مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre

ONE TEAM for ZERO HARM

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Patient Safety

What is Patient Safety?

The Institute of Medicine (IOM) defines safety as freedom from accidental injury. The Joint Commission (TJC) takes a broader view of safety and defines patient safety through their definition of a sentinel event - any unanticipated event in a healthcare setting resulting in death or serious physical or psychological injury to a patient or patients, not related to the natural course of the patient's illness. Sentinel events specifically include loss of a limb or gross motor function, and any event for which a recurrence would carry a risk of a serious adverse outcome. Safety would then be protecting patients from those events while they are receiving care. A related term is iatrogenic injury, from the Greek word for physician, *iatros* .

However safety is defined, safety is protecting people from harm. Harm is defined as any bad outcome caused by and/or allowed to occur in the course of helping patients to their best possible outcome.

Some types of harm are closely associated with direct patient care, such as a medication error. Other types of harm are less associated with the direct care and more associated with being in a care setting, such as falls and pressure ulcers. And still others are not closely associated with patient care at all, only being labeled as patient safety because the harm happened to a patient – such as a physical assault.

The table below shows the diversity of patient harm.

Direct patient care	Related to patient care	Patient protection
Procedure on wrong patient	Infections	Discharge to wrong person
Procedure on wrong site	Falls	Elopement
Wrong procedure on patient	Pressure ulcers	Suicide or attempt
Preventable procedural complications	Restraint entanglement	Discharge to wrong care setting
Medication errors	Burns	Abduction
Hemolytic reactions	Wrong or toxic gases	Sexual assault
Hypoglycemia	Contaminated drugs	Physical assault
Delay in diagnosis or treatment	Contaminated devices	

The IOM went on to estimate, in their report *To Err is Human*, the number of patient deaths caused by human error to range between 44,000 to 98,000 per year. Comparing to other known risks, the probability of dying in a scheduled airline flight is 10^{-6} per departure and the probability of dying in a nuclear power plant accident is 10^{-8} per year. The probability of a patient dying because of error is 1 in 1,000 (10^{-3}).

What can I do?

Everyone has a role in keeping patients safe. Four general things we should all do for every patient, every time:

1. Do your job very well - pay more attention and be more compliant when performing tasks associated with safety.
2. Know how patients may be harmed, anticipate those conditions that lead to harm, and act to prevent harm.
3. Pay attention to your colleagues (cross monitor) and help them to prevent harm (cross monitor with an assist).
4. Speak-up if you see conditions that lead to harm. Use chain-of-command if colleagues are unresponsive to your concerns.

The Patient Experience

What is the Patient Experience?
The patient experience includes all aspects of patient care – patient safety, clinical quality, and service quality. Patients are confident we will care for them. Our caring tradition demands that we do so – within our system care givers care for and care about patients.

Why High Reliability?
We are building our patient experience – safety, quality, and satisfaction – on high reliability because high reliability is a single framework that enables our success in every results area:

Right Priority		High-Reliability		Care that is
• Don't harm me • Heal me • Be kind to me	+	• Right Associates in the right jobs • Right mix of people, process, and technology • Right leaders involved	=	• Safe • Effective • Compassionate

Environment	Processes	Behaviors
Beautiful and spacious facility	Patient inclusion in care decisions	Smile and greeting others
Rooms where families feel welcome	Hourly rounding by nursing staff	Introduce others and explain roles
Quiet, healing environment	Use of patient communication boards	Explain care and anticipated times
Clean and smells clean	Discharge phone calls for continuity of care	Explain the positive intent of actions
		Provide opportunities for questions
		Anticipate patient and family needs
		Engage patient and family at their level
		Thank patients for the privilege

What can I do?
Everyone has a role in creating the exceptional patient experience. Four general things we should all do for every patient, every time:

1. Put safety first. Do our jobs well to assure patient safety – no patient is harmed – is the price of admission for the exceptional patient experience.
2. Do our jobs well to assure clinical quality. The best possible clinical outcome is the next step in providing the exceptional patient experience.
3. Communicate. Patients and family are very vulnerable and in a bewilderingly complex environment. Speak in plain language and over-communicate.
4. Listen and respond with empathy. This builds trust and respect, enables the speakers to release their emotions and reduce tensions, encourages sharing of information, and creates a safe environment that is conducive to collaborative problem solving.

Systems Thinking and High Reliability

What is Systems Thinking?

Systems thinking is the science of reliability in complex systems. And since healthcare is a human-based system, where people, not machines, do most of the important work, systems thinking in healthcare is essentially the science of human performance in complex systems.

Reliability simply means the probability that a system will perform correctly. Reliability can be expressed as a ratio (e.g., 98:100) or a percentage (e.g., 98%). Reliability is perfect performance minus the error rate:

Reliability = 1 – Error Rate

So the example 98% reliability would have a 2% error rate.

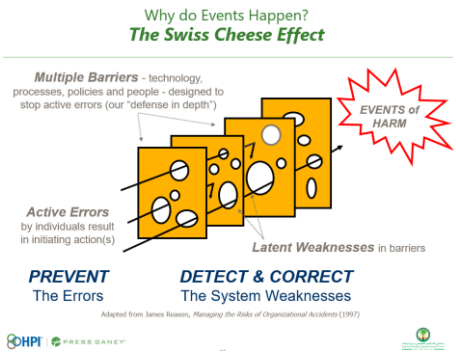
In systems thinking, system problems are the majority cause of error. All people are presumed to be capable of experiencing human error. Reliability is the best mix of behavior-shaping factors in the system: people, process, policy & protocol, technology, and environment of care.

People left on their own can only be as reliable as one (1) error per every 1,000 attempts or 10^{-3} performance. 10^{-3} performance is the limit of human reliability without intervention. If we want more reliable performance, we must give the people assistance in the form of the other system behavior-shaping factors such as technology or a protocol.

Making Reliability a Reality

We use two models to describe and help us better understand human reliability in complex systems. James Reason's *Swiss Cheese Effect* shows how multiple errors in a system lead to events of patient harm. David Woods' *Sharp-End Model* reinforces this concept of systems causing human error, and also defines the behavior-shaping factors of complex systems which impact human behavior and thus determine outcomes.

The *Swiss Cheese Effect* (inset right) shows that events of harm are a combination of active errors that trigger the system and latent system weakness (the holes) that allow the error to reach the patient and cause harm. Safety is the absence of events – zero events of harm. This model shows two basic approaches to achieving zero: 1) prevent active errors that trigger events, and 2) find and fix the latent system weaknesses.



This is a Prevent, Detect, and Correct (PDC) approach to event rate reduction. In practice, all healthcare systems use some sort of PDC approach. Healthcare systems that use human error prevention approaches to patient safety culture and systems thinking in their Detection & Correction programs have the capability in theory to reduce events of serious patient harm by 80% *every* two years.

The *Sharp End Model* (inset left) shows that systems cause human error. The inverted blue triangle represents the system. People work at the point, the sharp end. The blunt end represents the ideal state where information is always correct and resources are always available, etc. In the middle of the triangle is the real world. The difference between the real world and the ideal world causes the stress on people that results in human error.

Shown by the arrows are the five groups of behavior-shaping factors. There are two approaches to preventing error: 1) make the real world more like the ideal world, and 2) use behavior of people at the sharp-end (the red oval) to prevent human error even when the system cause is present. In practice, all healthcare systems use some sort of approach to both.

Culture

What is Culture?
Culture is the shared values and beliefs of an organization. Culture is important because culture determines behavior and, in human-based systems, behavior determines outcomes.

Culture is only one of the five behavior-shaping factors in Cook & Wood's *Sharp End Model*. The other four are organizational structure (which dictates job design), work processes, policy & protocol, and technology & environment (of care). These four are sometimes referred to as forcing functions. Culture is the stronger of the five because culture is a *choosing function* – we choose the behavior because *we believe* the behavior is the best for us and our patients.

Patient safety culture is multi-faceted. Karl Weick and Kathleen Sutcliffe identified five elements of mindfulness in *Managing the Unexpected*. James Reason identified three elements in *Managing the Risks of Organizational Accidents*. A more systematic study of all aspects of patient safety culture was published by Christine Sammer, RN, PhD et al in *What is Patient Safety Culture? A Review of the Literature.* Sammer identified seven (7) subcultures with a total of 52 properties:

1. Leadership (14 properties from 35 citations)
2. Teamwork (9 properties from 15 citations)
3. Evidence-based (6 properties from 17 citations)
4. Communication (8 properties from 18 citations)
5. Learning (10 properties from 36 citations)
6. Just (6 properties from 20 citations)
7. Patient Centered (9 properties from 15 citations)

Patient safety culture is the sum of several subcultures. Many of those subcultures are shared with other aspects of the performance culture – a few subcultures are virtually unique to safety. In this respect, patient safety culture is like a gumball machine, with each gumball representing a subculture or a property of a subculture. The total of the machine is the sum of the parts.

Patient safety culture can be organized into properties of people/teams, leadership, the systems people work in, and the learning people apply to themselves and the systems in which they work (see table below based on the HPI *Reliability Governance Index*).

People & Teams	Leadership	Systems	Learning
Situational awareness	Safety as a priority	Simple work processes	Leader involvement
Attention to detail	Behavioral expectations	Training programs	Measurement
Conservative & compliant	Just accountability	Standardized protocol	Transparency & reporting
Critical thinking	Situational awareness	Intuitive environment	Cause solving
Knowledge & skills	Resource allocation	Intuitive devices	Learning from others
Clear communications	Task prioritization	Technology accelerators	Continuous improvement
Cross monitoring	Problem solving	Emergency plans	Process simplification
Resilient – committed to outcome	Consequence confinement		Monitoring & assessment

To summarize: Patient safety culture is people who think safety is important, have the knowledge & skills to perform their tasks with high reliability, are mindful to anticipate harm, are resilient to take action to prevent harm, work in systems that support high reliability, manage those systems for high reliability, and are transparent with failures so that systems are improved.

Human Error

What is Human Error?

Human error is the science of human performance when performance appears to not meet a performance standard. Human error is a cross discipline study of psychology, organizational behavior, and human factors engineering. There are many ways to categorize human error:

- exogenous versus endogenous (i.e., originating outside versus inside the individual)
- situational assessment versus planning
- distinctions in:
  - errors in problem detection (signal detection theory)
  - errors in problem diagnosis (problem solving)
  - errors in planning and execution (e.g., slips - errors of execution versus mistakes - errors of intention)

Human performance is perception, cognition, and execution. As a result, human error is studied as perceptual (e.g., optical illusions), cognitive communication , and organizational. The cognitive study of human error is a very active research field, including work related to limits of working memory and attention and also to decision making strategies such as heuristics and other cognitive biases. In healthcare, nursing commonly refers to this bias as a lack of critical thinking while medical staff tend to call the bias cognitive error. Heuristics and breaking biases are error prevention strategies that are useful and often correct, but can lead to systematic patterns of error.

The human error classification most useful in field applications to prevent human error is the *Generic Error Modeling System* (GEMS). This system was first developed by Jens Rasmussen in 1974 as the Skill-Rule-Knowledge system. James Reason made improvements to the system in 1988 and renamed it as GEMS. This system is most efficient for use in error prevention because the system is simple (only three error types to know) and practical (each error type directly indicates an error prevention skill). The table below summarizes each of the three error types and shows the indicated error prevention skill(s).

Performance Mode	Error Type	People Prevention	System Prevention
Skill-based Auto-pilot. Routine acts performed in familiar environments using learned skills.	Slip	Self-checking	Automation, error proofing
	Lapse	Cross checking	Checklist
	Fumble	Visualization	Automation, error proofing
Rule-based Expert choosing. Conscious choices using learned principles or rules.	Wrong rule	Questioning attitude	Protocol, checklist
	Misapplication	Questioning attitude	Collegial Team
	Non-compliance	Intelligent compliance	Simplification, forcing functions
Knowledge-based Out of the box. Conscious choices where no rules exist or are unknown to user.	Decision-making	Stop when unsure	Collegial Team
	Problem solving	Stop when unsure	Collegial Team

Why so much focus on human error?

When people mean well and are competent, only human error remains. Harm is mostly a human error issue. And while human error is system-caused, human error can be human prevented. 74.5% of errors leading to serious patient harm can be prevented using safety culture. These data come from a 96 hospital study of 1,964 cases of serious patient harm. Lack of critical thinking was the single largest contributor to error, seen in 42% of the acts leading to harm. Noncompliance was second with 19% of the acts.

At this point in the continuous improvement of patient safety, practicing human error prevention is the best way to prevent patient harm.

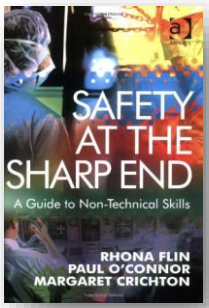
Non-Technical Skills

What are non-technical skills?
Non-technical skills, also called Universal Skills, describe how people interact with technology, environment, and other people. These skills are similar across a wide range of job functions. These skills include attention, information processing, and cognition.

Non-technical skills are shared across a wide range of job functions – technical skills are not. To change from a pharmacist to laboratory technician for example, one must develop new knowledge and skill sets. However, the non-technical skills are the same. Combining universal non-technical skills with the technical skills of every well trained professional in healthcare will result in a highly reliable work force.

Non-technical skills are very well studied and are best summarized in Rhona Flin's *Safety at the Sharp End*. Generic non-technical skills are:

- Situational awareness
- Attention
- Communication
  - repeat backs
  - call outs
  - phonetic & numeric clarification
  - clarifying questions
  - inquiry, advocacy, assertion
- Critical thinking
- Protocol use
- Decision-making



Flin, O'Connor, and Crichton
Safety at the Sharp End

Recall that patient harm is essentially a human error issue. When people mean well and are competent, only human error remains. And while human error is system-caused, human error can be human prevented. At this point in the continuous improvement of patient safety, practicing human error prevention is the best way to prevent patient harm. And bundles of non-technical skills are the best way to learn and practice human error prevention.

