Promoting a Culture of Safety in Healthcare

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Objectives
- Describe the importance of reporting errors in healthcare
- Identify the type of behavior involved in errors
- Discuss barriers to developing an effective safety culture
- Identify essential components that must be present to promote a culture of safety
- Describe common questions to assess safety planning within any healthcare system
- Identify ineffective approaches to conducting an analysis post-event
- Describe how to proactively evaluate and plan for system improvements
- List important factors that define highly reliable organizations
- Describe the qualities of leaders that lead to safety improvements in healthcare
- Describe the leadership qualities that promote a culture of safety

Culture of Safety

The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management.

Advisory Committee on the Safety of Nuclear Installations

Why is a culture of safety important?

Patient Safety Statistics
- In developed countries as many as one in 10 patients is harmed while receiving hospital care.
- Hospital infections affect 14 out of every 100 patients admitted.
- WHO estimates 20-40% of all health spending is wasted due to poor-quality of care.

Medical Error - the third leading cause of death in the US
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A medication error is “any error occurring in the medication use process.”

Serious medication errors occur in 5-10% of patients admitted to hospitals.

The FDA estimates that 1.3 million people are injured annually in the US following medication errors.

Adverse drug events cause more than 770,000 injuries and deaths each year and cost up to $5.6 million per hospital.

There are ~7,000 deaths per year (19 deaths per day) due to medication errors.


Medication Error Statistics

Serious Adverse Drug Events Reported to the Food and Drug Administration, 1998-2005


Looking at who is behind the numbers

Case Report

Becki was prescribed full doses of Lamictal and Depakote for bipolar disorder.

The pharmacy filled the prescriptions despite being alerted of a drug interaction.

After 2 weeks of treatment Becki started experiencing sore throat, dry cough, irritated sinuses and a pain in her chest.

Went to urgent care and was evaluated for her cardiac issues.

Emily’s Story

Diagnosed with a yolk sac tumor at age of ~1.5 years.

Received multiple surgeries and cycles of chemotherapy.

Family reported the latest MRI revealed the tumor was gone; doctors recommended finishing the last round of chemotherapy.

Chemotherapy was compounded with concentrated sodium chloride (23.4%) instead normal saline (0.9%).

Emily Jerry died due to a medical error on February 26, 2006.

http://emilyjerryfoundation.org/emilys-story/
Factors leading up to fatal medication error:
- "Weekend staffing"
- no breaks or meals
- computer maintenance resulted in pharmacy system not available until mid-morning
- nurse requested Emily’s chemo (early)
- rushed to check the chemo
- Ohio Board of Pharmacy permanently stripped him of his license

- Pleaded guilty to involuntary manslaughter
- 6 months in jail
- 6 months home confinement
- 3 years probation
- 400 hours of community service
- $5,000 fine

Second Victims
- Healthcare professionals who experience difficulties in coping with their emotions after a patient safety incident
- Suffer from loss of confidence, fear of litigation or reputation damage, guilt, and anger
- Worst cases result in suicide

Psychological impact and recovery after involvement in a patient safety incident (PSI)
- Evaluated individual, situational, and organizational aspects influencing psychological impact and recovery
- Multi-center, cross-sectional, retrospective survey of 1735 healthcare professionals

Factors associated with higher psychological impact:
- PSI resulting in moderate harm (p=0.0001)
- PSI resulting in severe harm (p=0.0001)
- Feeling personally responsible for the PSI (p<0.0001)

PSIs related to death resulted in a longer psychological impact over time for nurses than physicians (p=0.02)

Organizational culture and the impact on psychological impact of PSIs
- Cultures scoring above the median as supportive and respectful resulted in lower psychological impact (p=0.0012)
- Cultures scoring above the median as characterized by blame resulted in a higher psychological impact (p=0.0036)

- Rendered support associated with lower psychological impact scores during recovery
- Information concerning what happened (p=0.0027)
- Information concerning what to do (p=0.0072)
- Extra guidance at the workplace (p=0.0387) are associated with significantly lower IES scores

Take Away Points Regarding Second Victims
- The higher the harm score severity of the PSI, the higher the psychological impact.
- The more supportive and respectful the organizational culture, the less the psychological impact.
- Follow-up with second victims after a PSI to let them know what happened, future steps, and give guidance, leads to better psychological recovery.

How do we improve and develop a culture of safety?
High Reliability Organizations

- An organization that has succeeded in avoiding catastrophes in an environment where normal accidents can be expected due to risk factors and complexity. Safety is the highest priority.

- Examples include commercial aviation and nuclear power.

- Foster an environment of collective mindfulness - all workers look for and report small problems or unsafe conditions before they pose a substantial risk to the organization.


