, and reinforce a consistent theoretical framework for performance improvement (i.e., PDSA, PDCA, DMAIC, etc.) to ensure that everyone speaks the same language.

Educate everyone in the organization on the concepts of performance improvement

- ☐ Clearly define your improvement methodology (IHI: Comparing Lean and Quality Improvement).
- ☐ Relate new terms and concepts to the problem-solving processes that clinicians use on a regular basis: the scientific method and/or nursing process. Limit unnecessary jargon and use language that enhances understanding of the concept.
- ☐ Allow freedom of choice in the improvement tools individuals use, as many people in the organization may have learned these concepts in school or a previous organization, and already have a comfort level with them. Ensure that, regardless of the tool used, teams apply the core principles of improvement science to all projects.

Include those who do the work in improving the work.

- ☐ Avoid making improvement activities overly complex. If you can't bring the frontline to the improvement meetings, then bring the improvement meetings to the frontline in smaller groups and in tailored timeframes..
- ☐ Debrief regularly with the frontline about the results of ongoing improvement activities.
- ☐ Post department scorecards, dashboards, and project plans in conspicuous locations, and ensure they are aligned with the organizational strategic plan.
- ☐ Defer to those most knowledgeable about the process, including patients and family members.

Create a process to oversee the impact of all organizational improvement efforts to ensure effective resource allocation and alignment of new changes. Ensure all population-specific performance improvement projects begin with a foundation for safe and reliable care.

Evaluate your safety and quality committee structure and effectiveness

- ☐ Eliminate the silos among improvement teams and ensure that the right hand knows what the left hand is improving by redesigning your committee structure. Quantify the number of committees you have and how much time is spent in each. Consider all groups across the organization who are involved in any improvement work. Calculate the cost (using an average hourly rate) of this committee work, and repeat this exercise after appropriate committees have been restructured.
- ☐ Determine which committees are working on what initiatives. You may be surprised to see how much of these efforts overlap.

Create a "calendar" of improvement to minimize competition for internal resources.

- ☐ Assign this to an individual, department, or committee.
- ☐ Consider all resources needed for each project and determine what efforts can be combined (i.e., if three groups want to make changes in the electronic documentation system, can it all be accomplished at the same time?)
- ☐ Include all routine and ongoing efforts, such as software upgrades and regulatory survey preparation.

Provide the time and resources necessary for effective, timely improvement.

- ☐ Ensure that adequate staff, resources, and finances are allocated to effectively manage necessary performance improvement plans.
- ☐ Reduce variation in patient care delivery systems and processes by creating standard work.
- ☐ Offer support from quality and safety specialists who can help to facilitate the improvement process.
- ☐ Eliminate barriers to making rapid changes to documentation templates and order sets.
- ☐ Include improvement costs in the annual budget.

Monitor the process on an ongoing, granular level.

- ☐ Set the expectation for leadership to conduct department rounds daily. Make these rounds purposeful and query the team honestly about what is working and what is not.
- ☐ Collect data from leadership rounding. Discern trends, create action items, and follow up on action items.
- ☐ Ensure that leaders understand that their role is to eliminate barriers for the improvement team and to mitigate any areas for concern immediately.
- ☐ Establish a feedback loop for frontline staff and ensure all frontline staff understand the importance of open and honest feedback to their leader.
- ☐ Address staff concerns in a timely manner.
- ☐ Reinforce that the purpose of consistent anticipation and mitigation of even the most infrequent adverse events leads to high reliability (AHRQ, 2008).

Use valid and reliable data to drive decision-making, maximizing the use of electronic systems.

Validate the data on your organizational scorecard (IHI: Successful Measurement for Improvement).

- ☐ Examine where the data is coming from, and identify any additional places that this data may be captured but not included (is there more than one data file in which that this information may be documented?)
- ☐ Ensure that the end-users are entering the information as expected.
- ☐ Eliminate paper data management processes whenever possible.

Measure and trend process and outcome metrics for all improvement projects.

- ☐ Evaluate near misses for opportunities to improve.
- ☐ Review this information regularly with the leadership team and frontline staff. .
- ☐ Examine how data are collected, when, and why. Don't collect data just for the sake of collecting data.

Make it easy for the frontline to know what to do by developing clear, succinct documents to guide practice.

Ensure that every improvement team addresses each of the "6Ps of Clinical Practice" to create consistency for the frontline. For each, determine what already exists in the organization and combine, eliminate, and revise as needed. Create new content only when absolutely necessary.