KFSH&RC – One **Team** for ZERO HARM

Safety Behavior Expectations:	Error Prevention Tools:
Think Critically *I will "think it through," and ensure my actions are the best for the situation at hand.*	1. **Questioning Attitude** - Validate and Verify 2. **Stop the Line** – I need Clarity
Effective Communications *I am responsible for professional, accurate, clear and timely verbal, written, and electronic communication.*	1. **ISBAR** to transfer information (Introduction, Situation, Background, Assessment, Recommendation) 2. **Repeat & Read Backs** 3. **Clarifying Questions** 4. **Perform Structured Handovers**
Attention To Detail *I will act with intention and focus to avoid unintended errors.*	1. **Self-Check using STAR** (Stop, Think, Act, Review)
Mutual Support – 200% Accountability *I will demonstrate an open, respectful and 200% team commitment to safety*	1. **Cross Check and Coach** 2. **Speak up for Safety using ARCC** (Ask a question, Request a change, voice a Concern, use Chain of Command) 3. **Use Collegial Tones to Strengthen Teams**

The *Tools and Tones* are a bundle of non-technical skills. The bundle was designed by a large group of staff in a two-day retreat and a large group of medical staff in a series of design meetings. The non-technical skills in the bundle were selected because each skill is evidence-based in healthcare and was indicated by a common cause analysis of patient harm events.

The best way to learn and develop strong practice habits for non-technical skills is in simulation using realistic scenarios and natural work teams. Learning technical skills always requires use of non-technical skills, so the scenarios should not teach technical skills only. Technical skills can be learned with non-technical skills and non-technical skills only can be learned. Simulation can be both in the lab and at the line as long as there is a debriefing – because *learning is doing with feedback*.

Authority Gradient and Power Distance

What is Authority Gradient?
Authority gradient is a psychology term that describes the inequality of power and influence among team members. High authority gradient indicates unequal power. Low authority gradient indicates more equal power.

When authority gradient is high, team members are more likely to do what they are ordered to do – even if they do not understand why or think that the order is not best for the patient or the situation. When authority gradient is low, team members are less likely to do what they are told. They are more likely to ask clarifying questions to understand and more likely to suggest an alternate course of action.

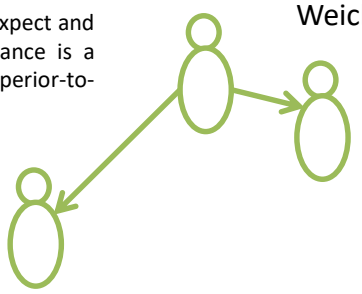
What is Power Distance?
Power distance is one of five cultural contributors to authority gradient in the Hofstede model. The other four attributes of the culture are: individualism, masculinity, uncertainty avoidance, and long-term orientation. Power distance is most often cited because this is the trait most controlled by the behavior of the individual.

Are these good or bad?
Power distance and authority gradient are neither good or bad. Too much is bad, and too little is also bad. Some power distance and authority gradient is good for leading teams. In crisis, high power distance helps as good leadership.

Too often – discussions of power distance and authority gradient sound like both need to go. More correctly – we need to learn to modulate power distance. Less power distance is needed when we need to think together as a team – more power distance is needed when we are in trouble and need a leader to direct our team through an urgent task.

How do we modulate power distance?
Many of our efforts in *high reliability* focus on modulating power distance so that team members can think together as a team. Our tones – simple communication practices to show respect and create familiarity among team members – increase frequency of communications. Our tools – such as clarifying questions, formatting of communications (SBAR), and speak-up for safety – help us to communicate even when power distance is high. Leader tools such as *Thank and Protect those who Voice Safety Concerns*, *5:1 Feedback* and *Fair and Just Culture* assure leader support for doing the right thing.

Power Distance is the extent to which the less powerful expect and accept that power is distributed unequally. Power Distance is a measure of interpersonal power or influence superior-to-subordinate as perceived by the subordinate.



Weick & Sutcliffe attribute of HRO's
- deference to expertise.

Authority Gradient is the perception of power and authority as perceived by the subordinate.

HRO Leadership

What is High Reliability Organizing?

High Reliability Organizing (HRO) is a body of knowledge that describes operational excellence in complex systems. High Reliability Organizations operate in complex, non-linear systems and are able to achieve consistent outcomes with fewer events. There are many descriptive theories of HRO. The best known are Weick & Sutcliffe and Rene Amalberti.

Weick & Sutcliffe, 2007

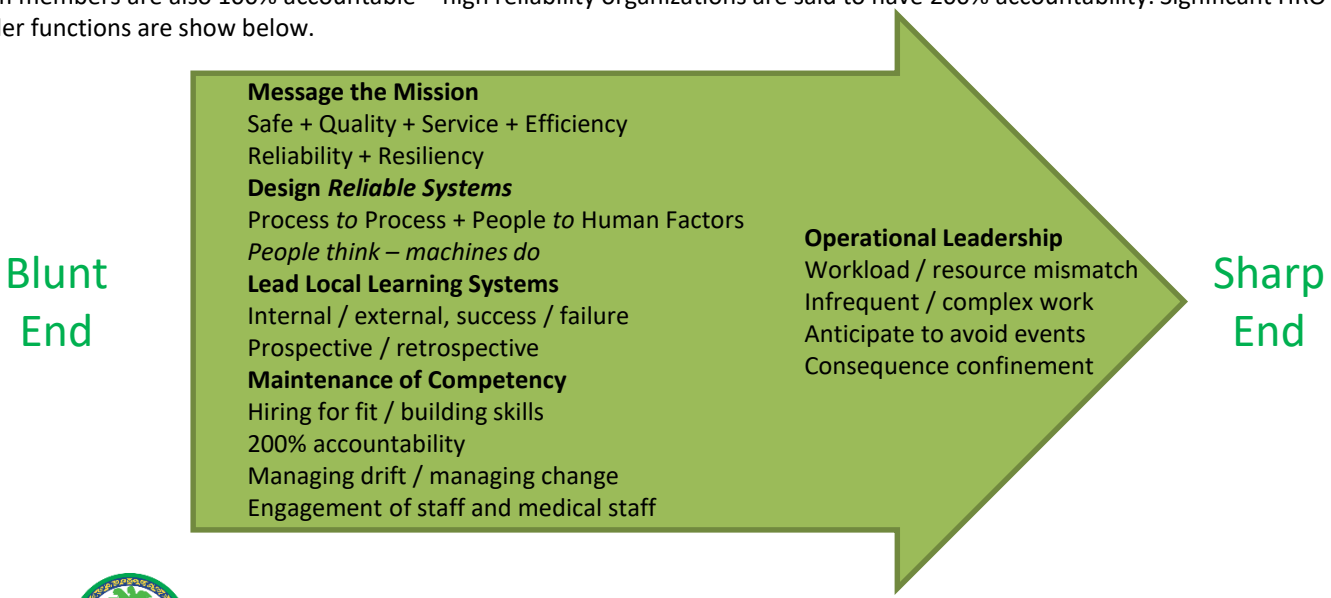
1. **Preoccupation with failure**: to avoid failure - look for early signs
2. **Reluctance to simplify interpretations**: critical thinking and looking past easy explanations provides situational awareness
3. **Sensitivity to operations**: systems are dynamic and non-linear – provide direct oversight to adjust to unpredicted interactions
4. **Commitment to resilience**: the organization maintains function(s) during high demands. Resilience has three components:
   - Absorb demands and preserve functions
   - Maintain the ability to return to service after untoward events
   - Learn and grow from untoward events
5. **Deference to expertise**: decision-making seeks those with knowledge and experience regardless of rank or status

Amalberti, 2005

1. **Accepting limits** on discretionary action (deference to expertise, protocol, and safety limits)
2. **Abandoning autonomy** (mindful of and coordinating with other people, activity, processes, and systems)
3. **Transition** from craftsman **to equivalent actor** (standard work based on evidence-based best practice)
4. **Sharing risk vertically** in the organization (communicate problems – looking back and looking ahead - to leaders)
5. **Managing the visibility of risk** (using systems to predict failure and adjust to prevent failure)

What is HRO Leadership?

HRO leaders are different. HRO leaders have a much greater Sensitivity to Operations (safety at the Sharp End) than their counterparts in less complex systems. HRO leaders also have a 100% accountability for the practice habits of the team. Since the team members are also 100% accountable - high reliability organizations are said to have 200% accountability. Significant HRO leader functions are show below.



Leader HRO Tools

ONE **TEAM** for

We the **leaders** of King Faisal Specialist Hospital & Research Center are **accountable** for the safety of our patients and employees. In order to ensure highly reliable outcomes in all domains – safety, quality and satisfaction – we **commit** to the following structured leadership methods:

Message the Mission

Safety First in Every Meeting

Put Safety First in Decisions

Communicate Lessons Learned

Thank and Protect those who Voice Safety Concerns

Find Problems and Fix Causes

Leadership Daily Safety Huddle

Unit Safety Huddles

Daily Huddle Boards

Reinforce and Build Accountability

5:1 Feedback

Rounding

Just Culture

Safety Coaches

Safety First in Every Meeting

A way for leaders to elevate safety and high reliability

ONE **TEAM** for ZERO HARM

We demonstrate our commitment to compassionate, safe, and reliable care by making it the first agenda item

This leader tool effects three primary embedding mechanisms and three secondary reinforcement mechanisms from Edgar Schein's *Organizational Culture and Leadership* (shown in bold below)

Primary Embedding Mechanisms	Secondary Reinforcement Mechanisms
1. **What leaders pay attention to, measure, and control on a regular basis** 2. How leaders react to critical incidents and organizational crises 3. Observed criteria by which leaders allocate scarce resources 4. **Deliberate role modeling, teaching, and coaching** 5. **Observed criteria by which leaders allocate rewards and status** 6. Observed criteria by which leaders recruit, select, promote, retire, and excommunicate organizational members	1. Organizational design and structure 2. Organizational systems and procedures 3. **Organizational rites and rituals** 4. Design of physical space, facades, and buildings 5. **Stories, legends, and myths about people and events** 6. **Formal statements of organizational philosophy, values, and creed**

Which meetings require a safety message?

1. All scheduled meetings with a prepared agenda start with a safety message.
2. Meetings with outside entities start with a safety message. This is who we are, and outsiders need to see us as who we are.
3. Safety huddles are exempt because the entire meeting is about safety, and the huddle is only 15 minutes.

Guidelines for sharing a safety message

- Talk about what you know; be sincere.
- Be specific and use names whenever possible.
- Keep it short and to the point.
- Use this three-part format:
    1. "I would like to share a message about the importance of _____. "
    2. Share the message.
    3. "And that's why it's important we all _____."

For further reading: *Made to Stick* by Chip & Dan Heath

What is a safety message?

A safety message is a two-minute communication about safety and can be any of the following:

- Share your convictions relative to patient safety, personal safety, reliability, or quality of care and service
- Explain how safety contributes to our mission
- Explain how our policy and practice contribute to safety
- Tell a story about something good that we did
- Tell a story about something bad that happened to us
- Tell a story about harm in another healthcare system
- Tell a story about another system preventing harm
- Read a safety success story from your people
- Read a safety success story from KFSH&RC
- Review our safety behaviors
- Teach applications of our safety behaviors to our jobs
- Discuss the importance of reporting problems
- Discuss the importance of speaking-up for safety
- Ask them to be safe
- Thank them for practicing / working safely

By putting safety first in our words and actions, leaders place a focus on the safety and well-being of our patients, and caregivers– all of whom have placed a special trust and confidence in our ability to care for them.

Planning	1. Who is my **protagonist**? _____ 2. What is my hook? _____ 3. What keeps it interesting? _____ 4. Where is the **conflict**? _____ 5. What are my telling details? _____ 6. What is my ***emotional*** hook? _____ 7. Is my **meaning** clear? _____ Based on *Seven Questions to Sharpen Your Stories* by Andy Goodman (2003)
Opening	I would like to share a message about the importance of: _____ _____
Message	
Closing	And that is why it is important that everyone: _____ _____

Put Safety First in Decisions

A way for leaders to elevate safety and high reliability

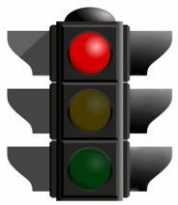
ONE **TEAM** for ZERO HARM

We demonstrate our commitment to compassionate, safe, and reliable care by making the patient and our caregivers our first concern in every decision

Questions to ask

1. How will this affect the safety and well-being of our patients and caregivers?
2. Will this make the patient(s) more likely or less likely to have a good outcome?
3. How with this affect our people?
4. Will our people be more likely or less likely to provide good care?
5. Will this increase the probability of harm? Or create the possibility of a different kind of harm?
6. *How do we know?* How do we know that this will be just as safe? Or just as effective?
7. What more can I/we do to improve the safety of our patients and caregivers?

Statements to avoid



1. We will never get more staff - or more equipment, space, supplies, etc.
2. We cannot afford it.
3. We have always done it that/this way.
4. They say we have to do it this way.
5. We asked before and *they* said no.
6. We don't have time.

By putting safety first in our words and actions, leaders place a focus on the safety and well-being of our patients and caregivers – all of whom have placed a special trust and confidence in our ability to care for them.

Communicate Lessons Learned from Safety Events

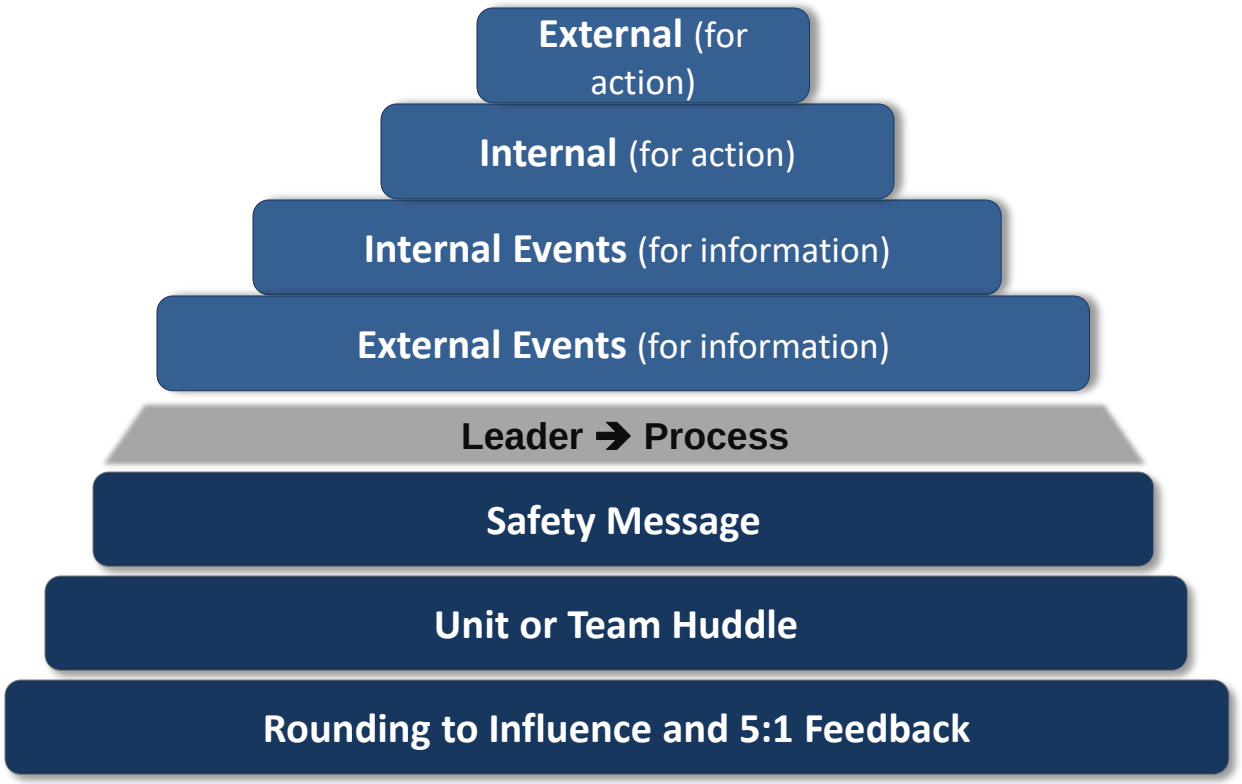
Sharing generic implications from a safety event in order to heighten awareness

ONE **TEAM** for ZERO HARM

"It is necessary for us to learn from others' mistakes. You will not live long enough to make them all yourself." (Admiral Hyman G. Rickover [1900-1986])

Best Practice for Communicating Lessons from Safety Events

1. Provide enough information about the event (without blaming, naming, or shaming) to create the imperative for change.
2. Create a distinct look for your communications. Leaders, staff, and physicians should learn to recognize these publications as high priority.
3. Be clear in your communication about the expectations for action: What do you expect individuals to do differently as a result of hearing or reading the communication?
4. Be clear about accountability expectations: What do leaders need to do to ensure that appropriate actions are taken or that the information is disseminated?
5. When communicating to heighten awareness consider multiple vehicles / venues: e-mail, department meeting presentations, intranet notice, town hall discussions, etc.
6. Be judicious when considering the need for alerts. Over-communication or communication about situations that are not truly safety critical can result in alert fatigue.



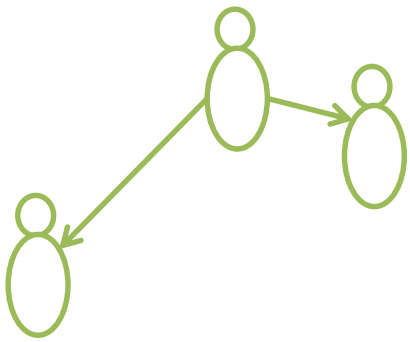
Thank and protect those who Voice Safety Concerns

ONE **TEAM** for ZERO HARM

A way for leaders to elevate safety and reliability

We demonstrate our commitment to compassionate, safe, and reliable care by assuring the well-being of those who show the courage to ask a question

Power distance is the extent to which the less powerful expect and accept that power is distributed unequally. Power distance is a measure of interpersonal power or influence superior-to-subordinate as perceived by the subordinate.



Wieck & Sutcliffe refer to this attribute of a high reliability organization: deference to expertise

Authority gradient is the perception of power and authority as perceived by the subordinate.

20 things to say or do to promote questions

1. That's an interesting question.
2. There is no such thing as a bad question.
3. Do you have a different idea on how to do this?
4. Let's explore this.
5. Let's think this through.
6. I'm not sure; can we figure this out?
7. Don't believe everything that you read or hear.
8. Show me how you came to that conclusion.
9. Can we look at this from a different angle?
10. What do you think?
11. Walk me through your thinking on this.
12. Tell me what you learned here.
13. Let's see what others have to say.
14. That's one option: let's see what other ways might also work.
15. What are some possible outcomes of that approach?
16. That was a great example of _____.
17. That is a great idea, let's expand on it and make it better.
18. Use a neutral voice.
19. Use an enthusiastic voice tone.
20. Sit silently and patiently (and listen).

Critical Thinking Promoting Behaviors and Comments, Rubenfeld & Scheffer, 2006.

Cross-checking

When we watch out for each other and speak-up to prevent acts that could lead to harm, we improve human reliability by as much 1,000 times. People only speak-up when they feel safe.

Multiply your error probability

$0.001 \times 0.001 = 10^{-6}$

What should I do?

We make it safe for people to speak-up:

1. **Before:** be clear on our expectations. Our people not only have a right to speak-up, they are expected to speak-up. Harassment of those who do speak-up will not be tolerated.
2. **During:** Take action to make our patients and people safe. Openly state, for all to hear, that we were right to stop and ask – even when the answer to the question did not change our plan.
3. **After:** Refute rumors. Act to stop harassment. Act to stop disciplinary action. Involve more senior leaders and leverage internal support resources.

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King Faisal Specialist Hospital & Research Centre

Daily Leadership Huddle

A way for leaders to elevate safety and reliability

ONE **TEAM** for ZERO HARM

Leadership Daily Huddle Cheat Sheet

"What will it take today to make this a safe day at KFSHRC"

We huddle at the start of the day to maintain ***situational awareness*** of immediate problems impacting **Safety, Quality and Service.**

This includes:

- Safety events
- Associate injuries
- Falls, Pressure Injuries
- Critical service issues
- Identified VTE, CLABSI, VAP or CAUTI
- Unexpected deaths
- Mislabeled specimens
- Safety critical resource issues
- Critical service issues
- Environmental safety issues

Tips for Huddle Leader:

- Redirect unrelated reports and conversation
- Give clear direction about prioritization

To participate, ask yourself:

- Do we have any high-risk patients or procedures?
- Do we anticipate any non-routine procedures or tasks?
- Are we dealing with any situations or conditions that distract our ability to focus or think critically about our patients?
- Are there any safety issues that I know about that may impact other departments?

Look Back

Look Ahead

Follow up

We will test the Electric Generator today

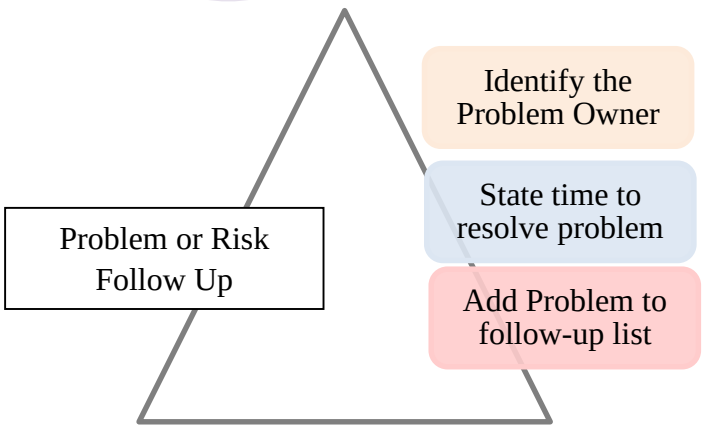
This is X from UMD

2 patients with same name going for OR

This is Y from Periop

We had a fall with injury yesterday

This is Z from Nursing



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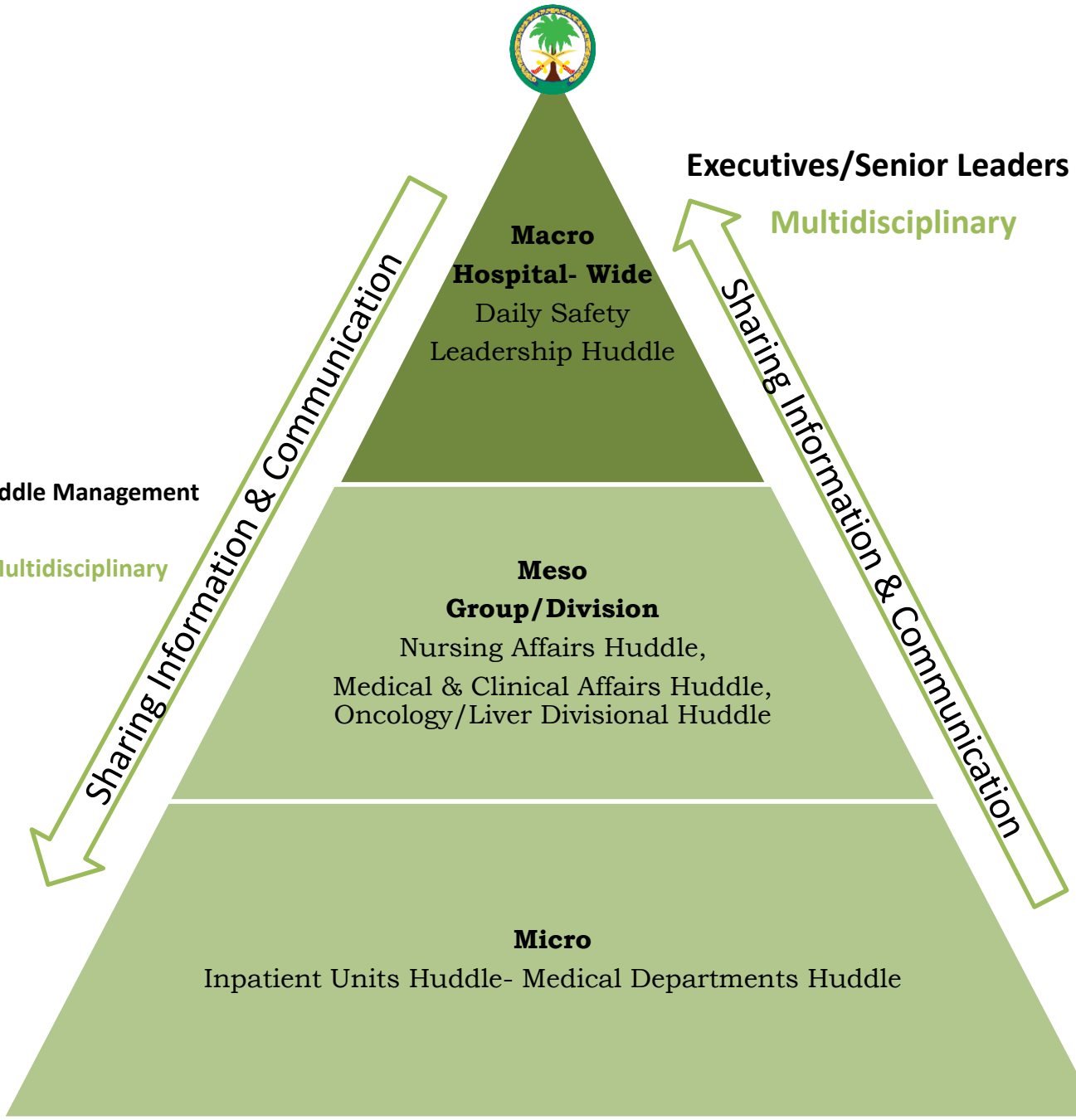
Unit Safety Huddles

A way for leaders to lead local learning

ONE **TEAM** for ZERO HARM



Daily Huddle Boards

ONE **TEAM** for ZERO HARM

A way for leaders to elevate safety and reliability

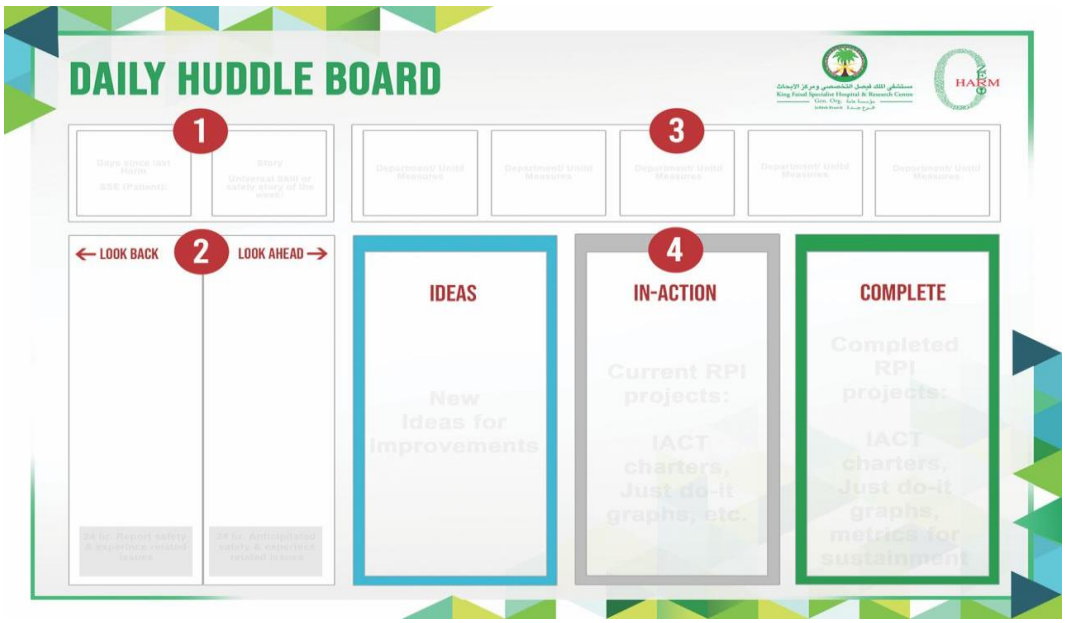
A method for identifying local system issues that impact **safe, effective, and patient-centered care**

- Connects daily work and performance results
- Engages the team to find and fix problems
- Leaders influence team behaviors: Reinforce expectations & Problem solving thinking

Learning boards provide **visual management** of new, working, and solved problems. They:

- Focus efforts of staff at department level.
- Give a shared understanding of problems, causes, and solutions.
- Create momentum for more solving of local system issues.