- ☐ Practice guideline summaries
- ☐ Policies, procedures, and standard work
- ☐ Protocols, pathways, and order sets
- ☐ Patient education material
- ☐ Patient care documentation requirements
- ☐ Professional development activities

THE 6P'S OF CLINICAL PRACTICE
1. **Practice Guideline Summaries:** The number of applicable standards of care and evidence-based guidelines can be overwhelming. Summarizing them in one location provides justification when clinicians question process changes and also serve as a starting point for future improvement work. When possible, link to external summaries such as the free resources provided by the PSMF rather than recreating the wheel.
2. **Policies, Procedures, and Standard Work:** These documents outline the who, what, where, when, and how of processes. They are often redundant and difficult to locate. Beware of departmental documents that may conflict with organizational policy. Whenever possible, combine, condense, and simplify the language used.
3. **Protocols, Pathways, and Order Sets:** Define what a "protocol" is in your organization and differentiate that from a pathway and an order set. Be consistent in where these documents can be found. For example, embed them in workflows and EHR documentation rather than outlining them in policy. Create them as interdisciplinary tools whenever possible.
4. **Patient Education Material:** Often, there is little standardization about what material is provided to patients and families, or the content is complex and difficult to understand. Ensure that education is presented in multiple formats (written, video, different languages, etc.) and meets the health literacy needs of your population. Embed this information into workflows and care processes to make it easy for clinicians to teach at every opportunity, not just upon discharge.
5. **Patient Care Documentation Requirements:** Before adding any additional requirements to documentation, evaluate whether other fields can be combined or eliminated. If using electronic systems, avoid the thought that "it's just one click" and minimize the use of alerts to avoid clinician fatigue. Create "tip sheets" and other visual documents that clearly outline what and how to document critical patient information.
6. **Professional Development Activities:** Clarify whether educational activities are necessary and incorporate into the existing curriculum. Design simulation activities and avoid the use of computer-based modules whenever possible. Draft an SBAR communication to explain the purpose and outcomes of the team's improvement work and how it applies to the specific activity.

Table 3: Each improvement team should assess all current documents that guide practice, both organizational and department-specific. Strive to combine as many as possible to ensure standardization and limit the number of documents that staff must be aware of. Make these documents easy to locate for the frontline, using electronic systems whenever possible. Ensure that they are "bundled".

Simplify integration into the existing environment.

- ☐ Apply improvement tools (IHI Improvement Toolkit) to ensure that the root cause and appropriate drivers are addressed. Engage the frontline to "think outside the box" to develop innovative ways to improve with minimal disruption to processes that are already running smoothly.
- ☐ Encourage staff to voice confusion or misunderstanding of expectations immediately.
- ☐ Ensure the seamless integration of population- and disease-specific protocols into the existing clinical workflows, whether electronic or paper.

Set your team up for success.

- ☐ Make it easy for the frontline to access what they need to know about what is expected of them. If they can't easily locate policies and procedures, they will not follow them.

- ☐ Write guiding documents for the frontline, not the attorneys and risk management.
- ☐ Debrief on a regular basis to solicit team feedback about barriers to sustained compliance. Be sensitive to operations and conduct routine huddles with leadership and staff at a time that is convenient for them.
- ☐ Adjust the plan quickly and nimbly as needed.
- ☐ Use a low threshold condition reporting program for bottom-up communication and organizational learning.

Model for Sustainment

Provide multiple opportunities for communication of new changes to the frontline and distinguish the difference between *communication* versus *education*.

Identify the preferred methods of communication and hold staff accountable for receipt of information. Ensure consistency among leaders and evaluate the effectiveness of each.

- ☐ Email
- ☐ Department whiteboards/huddle boards
- ☐ Internal intranet
- ☐ Newsletters

Ensure that leaders understand the difference between *communication* and *education*.

- ☐ Plan to *communicate* if the goal is to share news or information
- ☐ Plan to *educate* if the goal is to change behavior

Use SBAR to communicate *everything*.

- ☐ Situation: What is the problem we are trying to solve?
- ☐ Background: Why is it important? What have we learned from the past?
- ☐ Assessment: What is the current state? What is the expectation? What is the gap?
- ☐ Recommendations: What is the new process? What are all of the changes you can anticipate? (Here is where the 6Ps fit in).

NON-CLINICAL SBAR COMMUNICATION EXAMPLE
Situation: Recent regulatory surveys have indicated that we are non-compliant with restraint standards. Physically and chemically restraining patients can lead to serious complications, including death, making this a safety priority for our organization. **Background:** We were cited for non-compliance with restraint standards during our last regulatory survey 3 years ago. At that time, our restraint policies and processes were updated and internal chart audits have indicated >95% compliance since then. This data is inconsistent with the current survey findings. **Assessment:** During the survey, inconsistencies were noted in nursing knowledge about our current policies and procedures. A root cause analysis indicated that this was not a knowledge-deficit, but rather the result of conflicting requirements, as there are organizational as well as department-specific policies and procedures. It has also been noted that several fields on the computer-based order sets are not required, and often skipped as a result, and EMR nursing documentation does not flow in the order that assessments are completed. **Recommendation:** Our restraint policies and procedures must be revised once again. Department-specific policies have been eliminated. All staff will adhere to the same organizational standards. Please review the following changes to our restraint processes: • EBP Guidelines: PSMF Actionable Patient Safety Solutions • Organizational Policy 1.2.44: Physical and Chemical Restraint • Lippincott Procedure: Safe Application of Restraints • Standard Work: *Restraint Decision Flowchart* • Order Sets: Restraint Orders for Non-Violent Behavior, Restraint Orders for Violent Behavior • Handout: Restraint Information for Patients and Families • Video: Restraint Information for Patients and Families • Documentation: New Restraint Documentation Requirements Cheatsheet • Review all of the above information and take the quiz • Demonstrate appropriate technique for restraint application; sign up for the skills fair