All units, clinical and non-clinical
Run by leader (manager, shift supervisor, charge, etc.)
Huddle notes/minutes accessible to the team
On huddle board
In a "huddle log book"



Provide 5:1 feedback

Instant feedback – constant reinforcement

We reinforce performance expectations by observing performance, seeking opportunities to praise when our people do it right, and to teach/coach when performance does not meet expectations

In a nationwide survey conducted by The Gallup Organization of over 2,000 workers, 69% indicated that receiving praise and recognition from their bosses was more motivating than money. Four out of five workers said recognition or praise motivates them to do a better job (The Gallup Organization, August 2006). 5:1 Feedback is a method for increasing the amount and quality of feedback that we give to others. There are two types of feedback – positive reinforcement and corrective reinforcement:

Positive reinforcement makes an individual more likely to perform a behavior again. Recognize and praise an individual when they practice according to performance expectations.

Corrective reinforcement makes it less likely that an individual will perform the behavior again. Coach and correct an individual when practice does not meet performance expectations.

We are conditioned to give others corrective feedback yet giving positive feedback doesn't come so naturally. Although both types of feedback play an important role, positive feedback is much more powerful in influencing and shaping behavior. Positive feedback builds a relationship of trust and respect, whether between an employee and a supervisor or between coworkers. That foundation of trust and respect is "money in the bank" - a relationship that enables individuals to more effectively give and receive corrective reinforcement for a behavior that needs to be changed. To maximize employee performance, there is an optimal ratio of positive to corrective feedback – 5 positives for every 1 corrective.

Application tips

General tips about giving feedback

- Based on observation and facts
- As close in time as possible to the act
- Be specific – describe what you observed and state how the action either met or did not meet our performance expectation(s)
- No sandwich approach – don't attempt to soften corrective feedback with positive
- Lightest touch possible to achieve the desired results – feedback can be in the form of words, but also can be as simple as a head nod or a thumbs up

Specific tips about giving positive feedback

- Seek opportunities to catch someone in the act of "doing it right" and build it into your everyday routine.
- **Small, spontaneous gestures go a long way.** Paying an unannounced visit to a staff member or sending a handwritten note to the employee's home, for example, reinforces a good practice and makes the individual feel appreciated and valued.
- Give feedback across professional lines and reporting relationships – remember that leaders need positive feedback, too!

Expected results

- Engrains performance expectations as work practice and habit
- Strengthens relationships between employees and supervisors and among coworkers
- Enhances employee satisfaction and well-being

Rounding

Shape practice habits at the front line

ONE **TEAM** for ZERO HARM

We regularly round to understand what is happening at the front line, engage with our people, and identify problems impacting operations

***What* it is**

- Rounding is a method for connecting with front line staff to reinforce our commitment to safety, reliability, and creating an exceptional experience for patients and caregivers. Rounding gives the opportunity to:
  - Observe first-hand the work performance of staff as well as other leaders
  - Provide real-time feedback and performance coaching
  - Through conversation, understand employee knowledge of and reinforce performance expectations
  - Identify problems impacting operations
- Rounding may already be a management practice at your organization. We want you to continue this good practice across your leadership team to help establish and sustain high reliability behaviors.

***How* we do it**

- Schedule dedicated time on a weekly basis to Round To Influence. Plan to spend 30 to 60 minutes.
- *Ask for problems* impacting operations. Think about the questions you will ask to elicit the best, most valuable information about what is happening at the front lines and what impacts the ability of your people to do their jobs.
- *Look for problems* impacting operations. Employees often "normalize" operational problems, accepting the problem or creating a work around to the extent that they do not recognize it as a problem or think to point it out as a problem. When rounding, look for signs of unspoken problems.
- Practice 5:1 feedback. Seek out opportunities to catch people doing it right…and to thank them for a job done well.
- Take notes and debrief after you round – either by yourself or with others. Review the information you gathered and to prioritize issues that need to be resolved.

***Why* we do it**

- Heightened leadership awareness of the status of front-line operations
- Timely recognition and resolution of problems impacting outcomes
- Enhanced caregiver engagement through leadership visibility and front-line interaction

Rounding questions to reinforce behavior expectations

- Name one of the tones or tools that are part of our behavior expectations.
- Which tool have you found the most helpful in your day-to-day work? Which is the hardest to practice, and why?
- Tell me a story about a time you observed a co-worker or physician using one of our tools for high reliability.
- What conditions make you most concerned that you're going to experience an unintended error or mistake that could result in harm to a patient or employee?
- Can you think of any "close calls" that almost resulted in harm to a patient or employee? What can we do to prevent that type of close call in the future?

Apply just culture principles

Managing individual culpability for unsafe acts using the Performance Management Decision Guide

ONE **TEAM** for ZERO HARM

We manage fairly and consistently when a person's actions deviate from performance expectations

How we as leaders respond when an employee's performance does not meet expectations is a *management moment of truth*. Employees will question the integrity and effectiveness of the manager if the individual is punished when a system or process problem influenced the employee's actions or if we let an employee "off the hook" when there was clear intentional, disregard for a reasonable performance expectation. The lack of trust can erode opportunity for the organization to learn from events of harm, near misses, and other human errors and mistakes. If employees perceive that individuals are unfairly punished, they are less likely to report events, errors, and mistakes - missed opportunities to find and fix problems impacting performance and outcomes. And if employees see management tolerance when there is intentional, disregard for work rules, performance of other individuals and of the team as a whole will decline over time.

It is important for employees to know that a leader will respond and treat an employee fairly when performance does not meet expectations. Managers must differentiate between an honest mistake and a knowing violation of performance expectations. An *honest mistake* is an action taken with good intentions by a person who believes they are complying with performance expectations such as rules, policies, or procedures. The action can be characterized as a slip or lapse. It is inadvertent, not deliberate, and may be a result of a weakness in a system process or structure. A *knowing violation*, however, is a decision-based act in which the individual knows the rule, thinks about it at the time, and makes a decision to deviate from the performance expectation. The deviation is intended, although the consequences are not necessarily intended.

An honest mistake requires a different management response than a knowing violation. Based on the circumstances, an honest mistake may require coaching on individual error prevention techniques, management actions to improve team knowledge and practice, or system or work process changes. A knowing violation, however, may fairly require application of progressive discipline according to hospital policy.

Human error is not the cause of failure, but a symptom of failure. Human error...should be the starting point of our investigations, not the conclusion. (PM Fitts & RE Jones, 1947)

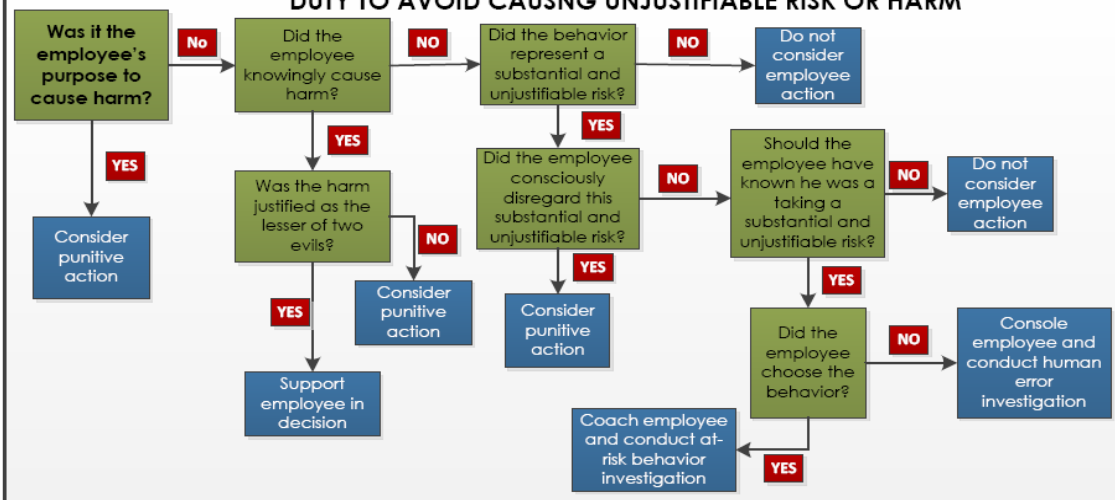
About the Performance Management Decision Guide

- Guides managers' thoughts and actions in response to a performance expectation violation.
- Shifts thinking from *who is to blame* to *why did the individual act this way*. Determining the causal factors helps the manager define effective corrective actions and promotes an environment where employees are treated fairly and consistently.
- A tool to distinguish different human behavioral choices - "Human Error, At-risk Behavior and Reckless behavior ". Identifying the type of human behavior will help Managers determine the appropriate action toward the staff.

Expected results

- Improved comfort in reporting safety events, near misses, errors, and mistakes
- Improved confidence that managers will respond fairly to performance violations
- Improved identification and correction of system and process problems contributing to performance problems

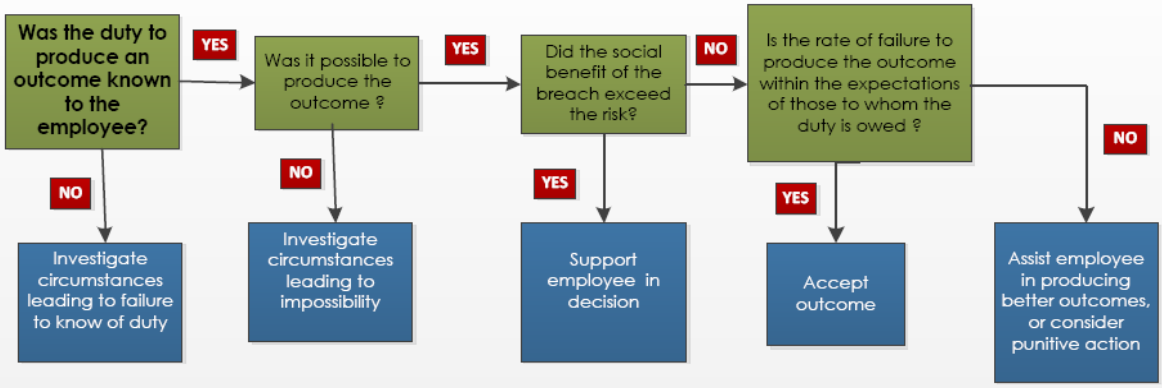
DUTY TO AVOID CAUSNG UNJUSTIFIABLE RISK OR HARM



At all times, an employee will be subject to the duty to avoid causing unjustifiable risk or harm to himself, to fellow employees, customers, visitors, and the organization. Under this duty an employee who has acted with reckless disregard forward a potential harm will be subject to punitive action.

DUTY TO PRODUCE AN OUTCOME (system largely controlled by the employee)

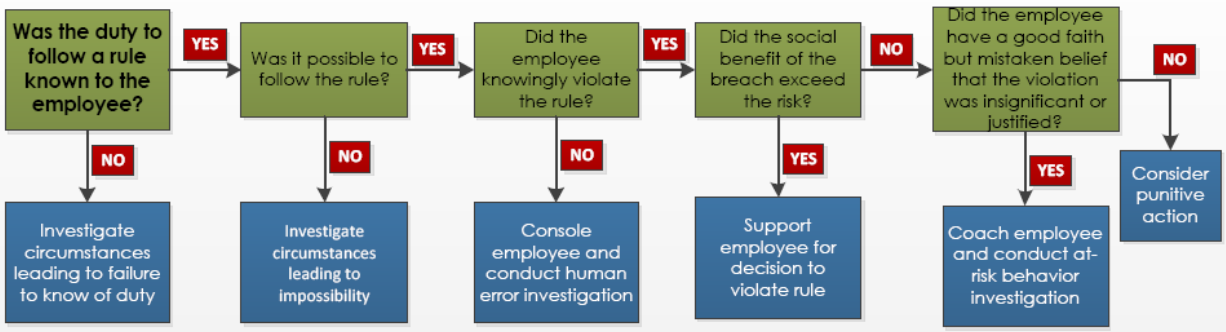
NOTE: This test applies when the employee is aware that he controls the system and is responsible for the output of the system



When working under a duty to produce an outcome ,an employee will be held accountable as directed by the code of conduct and individual policies. These policies put the employee on notice of the duty and prescribe acceptable outcomes attached to each duty (eg. time and attendance, dress code)

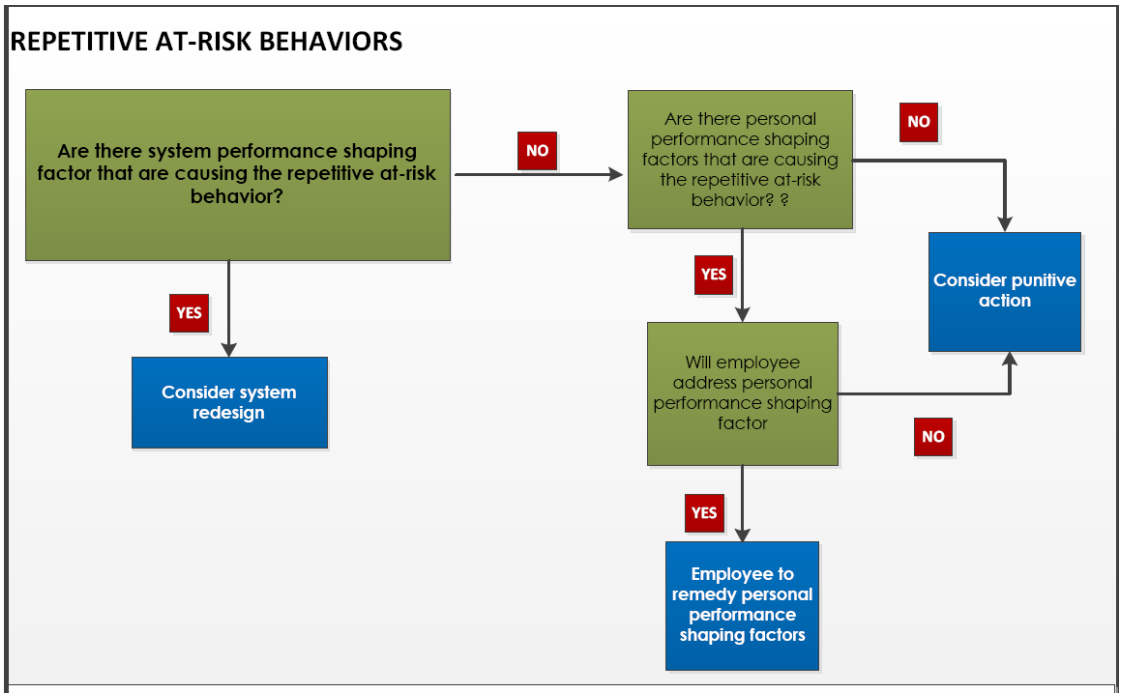
DUTY TO FOLLOW A PROCEDURAL RULE (system largely controlled by the employer)

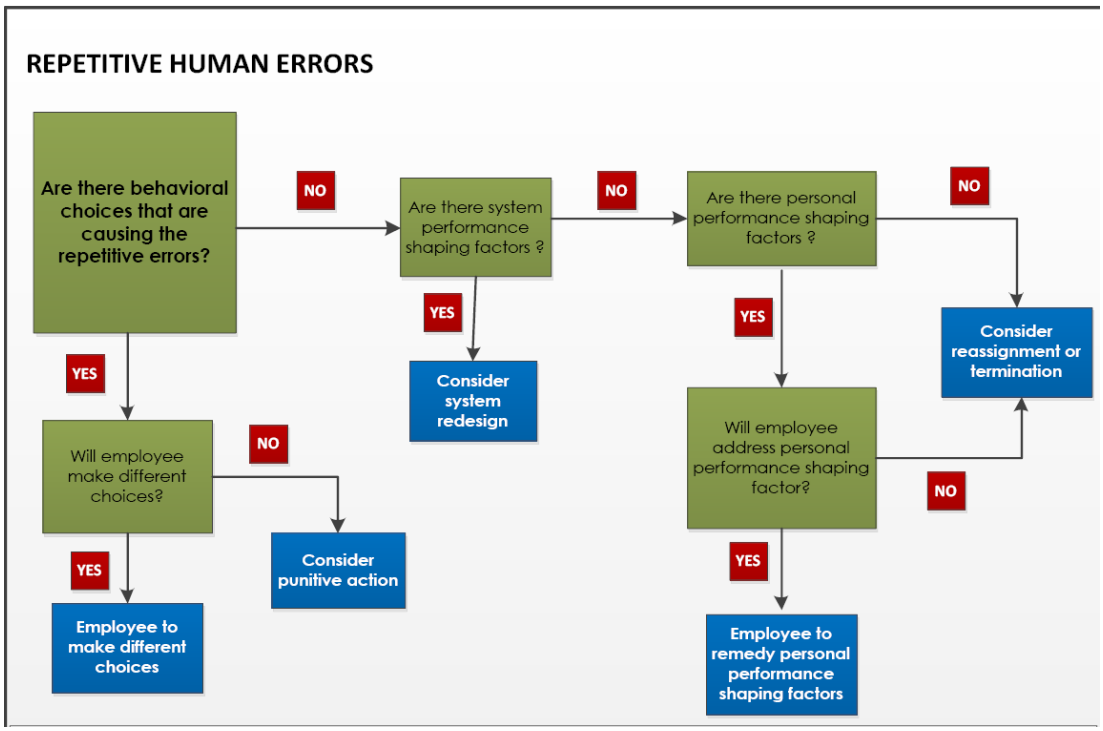
NOTE: This test applies when the employee works within a system and is responsible for being a reliable component within the system.



When working under a duty to follow a procedural rule within a system, an employee will be subject to punitive action when they have acted with reckless disregard toward the risk associated with non-compliance.

(burden of production falls on employee)


REPETITIVE AT-RISK BEHAVIORS
Are there system performance shaping factor that are causing the repetitive at-risk behavior?
NO
Are there personal performance shaping factors that are causing the repetitive at-risk behavior? ?
NO
YES
Consider punitive action
YES
Consider system redesign
Will employee address personal performance shaping factor
NO
YES
Employee to remedy personal performance shaping factors


REPETITIVE HUMAN ERRORS
Are there behavioral choices that are causing the repetitive errors?
NO
Are there system performance shaping factors ?
NO
Are there personal performance shaping factors ?
NO
YES
YES
YES
Consider reassignment or termination
Consider system redesign
Will employee make different choices?
NO
Will employee address personal performance shaping factor?
NO
YES
YES
Consider punitive action
Employee to make different choices
YES
Employee to remedy personal performance shaping factors

Second Victim FOR YOU program

ONE TEAM for ZERO HARM

"Second victims are health care providers who are involved in an unanticipated adverse patient event, in a medical error and/or a patient related injury and become victimized in the sense that the provider is traumatized by the event."

Physical

> Rapid heart rate
> Profuse sweating
> Dilated eyes
> Tense posture
> Quick/shallow breathing
> Nausea
> Fatigue

Cognitive

> Confusion
> Disorientation
> Poor concentration
> Inattention
> Inability to recall event

FOR YOU TEAM

Emotional

> Fear
> Guilt
> Shock
> Panic
> Depression
> Agitation
> Intense anger
> Anxiousness

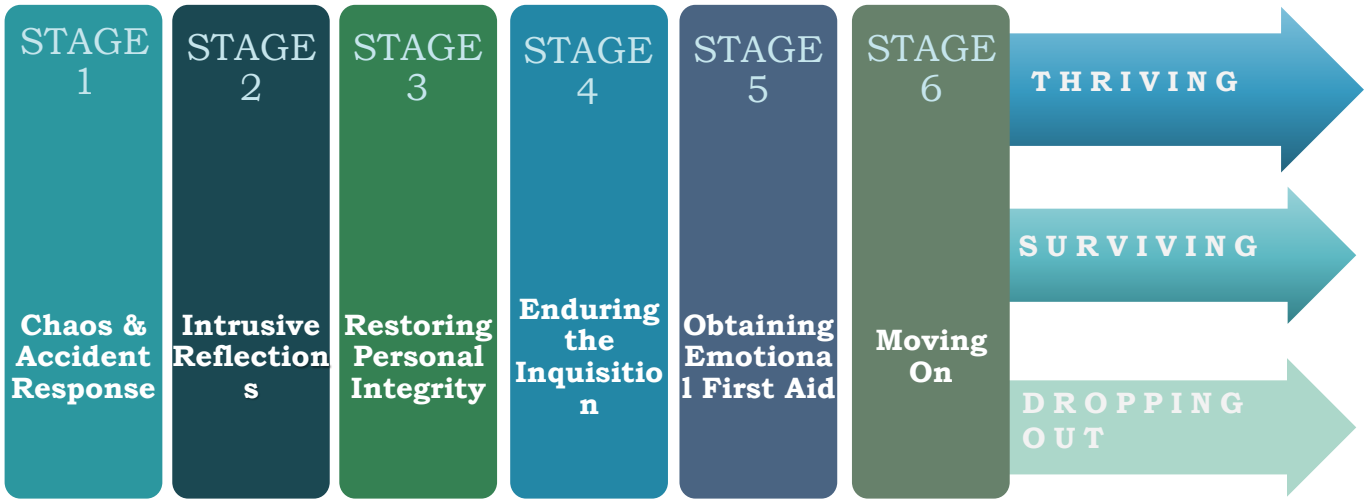
Behavioral

> Crying
> Yelling/ Screaming
> Silence
> Withdrawal
> Pacing
> Hollow glare
> Agitated/ SLOW movement

Second Victim
FOR YOU program

ONE **TEAM** for ZERO HARM

The Recovery Stages after a traumatic event or during challenging times



Support model and work flow for KFSH&RC

Area leader/peer

(Provide one to one reassurance/ Professional collegial review of cases)

Quality representative:

(one on one crisis intervention, peer support mentoring, team debriefing and support through investigation)

Mental Health:

(Will provide support within one working day)

Referral will be initiated by staff, area manager, or MQR

1. Staff will be given information about **mental health support system**

2. Staff will reach out **mental health support system** (through the mental Health **Consultant** on-call)

3. **Mental health support system** will provide the service within 24 hrs

4. Clinician recovery:

>Thrive

>Survive

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Safety Coaches

Coach, educate, communicate, advocate and train

ONE **TEAM** for ZERO HARM

What is a Safety Coach?

A safety coach is an KFSHRC Associate who volunteers to promote our Culture of Safety. Safety coaches are prepared through a safety coach course that provides a more detailed understanding of the safety behaviors, observable standards for the safety coaches, and instant feedback techniques for use in coaching. Safety coaches role model and reinforce our universal skills for error prevention as they work and interact with colleagues. Safety coaches are asked to coach in their own practice areas as well as other practice areas where they do not normally practice. Safety coaches are also asked to document some of their observations on an observation tool provided by the safety coach team.

Roles of the Safety Coach

1. Coach (peers on the safety behaviors)
2. Educator (at the bedside/on the job)
3. Communicator (of safety behaviors)
4. Advocate (for solutions to problems)
5. Role Model (of safety behaviors)

Safety Behavior Expectations:	Error Prevention Tools:
Think Critically *I will "think it through," and ensure my actions are the best for the situation at hand.*	1. **Questioning Attitude** - Validate and Verify 2. **Stop the Line** – I need Clarity
Effective Communications *I am responsible for professional, accurate, clear and timely verbal, written, and electronic communication.*	1. **ISBAR** to transfer information (Introduction, Situation, Background, Assessment, Recommendation) 2. **Repeat & Read Backs** 3. **Clarifying Questions** 4. **Perform Structured Handovers**
Attention To Detail *I will act with intention and focus to avoid unintended errors.*	1. **Self-Check using STAR** (Stop, Think, Act, Review)
Mutual Support – 200% Accountability *I will demonstrate an open, respectful and 200% team commitment to safety*	1. **Cross Check and Coach** 2. **Speak up for Safety using ARCC** (Ask a question, Request a change, voice a Concern, use Chain of Command) 3. **Use Collegial Tones to Strengthen Teams**

Why do we have safety coaches?

Moving from paper to practice is the most difficult part of safety culture transformation. Safety coaches accelerate safety culture transformation by increasing the pace of teaching and reinforcing safety behaviors. Safety coaches also accelerate safety culture transformation by increasing the pace of problem identification and resolution.

Which ideas are to be coached?

Safety coaches are authorized to coach their peers on any idea consistent with KFSHRC vision, mission, values, founding principles, policy, and protocol. The main purpose of the safety coach is to coach their peers on the Safety Behaviors.

How do they coach?

Safety coaches are effective because they use *influence*. To be an effective coach: invite yourself in, be proactive, be discrete, and be helpful. Use your knowledge of patient safety, the Safety Behaviors, and 5:1 feedback to teach/reinforce the best practice. Refer tough cases to the local leader and/or your safety coach leader.

Invitation:	**"May I point something out?"**
Observation:	"I could tell that you were struggling in your phone conversation with Dr. Thurmond."
Expectation:	"SBAR is one of the Safety Behaviors. It helps us frame the conversation when communicating a problem that requires a decision or an action."
Facilitation:	"Let's do one together. Why don't we talk through your patient case using SBAR."
Commitment:	"Next time you communicate with someone about a decision, can you use SBAR?"

HRO Tones & Tools

ONE **TEAM** for ZERO HARM

KFSHRC Safety Promise

Safety is a value that stretches across King Faisal Specialist Hospital and Research Centre. It reinforces our Mission and serves the inspiration for our Vision.

At KFSHRC we are all one **TEAM** for zero harm. TEAM is an acronym that stands for our **4 safety** behaviors and **10** skills to prevent errors in our complex, high-risk environment in which we work – both in clinical & non-clinical settings .

Let us all make the commitment to practice our **universal skills** and make them our work habit

Safety Phrases

1. "Let me repeat that back"
2. "That's correct." (after an accurate repeat/read back)
3. "Let me ask a clarifying question."
4. "Thanks for the cross check."
5. "I have a safety concern."
6. "Stop the Line - I need clarity"

Collegial Tones

1. Smile and say hello
2. Introduce yourself and use preferred name
3. Actively listen and respond with empathy
4. Communicate positive intent of your actions
5. Provide opportunities to ask questions

Skills explained:

STAR
Stop
Think
Act
Review

ISBAR
Introduction
Situation
Background
Assessment
Recommendation

ARCC
Ask a question
Request a change voice a **C**oncern
Chain of command

Tools for Safety

Think Critically

1. **Questioning Attitude - Validate and Verify**
Think: "Does this situation make sense?" If no, **verify** with an expert source.
2. **Stop The Line – I need Clarity**
If you are unsure about what to do or are concerned about the safety of a patient or employee, don't be afraid to **Stop the Line** and clarify the situation.

Effective Communication

1. Use the ISBAR checklist to ensure proper flow of information
2. Repeat and Read Back
2. Clarifying Questions
4. **Structured Handoffs** in patient care are a high-risk activity with opportunities for critical information to be lost or misunderstood.

Attention To Detail

Self checking using STAR to prevent unintended errors by focusing on the task at hand

Mutual Support

1. Applying **Cross-checking**
2. Speak up by using **ARCC**
3. Use **Collegial Tones**

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King Faisal Specialist Hospital & Research Centre

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Version 8.1 – March 2020

Robust Process Improvement

What is Robust Process Improvement?

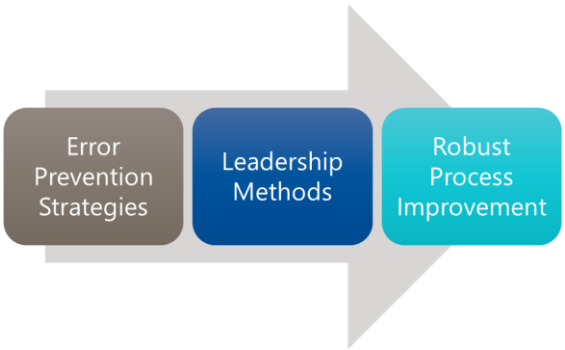
Safety problems in health care persist because they are complex. Because of this complexity, it is important to understand why something isn't working in order to improve it. Robust Process Improvement (RPI) is an effective set of tools to handle the complex quality and safety challenges that exist in health care. In the article, "The Ongoing Quality Improvement Journey: Next Stop, High Reliability", Mark Chassin and Jerod Loeb suggest "The power of these tools lies in their systematic approach, which involves the following: reliably measuring the magnitude of a problem; identifying the root causes of the problem and measuring the importance of each cause; finding solutions for the most important causes; proving the effectiveness of those solutions; and deploying programs to ensure sustained improvements over time."