Table 4: Example of SBAR communication to the frontline using the 6Ps. Note the example links in the Recommendation section would be organization-specific documents, activities, and policies.

Design an organization-wide education plan that aligns with the continuous improvement schedule.

Ensure that there is organizational oversight for all learning, and that effort is made to align all educational efforts, including:

- ☐ Orientation and onboarding
- ☐ Competency validation
- ☐ Continuing education

Use simulation whenever possible.

- ☐ Avoid computer-based modules, which are generally ineffective.
- ☐ Consider low-fidelity simulations using case studies if your organization doesn't have access to a simulation lab.
- ☐ Bring the activity to the frontline, rather than taking them out of staffing.
- ☐ Design activities that incorporate multiple learning opportunities at the same time.

Roll out new improvement expectations in a standardized manner.

- ☐ Present the "6Ps of Clinical Practice" as a complete package for the frontline.
- ☐ Don't waste time creating powerpoint presentations that summarize the changes. Link to the actual revised documents that guide practice.
- ☐ Align the education calendar with the improvement calendar, so that learning needs can be more easily anticipated.

Consider using the same objectives for everything:

- ☐ Locate applicable resources (i.e., the 6Ps).
- ☐ Review practice guideline summaries and applicable policies.
- ☐ Review applicable procedures. Demonstrate competence with associated clinical skill.
- ☐ Discuss applicable plans for care (including protocols, order sets, pathways and care plans).
- ☐ Verbalize appropriate patient education materials for this population.
- ☐ Demonstrate the process for required patient care documentation.

Focus on developing the leadership team and create succession plans.

Establish a formal leadership development program.

- ☐ Develop an assessment tool to determine the learning needs of all new leaders.
- ☐ Design individual development plans for each leader. Incorporate outcomes into the annual evaluation process.
- ☐ Create robust learning opportunities that allow for experiential learning. Limit the time sitting in lectures.
- ☐ Focus on developing the skills of accountability, change management, and communication.
- ☐ Provide one-on-one coaching as needed.

Create a succession plan for each leader.

- ☐ Review personal and professional goals with each leader annually.
- ☐ Have each leader identify high performers who could be groomed for leadership roles.
- ☐ Empower leaders to coach and mentor leadership skills in their employees.
- ☐ Stress that everyone has strengths and weaknesses. The goal is to highlight each other's strengths and support each other's weaknesses.

Make the discussion of human factors a component in all safety and improvement work.

Anticipate that staff will gradually revert back to previous habits.

- ☐ Avoid implementing too many changes at once through ongoing review of improvement and education calendars.
- ☐ Ensure that leaders routinely debrief with their teams to determine what is working and what is not. Solicit honest feedback.
- ☐ Develop "spot checks" for completed projects to measure sustainment. Immediately address any slippage.
- ☐ Ensure that all new changes are incorporated into the education program, and that preceptors and trainers are teaching the correct processes.

Provide cultural awareness and empathy training.

- ☐ Include this training as part of the overall education curriculum.
- ☐ Create an ongoing, open dialogue with staff, physicians, patients, and families to determine gaps.
- ☐ Ensure that all leaders model this behavior.
- ☐ Consider psychological and emotional safety as a component of all project work.

Use facts and emotions to build staff understanding and sustain commitment.

- ☐ Review department outcomes and overall organizational health with the frontline on a regular basis. Use colorful charts and graphs to make it easy to visualize trends.
- ☐ Use storytelling to reinforce the "why".
- ☐ Implement a "Great Catch" program (Wallace, Mamrol & Finley, 2017; Barnard, Dumkee, Bains & Gallivan, 2006).
- ☐ Celebrate wins!