RPI focuses on continuous improvement via daily problem solving and sustainment through daily management systems – in alignment with strategy – to support the journey to high reliability and zero harm.

When addressing the high reliability challenge that faces health care, as leaders, we should ask ourselves the following questions:

- *Are we doing the right things?*
- *Are we doing the right things right?*
- *How can we be certain that we do the right things for every patient every time?*

All of the technology, science, facilities, equipment and compassion that comprise health care are only as good as our ability – through systems and processes – to deliver it. We can optimize reliability through implementation of Error Prevention strategies + Leadership Methods + Robust Process Improvement.



How can Leaders Support Robust Process Improvement?

A key role of HRO leaders is to "find problems and fix causes" in systems and processes. As a leader, you can accomplish this goal by supporting RPI activities in your area of responsibility. You can do this by:

- Participating in project idea prioritization to ensure alignment with mission, vision, values, and strategic objectives
- Providing resources to serve as team members on projects
- Attending project leadership meetings and project report outs
- Removing barriers to project success
- Conduct rounds to improvement areas to see the project work and related results

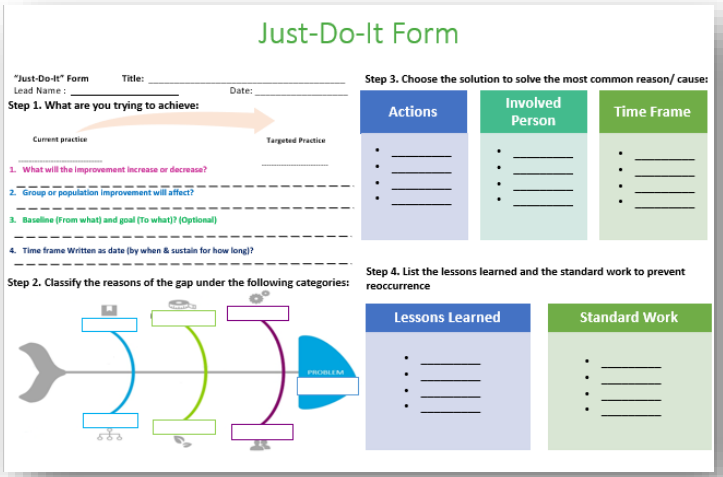
Improvement Methods

What are Improvement Methods?

Avedis Donabedian, one of the grandfathers of quality improvement, contributed greatly to quality assessment and improvement within health care. One of his greatest contributions was bringing to light that in order to affect outcomes, we have to affect structures and processes. Structures describe the settings where care is delivered; processes are the actual medical care practices that are provided to the patient; and outcomes reflect the effect of structures and processes. During the transformation and quality improvement journey, the aim is to change structures and processes. While many improvement methods exist to assist in the quality improvement journey, King Faisal Specialist Hospital & Research Center has selected two methods – Just-Do-It Daily Improvement and the I.A.C.T. Model for Improvement – to support the journey to high reliability and zero harm.

The **Just-Do-It Daily Improvement** method creates a highly engaged workforce committed to long-term change because of its simplicity and ease of use by front-line staff. Improvement is done by the local experts – the people doing the job. As problems surface during the course of daily work, and the solutions are known, four simple steps can be followed – and documented on the Just-Do-It-Form – to make the improvement:

1. Document what you are trying to achieve
2. Classify the reasons of the gap in performance
3. Choose the solution to solve the most common reason
4. List the lessons learned and standard work to prevent reoccurrence



The **I.A.C.T. Model for Improvement** is an evidence-based approach developed by the KFSH&RC Quality Management Departments in Riyadh and Jeddah and validated by HPI Press Ganey. This method incorporates concepts and tools from Six Sigma, Lean, the IHI Model and FOCUS PDSA to create a standardized model to support improvement efforts where the solution is unknown and a more structured, in-depth approach is necessary for cause analysis and intervention testing and implementation. The four phases of the I.A.C.T. model are Identify, Analyze, Change and Transform and are documented on the Performance Improvement Charter (see following pages).

I.A.C.T. Model for Improvement: Identify Phase

What is the Identify Phase?

The Identify Phase of the I.A.C.T. model includes four sub-phases – Opportunity, Team, Baseline, and SMART Aim – and is a critical phase, as it creates the foundation for a successful project. Leaders can provide support in project identification by highlighting opportunities that are strategically important to the organization, particularly those that are problem prone, high risk, high cost or impact patient experience. As an opportunity is identified, it is important to build a project team that includes members familiar with each part of the process – managers, physicians, nurses and front-line workers – as well as an executive sponsor who owns the results of the project and assures results are achieved. Once the team is assembled, a baseline understanding of the process is established through capturing the current state flow of the process and associated metrics to measure success.

Any improvement requires setting aims. Establishing a **SMART Aim** for the improvement you are seeking helps the team systematically and meaningfully monitor progress towards the target.

I_Identify ©

Phase	Sub Phase	Description and Action needed
Identify	Opportunity	Identify the Problem: The Ideal, The Reality, The Consequence Problem prone | High Risk | High Volume | High Cost| etc.
	Team	Identify the Team: Executive Sponsor, Lead, Coach, front-liner, etc.
	Baseline	Identify the Flow (i.e. what is happening now?)
		Identify baseline Data (i.e. measure the problem)
	SMART Aim	Identify the scope Smart Aim Questions: 1. What are your increasing or decreasing 2. What is the group or population being affected 3. From what (baseline) to what (goal) 4. By when (date)

I.A.C.T. Model for Improvement: Identify Phase

KFSH&RC's Robust Process Improvement I.A.C.T. Model
Performance Improvement Charter

Identify Phase

Identify

Improvement Project Name:	Strategic Objective (select one):	Department
Click or tap here to enter text.	Strategic Objective SO1	Click or tap here to enter text.

Project Status	Improvement Site:	Project Start Date	Project End Date
Choose an item.	Choose an item.	Enter Start date	Enter End Date

Executive Sponsor	Team Lead	RPI Coach
Click or tap here to enter text.	Click or tap here to enter text.	Click or tap here to enter text.

Problem: *Why is this project needed?*
(State: 1) The Reality 2) The Consequences 3) The Ideal.)
Click or tap here to enter text.

Quality Domain: Which Healthcare Quality Domain does this project support:
Choose an item.

Baseline (Flow): Map the current process/ problem (Value Stream Mapping (VSM), Timeline, Flow diagram, etc.)
(Create a flow chart and determined value for each step of the process: This will help better understand the Gap from expected performance)

Baseline (Data): Determine the baseline of the problem that has been identified
(Write down the last data points captured)
Click or tap here to enter text.

Benefit/Impact: What is the main impact/Benefit?
(Please check only one)
- ☐ Contained or reduced costs; indicate amount----------
- ☐ Improved productivity
- ☐ Improved work process
- ☐ Improved cycle time
- ☐ Increased customer satisfaction
- ☐ Other (please explain)
  Click or tap here to enter text.

SMART Aim statement: What will the project achieve?
(3-4 words each)
1. What will the project increase or decrease?
   a. Click or tap here to enter text.
2. What is the Group or population affected?
   a. Click or tap here to enter text.
3. Baseline (From what) and goal (To what)?
   a. Click or tap here to enter text.
4. What is the time frame (By when (Date) & sustain)?
   a. Click or tap here to enter text.

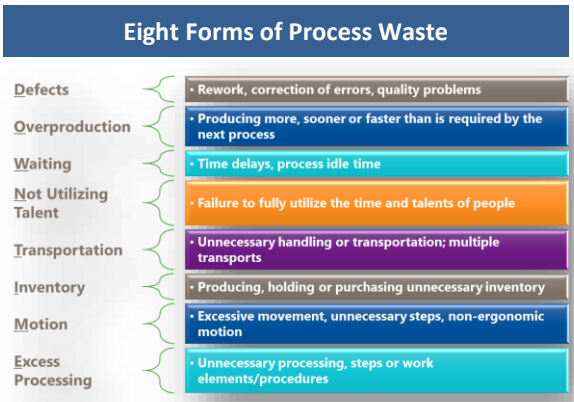
The I.A.C.T. Performance Improvement Charter is organized by the four phases. The Identify Phase of the charter captures the basic demographics of the project along with the information related to the sub-phases. An image of the current state flow of the process is encouraged to provide a baseline understanding of the process to be improved.

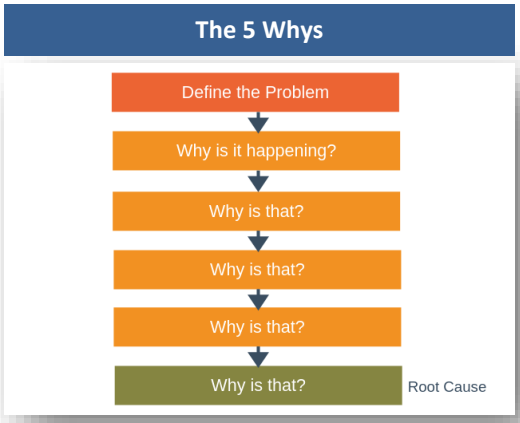
I.A.C.T. Model for Improvement: Analyze Phase

What is the Analyze Phase?

The Analyze Phase of the I.A.C.T. model includes three sub-phases – Cause Analysis, Drivers Diagram and Data Plan. During this phase, the team uses the process map created in the Identify Phase to brainstorm possible causes for the problem by looking for process waste and other causal factors.

When looking for improvement opportunities, look for process waste using the **Eight Forms of Process Waste** as a guide. Any activities that are considered non value-added (not essential to the customer) should be considered as waste and eliminated from the process if possible.



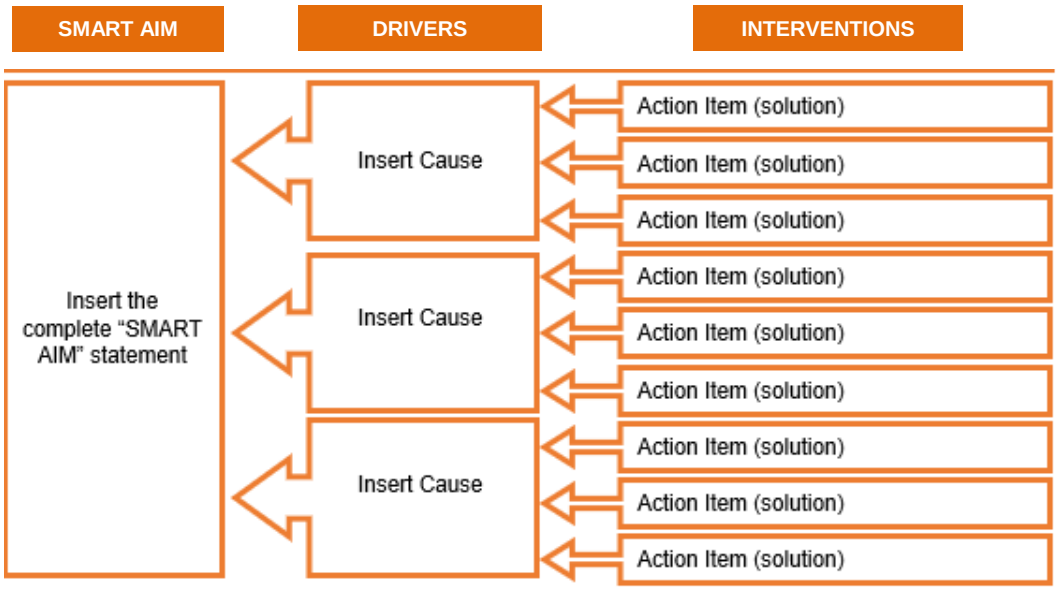


An effective tool to identify root causes and confirm the underlying issues that need to be resolved is **The 5 Why's.** The team repeatedly asks the question "why" – each answer forms the basis of the next question.

Phase	Sub Phase	Description and Action needed
Analysis	Cause Analysis	Brainstorm the causes of the problem, not the solutions
		Analyze the causes to confirm the Root Cause
	Drivers Diagram	Drivers (Begins with a noun): 1) Confirmed Root & Contributing Causes Intervention (Begins with a verb): 1) Solutions to match each cause
	Data Plan	Outcome Measure = Baseline Process Measure = Each driver and intervention Balance Measure = Each driver and intervention

I.A.C.T. Model for Improvement: Analyze Phase cont…

The Driver Diagram



The **Driver Diagram** is a key tool used in the Analyze Phase – it is a visual display of the team's hypothesis of what must change to achieve the project aim and what interventions, or action items may result in an improvement. Components of a driver diagram are:

SMART AIM
This is what you want to achieve and must be measurable. The team established the SMART AIM in the Identify Phase.

DRIVERS
These are the causes identified through brainstorming and cause analysis that the team needs to work on to achieve the aim. The statement of drivers should begin as nouns.

INTERVENTIONS
These are the ideas or action items the team would like to test to help move towards the aim. The statement of interventions should begin as verbs.

I.A.C.T. Model for Improvement: Analyze Phase cont…

The Data Plan

Measurement is a critical part of testing and implementing improvements. Measures inform a team whether the changes they are making actually lead to an improvement. The team should establish three types of measures – outcome measures, process measures, and balancing measures – along with a data collection plan for capturing the data for each measure.

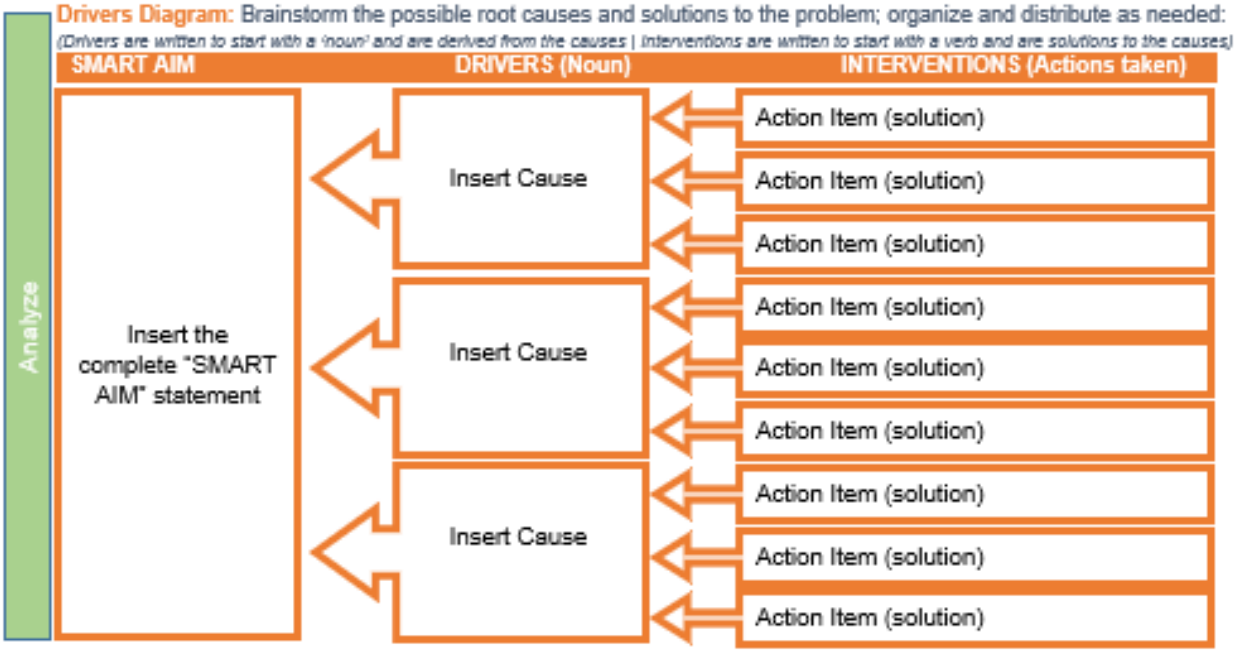
Outcome measures indicate business performance, health and success to goals. They may include financial and non-financial measures and are useful for management as lagging indicators. Examples of outcome metrics include revenue increase, patient experience, employee engagement and reduced length of stay.

Process measures are useful to management as a leading indicator and measure process performance. Process measures track progress towards goals and are consistent with the SMART Aim. A project may have more than one process measure. Examples include % late starts in the OR, wait time for a clinic visit and % patients discharged within 2 hours of order written.

Balancing measures are used to measure unintended consequences of process changes. It is important for the team to establish these measures to provide checks and balances as changes are being made. For example, if the outcome measure is reduced length of stay, a balancing measure may be a decline in patient experience.

I.A.C.T. Model for Improvement: Analyze Phase

KFSH&RC's Robust Process Improvement I.A.C.T. Model
Performance Improvement Charter
Analyze Phase



The I.A.C.T. Performance Improvement Charter is organized by the four phases. The Analyze Phase of the charter captures the completed Drivers Diagram, providing a visual of the identified causes and potential interventions as identified by the team through causal analysis.

I.A.C.T. Model for Improvement: Change Phase

What is the Change Phase?

The Change Phase of the I.A.C.T. model includes three sub-phases – Test & Implement, Monitor and Support. During this phase, the team performs small tests of change in the real work setting to determine if the interventions captured in the Drivers Diagram impact the SMART AIM as hypothesized. These small tests of change can be accomplished using the Just-Do-It improvement method, the Plan-Do-Study-Act (PDSA) cycle, or a Rapid Improvement Event (RIE). As changes are validated and implemented, they are monitored using the Outcome, Process and Balance measures established in the Analyze Phase and are supported and reinforced using standard work and a Daily Management System.

How do you select the method for testing changes?

Just-Do-It Improvement Method

Select this method when the change is simple, and the solution is known – it is something you can just "go and do".

Plan-Do-Study-Act (PDSA) Cycle

Select this method when the change requires testing in the real work setting to determine if it impacts the SMART AIM as hypothesized. The PDSA cycle is an iterative process of testing change by planning it, trying it, observing the results, and acting on what is learned.

Rapid Improvement Event (RIE)

Select this method when the scope of the change is a narrowly defined issue or process, and a small team can devote 100% of their time over three to five days to analyze and improve the issue or process. An RIE is a highly-facilitated, structured approach for making significant change within a short time frame.

Phase	Sub Phase	Description and Action needed
Change	Test & Implement	Change using one of the following methods for each intervention: 1) Plan Do Study Act (PDSA) cycles a. A four step iterative process used for testing a change in support of continuous improvement 2) Rapid Improvement Event a. Highly facilitated approach to team-based problem solving on a narrowly scoped process 3) Just Do-it: 1) Clear Solution with immediate resolution
	Monitor	Monitor change within the "Daily Management System"
	Support	Support through: • Huddling on the area's learning board • Development of Standard work

I.A.C.T. Model for Improvement: Change Phase cont...

More on the Plan-Do-Study-Act (PDSA) Cycle of Improvement

The PDSA cycle is an iterative process of testing change by planning it, trying it, observing the results, and acting on what is learned. During this testing cycle, the team should ask the following three questions:

- What are we trying to accomplish?
- How will we know that a change is an improvement?
- What change can we make that will result in an improvement?

The four steps in the PDSA cycle are followed in order:

Plan

- State the objective of the test and predict what will happen and why – this is done by understanding the current state of the process and identifying root causes of the issue being tested
- Develop a plan to test the change – this involves establishing Who? What? When? Where? and what data needs to be collected.

Do

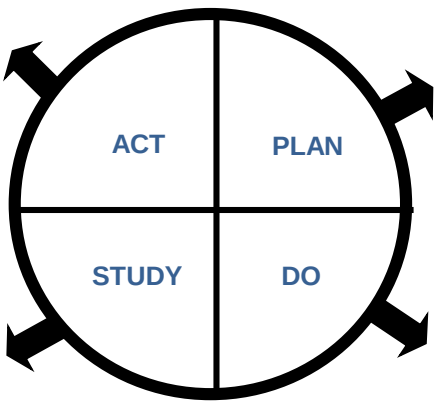
- Carry out the test on a small scale
- Observe and document learnings from the test, including problems and unexpected results
- Begin analysis of the data

Study

- Complete the analysis of the data and study the results
- Compare the data to your predictions
- Summarize and reflect on what was learned

Act

- Based on what was learned from the test, determine next steps:
    - Implement the change, or
    - Determine what modifications are needed and plan the next change cycle, or
    - Discard the change if the results will not yield the desired outcome



I.A.C.T. Model for Improvement: Change Phase cont...

More on the Rapid Improvement Event (RIE)

The Rapid Improvement Event (RIE) is a highly-facilitated, structured approach for making significant change within a short time frame. It is team-based problem solving at its best – a small team of process experts, including representatives from upstream and downstream processes, come together for 2 ½ to 5 days to test and implement process changes identified in the Drivers Diagram that are highly focused and narrowly scoped.

RIE Preparation

- Assemble the team and choose an executive sponsor
- Complete the event charter
- Complete observations and gather relevant data for baseline performance

RIE Goals

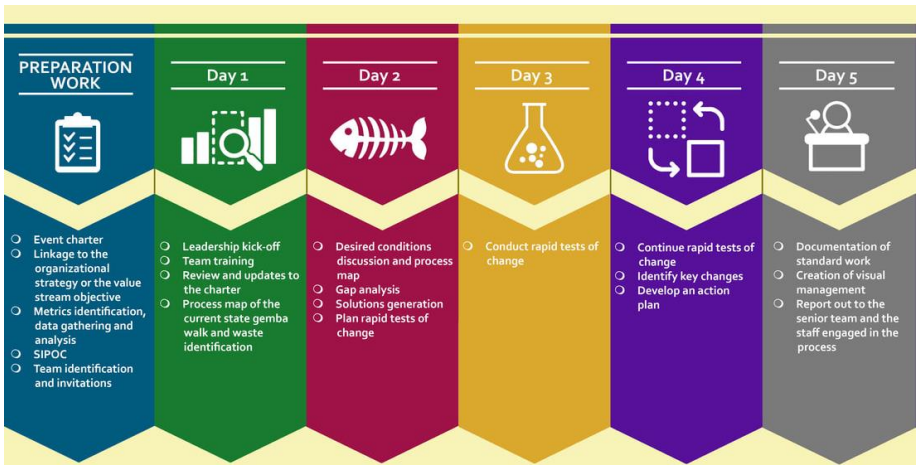
- Identify and make improvements during the event
- Remove waste and variation from processes to make them more reliable

RIE Process

The RIE process includes the following activities:

- Select an issue (pain point) from the current state process map/flow or drivers diagram
- Define the target condition and identify gaps between current state and target state
- Identify possible interventions
- Use the PDSA cycle to test the interventions in the real work place
- Prepare a plan to implement the interventions
- Establish a plan to monitor and sustain improvements

Traditional Rapid Improvement Event Agenda



I.A.C.T. Model for Improvement: Change Phase cont...

How do you Monitor and Support Improvements?

While leading improvement efforts is critical to supporting the journey to high reliability and zero harm, no one wants to expend the time and energy to make improvements only to see the progress disappear as systems and processes revert to the old way of doing things. Improving processes is not enough – you must have a systematic approach to sustaining the improvements. Key methods for support and sustainment that can be implemented in the Change Phase of I.A.C.T are standard work, huddle boards, and daily huddles.

What is Standard Work?

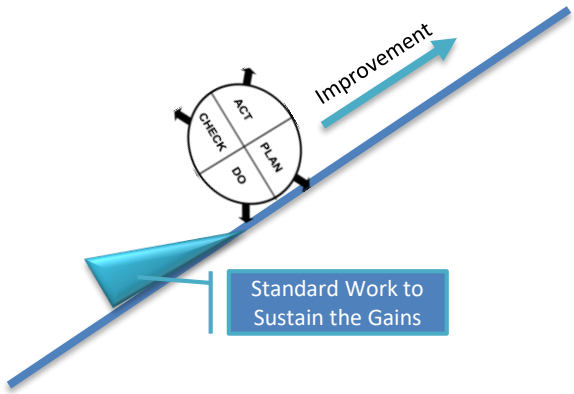
Eli Quisenberry, Administrative Director, Virginia Mason Production System at Virginia Mason Medical Center states in his article "How Does Standard Work Lead to Better Patient Safety" that "the first thing to realize about standard work is that it's about efficiency, accuracy and safety and not about making workers into robots. With standard work, the employees who are doing the work are key players in developing the standard work process…that's why standard work becomes an opportunity to help employees do a better job". Standard work is the detailed description of the best way to do work and provides a basis for continuous improvement.

How is Standard Work Created?

Standard work is created by answering the following questions:

- **WHO** operates the process and how many people are needed?
- **WHAT** should the final product/service look like and what are the check points for quality/defects?
- **WHERE** does the process occur and what does the environment look like?
- **WHY** are the process steps necessary to add value to the product/service?
- **HOW** will the process be followed to minimize variation?

What is the Role of Standard Work in the Improvement Process?



As improvements to processes are made, standard work should be created to document the changed work practice. Once created, the standard work must be deployed through training and communication. Once in place, standard work should be audited and enhanced, as necessary. Often performance of improved processes can diminish over time as other priorities and distractions arise. Standard work can be the support that prevents total slippage by reminding workers of the standard they created for the best way to do their work.

I.A.C.T. Model for Improvement: Change Phase cont...

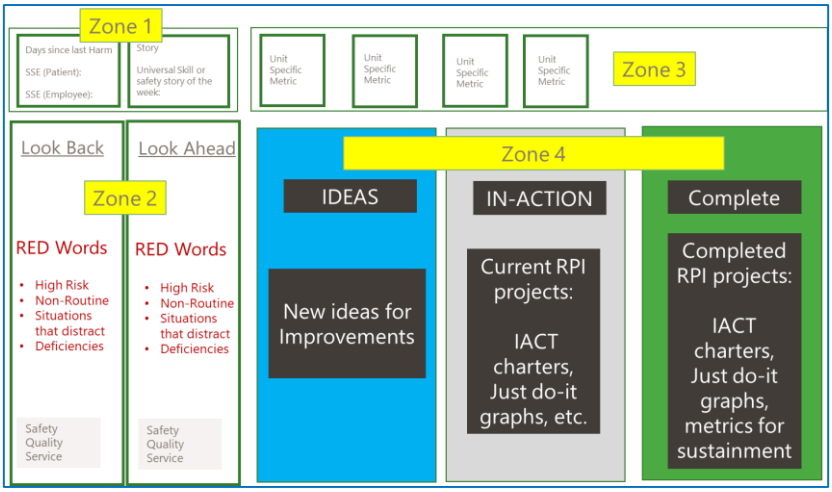
What are Daily Huddle Boards?

A daily huddle board is a powerful tool that provides a method of visual management to involve all employees in creating positive change, to support and sustain improvement efforts, and to identify local system issues that impact safe, effective, and patient-centered care. Daily huddle boards should become integrated into a unit or department's daily practice – they allow leaders and staff to quickly understand the performance of key process measures for the area and provide situational awareness for the team, helping the staff know if they have had a good day. Daily huddle boards facilitate daily problem solving by:

- Providing a mechanism for leaders and staff to identify and implement solutions together
- Viewing problems and issues as opportunities, not failures – an issue, when identified, signifies "Good News", "Thank you" for bringing this to our attention, and what can we do to fix the problem?"
- Preventing problems from getting larger – prevention vs. reaction

Why Daily Huddle Boards work…

- Not another "suggestion for safety program" rather a unit/department-owned visual of the team's work in progress and work accomplished
- Accessible by everyone
- Create an environment of transparency of outcome data and process
- Give a shared understanding of problems, causes, and solutions
- Create momentum for solving of local system issues
- Focus and results are locally shared and owned
- Continuous learning and improvement embeds desired safety behaviors in the daily work



The **KFSH&RC Daily Huddle Board** includes the following zones:

Zone 1: Real-time updates for the unit/department

Zone 2: Situational awareness through "Look Back" and "Look Ahead"

Zone 3: Measures important to the unit/department not displayed on other boards

Zone 4: Improvement efforts – ideas, current projects, and completed projects

I.A.C.T. Model for Improvement: Change Phase cont...