Resources

For creating a foundation for safe and reliable care:

- IHI: Develop a Culture of Safety
- AHRQ: Culture of Safety
- The Joint Commission: 11 Tenets of a Safety Culture
- Promoting a Culture of Safety as a Patient Safety Strategy: A Systematic Review
- Systems Strategies for Continuous Improvement
- AHRQ: Engaging Patients and Families in their Healthcare
- A Just Culture Guide

For general improvement:

- CMS: Hospital Improvement Innovation Networks
- IHI: A Framework for the Spread of Innovation
- The Joint Commission: Leaders Facilitating Change Workshop
- IHI: Quality Improvement Essentials Toolkit
- SIPOC Example and Template for Download
- SIPOC Description and Example

Education for Patients and Family Members

Patients and family members should understand the efforts of the hospital to incorporate their involvement in every decision as it relates to their care. Make sure to spend time explaining the importance behind all of these efforts on a broad level and also articulate how it will improve their care specifically. Patients and family members should understand that the organization will not be successful without their participation and involvement. Therefore, members of the healthcare team should spend quality time helping the patients and family members understand how they can report errors, what constitutes an error, and how reporting errors will help improve efforts in the future.

While not all patients and family members will report an error or a near miss, nearly all should have questions about their care, whether out of curiosity or concern. Members of the healthcare team should not only encourage these questions, but should help the patient and family members understand how these questions will help in their future individual care delivery. If one patient has a specific question, it is likely other patients in the future will have similar questions and by elevating these questions, patients and family members can help inform the healthcare provider of gaps in their explanations.

Measuring Outcomes

Topic:

"Safety is not only the absence of events, it is the presence of resilient processes. In multiple sections, this APSS emphasizes the need for trust, communications and the use of a reporting system for organizational learning. We mention the importance of reporting low threshold "good catches" and "safety rounding data" and also the need for feedback on data collected. However, the recommended metrics only focus on serious safety events. To be more proactive and identify precursor conditions and behaviors, other metrics should be recommended such as:

- *Employee Engagement in reporting by group (e.g. % of staff reporting incidents/good catches each month)*
- *Low Threshold reporting (e.g. ratio of low severity reports versus high severity)*
- *Feedback provided to originator (e.g. % of reports discussed in individual feedback or group trend reports)*
- *Improvements made (e.g. time elapsed since last reportable event and survey scores versus last culture survey)*
- *Safety Culture training completed for all staff (e.g. % of new hires completing core training, case study reviews etc.)"*

If your organization uses the Safety Event Classification system, the following metric specifications apply. If not, consider adapting this model as a template.

Serious Safety Event (SSE) Rate: Rate of Serious Safety Events per 10,000 adjusted patient days (Stockmeier, 2009). An SSE results in harm that ranges from moderate to severe patient harm or death.

Outcome measure formula:

Numerator: Number of patients with a serious safety event

Denominator: Total number of adjusted patient days

Rate is typically displayed as: Events per 10,000 adjusted patient days

Metric Recommendations:

Direct impact: All patients

Elimination of patient harm: As measured by elimination of serious safety events, sentinel events, state reportable events, or hospital acquired conditions (HACs)

Lives Spared Harm:

Lives spared harm =

$(SSE\ rate_{\text{baseline}} - SSE\ rate_{\text{measurement}}) \times adjusted\ patient\ days_{\text{measurement}}$

Lives saved:

$Lives\ saved = (SSE\ mortality\ rate_{\text{baseline}} - SSE\ mortality\ rate_{\text{measurement}}) \times adjusted\ patient\ days_{\text{measurement}}$

Mortality SSEs are coded. If the organization codes the severity of their events, this formula could be applied to their data set.

Notes:

To calculate an "adjusted patient day" accounting for inpatient, outpatient and other miscellaneous workload, the following are weighted: total patient days by inpatient, outpatient, and miscellaneous revenue. The calculation for adjusted patient days is:

Inpatient revenue + outpatient revenue + ((miscellaneous revenue) / (inpatient revenue)) x total patient days

Data collection:

Manual chart review of events to determine if an event is a serious safety event.

Settings:

All inpatient and outpatient settings.

Mortality (will be calculated by the Patient Safety Movement Foundation)**:**

The PSMF, when available, will use the mortality rates associated with Hospital Acquired Conditions targeted in the Partnership for Patient's (PfP) grant funded Hospital Engagement Networks (HEN).

The program targeted 10 hospital acquired conditions to reduce medical harm and costs of care. At the outset of the PfP initiative, HHS agencies contributed their expertise to developing a measurement strategy by which to track national progress in patient safety—both in general and specifically related to the preventable HACs being addressed by the PfP.

In conjunction with CMS's overall leadership of the PfP, AHRQ has helped coordinate development and use of the national measurement strategy. The results using this national measurement strategy have been referred to as the "AHRQ National Scorecard," which provides summary data on the national HAC rate.

Endnotes

Conflicts of Interest Disclosure

The Patient Safety Movement Foundation partners with as many stakeholders as possible to focus on how to address patient safety challenges. The recommendations in the APSS are developed by workgroups that may include patient safety experts, healthcare technology professionals, hospital leaders, patient advocates, and medical technology industry volunteers. Workgroup members are required to disclose any potential conflicts of interest.

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