What are Daily Huddles?

Another key method for support and sustainment of improvements is the daily huddle. A daily huddle is a short meeting of front-line staff to begin the day (or shift) to share operational and situational awareness regarding each other's work-load through a lens of safety and quality of the experience of care as well as to review measure performance for improvement activities – project ideas, projects in-action and completed projects. Daily huddles allow for horizontal communication between team members, allowing for more efficient operations while anticipating safety, quality or experience concerns. They offer the opportunity to see how important measures are performing – particularly those related to current or recently completed projects – and to intervene as necessary if measures are underperforming.

Daily Huddles are not a turnover brief or staff meeting but rather an ***agenda-driven discussion*** on specific operational drivers and safety, quality, experience and improvement activity concerns. Minimum topics should include:

- Universal Skill reinforcement – good catch, lesson learned…
- Look back at previous day's issues
- Follow-up on action items from yesterday
- Look forward at current day safety, quality & operational concerns
- Review measure performance for improvement activities

Step	Description	Duration
1	**Safety Message** Great Catch / Review of a Universal Skill	2 minutes
2	**Look Back** Safety, Quality, PX Events/Concerns (Methods, Equipment, Supplies, Staffing – MESS)	3 minutes
3	**Look Ahead** Potential Safety, Quality, PX Issues/Concerns (Methods, Equipment, Supplies, Staffing – MESS, Watchers)	3 minutes
4	**Metrics Review** Issues/Barriers to Daily Work Problem Solving Project Updates & Metrics Review	5 minutes
5	**Escalation/Follow Up** Any issues/events to share with next tiered huddle/leadership	2 minutes

To ensure effective huddles, set the following expectations:

- Huddle every shift, or at least once per day
- Huddle on all units – clinical and non-clinical
- Leaders run the huddle (manager, shift supervisor, charge, etc.)
- Take notes and make them accessible to the team

I.A.C.T. Model for Improvement: Change Phase cont...

KFSH&RC's Robust Process Improvement I.A.C.T. Model
Performance Improvement Charter

Change Phase

Change

Data Management Plan: What are the measures to ensure the improvement is moving in the right direction?
(Development of the measures is critical to ensure that the interventions are correct and making a difference towards the outcomes)

Outcome Measures: (only one) *(The measure that highlights the main problem; i.e. baseline)*	Target/Goal
1. Click or tap here to enter text.	1. Click or tap here to enter text.
Process Measures: (measure for each driver) *(The measure that highlights the drivers and interventions)*	**Target/Goal**
1. Click or tap here to enter text. 2. Click or tap here to enter text. 3. Click or tap here to enter text.	1. Click or tap here to enter text. 2. Click or tap here to enter text. 3. Click or tap here to enter text.
Balance Measures: *(The counter-measure of the outcome measure; i.e. indirect measure)*	**Target/Goal**
1. Click or tap here to enter text.	1. Click or tap here to enter text.

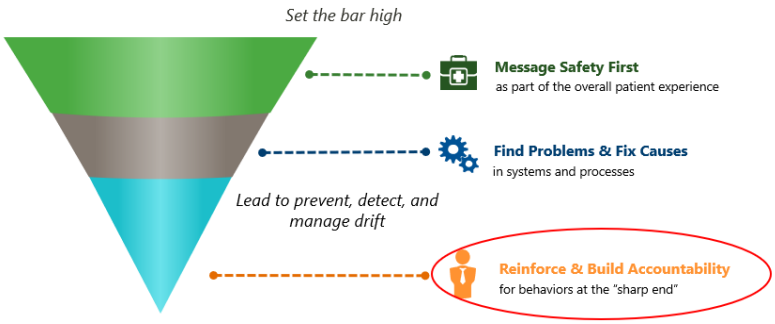
Results: Insert relevant graphs and charts to illustrate improvement over time.
(Insert relevant graphs, data, charts, etc. | include the baseline and final outcome measure | include at least one process and balance measure)

The I.A.C.T. Performance Improvement Charter is organized by the four phases. The Change Phase of the charter captures the Outcome, Process and Balance Measures along with charts and graphs to illustrate improvement over time. These charts and graphs can be displayed on the Daily Huddle Board and discussed in the Daily Huddle to celebrate accomplishments and/or highlight the need for intervention.

I.A.C.T. Model for Improvement: Transform Phase

What is the Transform Phase?

The Transform Phase of the I.A.C.T. model includes two sub-phases – Sustainability and Closeout. During this phase, the team refines the sustainment methods introduced in the Change Phase – Daily Huddle Boards and Daily Huddles – and continues to incorporate changes into standard work, embedding them in the system as the "new normal".



HRO leaders play a key role in the Transform Phase through "reinforcing and building accountability" for behaviors at the "sharp end". Leaders do this by:

- Continuing to develop the system and structures to support improvement work
- Stewarding the changes
- Coaching for adherence to standard work
- Focusing others on continually improving process to deliver optimal service and ensure desired results
- Encouraging problem solving to achieve the desired outcomes

This is called ***Leader Standard Work***.

T_Transform ©

Phase	Sub Phase	Description and Action needed
Transform	Sustainability	Continuity & accountability of the Improvement work • Leadership Standard Work • Visual Management • Daily Accountability • Continuous Improvement
	Closeout	Celebrate Success & Share learnings

I.A.C.T. Model for Improvement: Transform Phase cont...

What is Leader Standard Work?

Leader Standard Work is the set of activities of leaders to bring an improvement system to life. Leader standard work seeks to determine whether standards are being adhered to and whether they are sufficient, i.e. standard work. Leadership standard work involves leaders carving out time to help everyone focus on improving processes and developing people. This is accomplished by:

- Coaching leaders to translate the organization's strategic plan into the most important process improvements
- Actively developing and coaching staff to improve their performance
- Allocating a significant portion of work time to improvement activities
- Practicing and encouraging problem solving where the problem occurs to achieve the outcomes desired for the target condition
- Regularly rounding and attending daily huddles in units and departments where improvement activities are occurring to observe performance measures, probe for reasons if targets are not being met, and celebrate accomplishments (Gemba Walks).

Why Leader Standard Work?

Leaders shape culture through various embedding mechanisms including:

- What leaders pay attention to, measure and control on a regular basis
- Deliberate role modeling, teaching and coaching

Leader standard work sustains improvements by:

- ***Giving attention*** to the problem solving and improvement methods
- ***Role modeling*** how to critically think through the improvement process

Leader standard work includes Gemba Walks with a specific focus to see ***first-hand*** an improvement process

Daily:
- Facilitate/Attend Daily Safety Briefing
- Walk the Deck as assigned
- Round to Influence on rotational basis
Weekly:
- Gemba in all PI Demonstration Project units/departments
- Minimum 3-5 notes home for safety/service excellence
- 1:1 with Safety Coach & Manager on rotational basis
- Review G&O's and identify specific action steps for the week
- Conduct Executive Patient Safety Rounds with CNO (x2 weekly)

Tips for Creating Leader Standard Work

- Decide on your leader standard work activities and the frequency of each
- Document your leader standard work and put it on your calendar
- Be present and inquisitive on Gemba walks
- Make notes on Gemba Walks for follow-up, if needed

I.A.C.T. Model for Improvement: Transform Phase cont...

KFSH&RC's Robust Process Improvement I.A.C.T. Model
Performance Improvement Charter
Transform Phase

Transform

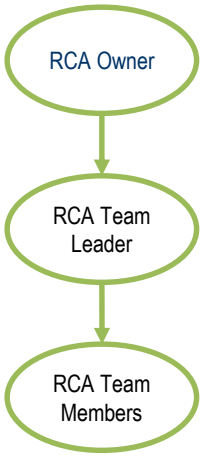
Monitoring methods *(monitoring method to ensure the improvement work is fixed)*	Sustainment plan *(How will the work continue to be governed? What is the plan if outcome measure returns?)*
☐ New developed indicator (please specify KPI title) Click or tap here to enter text. ☐ Tracking on the local 'Daily Huddle Board' ☐ Other (please Specify Click or tap here to enter text.	Click or tap here to enter text.
Lessons learned *(lessons learned that others can benefit from this type of project)*	**Team members** *(Please specify team members)*
1. Click or tap here to enter text. 2. Click or tap here to enter text. 3. Click or tap here to enter text. 4. Click or tap here to enter text. 5. Click or tap here to enter text. 6. Click or tap here to enter text.	1. Click or tap here to enter text. 2. Click or tap here to enter text. 3. Click or tap here to enter text. 4. Click or tap here to enter text. 5. Click or tap here to enter text. 6. Click or tap here to enter text.

The I.A.C.T. Performance Improvement Charter is organized by the four phases. The Transform Phase of the charter captures the monitoring methods, sustainment plan, lessons learned and team members. This is where action plans are created and documented to support the Daily Management System created in the Change Phase and where guidelines are established for when subsequent interventions are required if outcome measures underperform.

Own Root Cause

A way for leaders to lead local learning

ONE **TEAM** for ZERO HARM



Responsibilities

- ❑ Ensures stabilization of the immediate situation
- ❑ Charters the RCA Team
- ❑ Provides RCA Team with problem statement
- ❑ Meets with RCA Team to discuss and agree on investigation scope and objectives
- ❑ Projects urgency, establishes priority, and allocates resources
- ❑ Meets with the RCA Team Leader/Team Members and Stakeholders to understand investigation progress
- ❑ Removes investigation roadblocks
- ❑ Communicates investigation status
- ❑ Demonstrates responsibility for the root solution and implementation of corrective actions

10 Questions RCA Owners Should Ask

1. What must we do *now* to make our patients safe while we perform the root cause analysis?
2. Where else in our hospital/system might we be at risk for a similar type of event?
3. If we had delivered safe, evidence-based care, what would that have looked like? What did we do that was different – what are the *inappropriate acts*?
4. What are the system factors contributing to the acts comprising this event? Have we asked WHY enough?
5. Of the system factors that are root causes, what must we change or put in place to prevent recurrence? That is, what are the *corrective actions to prevent recurrence*?
6. Is this a déjà vu root cause (i.e., have we seen it before in a safety event)? *If yes,* why were past efforts unsuccessful in fixing the cause?
7. What problems do you anticipate in implementing the corrective actions?
8. What must we do to make our patients safe while we implement these actions?
9. Where else in the hospital/system should we apply these actions? How will we share the lessons learned?
10. How will you know that the corrective actions have been implemented effectively and are working?

Top 3 RCA Red Flags

"There was no policy and/or procedure…"
"Staff weren't following protocol…"
"We've always done it that way…"

If you see these red flags:
Ask WHY and press the RCA Team to identify the deeper (and likely more interesting) system causes of these conditions.

If you don't address these red flags:
The underlying causes will remain in the system and contribute to future failures and events!

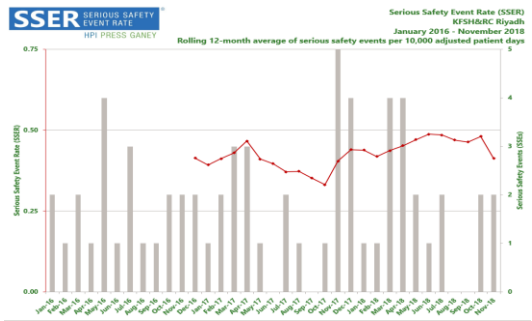
Top 3 RCA Roadblocks to Progress

Roadblock	Resolution
Scheduling RCA Team and RCA Stakeholder meetings	▪ establish culture of urgency for RCA ▪ alert senior leaders of RCA meeting schedules and communicate priority
Physician resistance in participating in the RCA process	▪ attempt to anticipate resistance at initiation ▪ 1:1 phone call to physician ▪ engage physician leader to intervene
Stakeholder non-agreement with root cause statements	▪ validate RCA Team assessment ▪ meet with RCA Team Leader to anticipate resistance and plan stakeholder approach

Display safety, quality, and service results

A way for leaders to lead local learning

ONE **TEAM** for



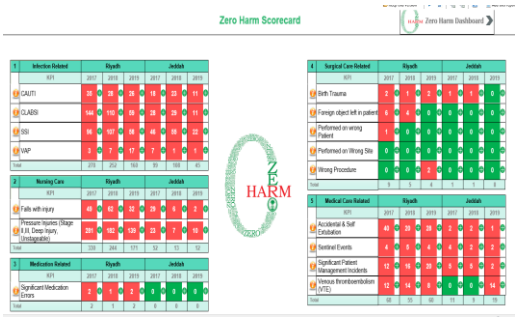
Safety is protecting patients and our people from harm.

The best way to keep people safe is to practice – with high reliability – what is known to be safe practice.

For safety – the only acceptable outcome is zero preventable harm. We will continue improving our systems until we heal with zero harm.

As target behaviors – known safe practice – go to 100%, harm goes to zero.

One measure of patient safety is our Serious Safety Event Rate (SSER). The SSER is shown above.



Quality is care that is effective – giving the patient the best probability of a good clinical outcome.

The best way to get a good outcome is to practice – with high reliability – what is known to be safe and effective practice.

For quality – the only acceptable outcomes are 100% best care. We will continue improving our systems until we consistently provide 100% best care.

As target behaviors – known safe and effective care – go to 100%, our patient outcomes go to the top 10%.

The Zero Harm Scorecard shown above is from KFSH&RC and a dashboard is an example of a Performance Scorecard, a composite of quality measures.

Complacency is satisfaction with the existing outcomes. To do better we must want to do better. Three ways to break complacency are:

1. Make gaps visible to leaders, caregivers, and providers. A performance gap is the difference between goal and actual outcome.
2. Strive for best practice. We might be meeting our goal – but is our goal set for the patient experience that our customers deserve.
3. Continuously raising the bar. We might have the correct goal and we are meeting our goal – but could we do better next month? Next year?

مستشفى الملك فيصل التخصصي ومركز الأبحاث
King Faisal Specialist Hospital & Research Centre

ONE TEAM for ZERO HARM