Highly Reliable Organizations

- Characterized by blameless and voluntary reporting

- Perform detailed analysis of accidents and near misses

- Open communication and disclosure regarding safety and accidents

- Top-down commitment to safety with accountability not simply limited to front-line providers

- Trust exists throughout the organization

- Focus is on continuous improvements and system design


Traits of Highly Reliable Organizations

- Sensitive to operations - constant awareness of how processes and systems affect the organization; what is and isn't working

- Transparency through improved communication and data sharing, leadership involvement and rounding, don't assume

- Reluctance to oversimplify the reasons for problems

- Examine data/metrics, willing to challenge long-held beliefs - don't stop at the surface


- Preoccupation with failure - all staff look for ways their work processes might break down; constantly share; de-stigmatize failure

- Support innovation and new ideas

- Identify what is working correctly - if a process fails, look at areas it is successful

- Don't quit after a few months - lead employees to see it is attainable


- Deference to expertise - listen to people who have the most developed knowledge of the task at hand, regardless of hierarchy or seniority

- Do not say "I already know that."

- Redefine meetings - place and time

- Resilience - leaders stay the course and are prepared and know how to respond to failures and continually find new solutions.

- Emphasize skill development, reconnect to the "why" or purpose


Reporting Errors

- Institute of Safe Medication Practices (ISMP)
- National Medication Errors Reporting Program (ISMP MERP)
- National Vaccine Errors Reporting Program (ISMP VERP)
- Food and Drug Administration (FDA)
  - MedWatch Program
  - Vaccine adverse drug reaction (VAERS)
  - Medical Device Reporting (FDA MDR)
- Licensing Boards
- Manufacturers
- Internal reporting programs

Error Detection Methods

- Voluntary Reporting
- Trigger Tools
- Observation
- Chart Review
- Patient Complaint

Importance of Reporting Errors

- Identify educational gaps
- Accidents/events/errors are rarely isolated failures
- Leadership becomes aware of the event
- Identify the root cause of errors with the goal of improving the system
- Data gathered may assist in identifying priority areas for improvement

Factors Contributing to Low Error Reporting

- Fear of retribution
- Fear of litigation
- Lack of knowledge regarding what is a reportable event
- Time constraints
- Unsupportive colleagues
- Belief that no systematic change will result from reporting an adverse event

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The Effects of Power, Leadership and Psychological Safety on Resident Event Reporting

- 106 residents from varied departments completed survey

  Study aims:
  1. Describe the relationship between psychological safety and intention to report adverse events;
  2. Test for the presence and strength of hypothesized negative correlation between perceived power distance and psychological safety to determine if it is a mediator of intentions to report adverse events;
  3. Test for the presence and strength of the hypothesized positive correlation between leader inclusiveness and psychological safety as a mediator of intentions to report adverse events

  Power distance
  - extent to which an individual perceives unequal distribution in status and power within institutions and organizations
  - Leader inclusiveness
  - explicit display of openness, availability and accessibility by leaders, focuses on followers’ perceptions that leadership behavior is consistent with their expectations
  - Psychological safety
  - belief that a people can express themselves without negative consequences

The Effects of Power, Leadership and Psychological Safety on Resident Event Reporting

- Perceived power distance
  - negatively correlated with psychological safety (p < 0.01)
- Leader inclusiveness:
  - positively correlated with psychological safety (p < 0.05) and reporting intentions (p < 0.05)
- Psychological safety:
  - positively correlated with reporting intentions (p < 0.01)

Team leaders should exhibit behaviors that are inclusive: sharing critical information, discuss progress of patients and learners, and leaders should maintain presence within the team.

Develop procedures and policies that “flatten” the hierarchy and develop leaders who exhibit inclusive behaviors.

Disrespectful Behaviors in Hospitals
Institute for Safe Medication Practices Survey Results (2013)

- 4,884 respondents
- Nurses (68%), pharmacists (14%), physicians (20%), quality/risk managers (10%)
- Top reported disrespectful behaviors (at least once %; often %):
  - Negative comments about colleagues (73%; 20%)
  - Reluctance or refusal to answer questions or return calls (77%, 13%)
  - Condescending language or demeaning comments (68%, 13%)
  - Impatience with questions or hanging up the phone (69%, 13%)
  - Reluctance to follow safety practices or work collaboratively (66%, 13%)

The least frequent disrespectful behaviors encountered at least once during the past year included:
- Shaming, humiliation, or spreading malicious rumors (46%)
- Reporting staff to a manager (actual or threat) (42%)
- Insulting or slighting an individual due to race, religion, or appearance (24%)
- Thrown objects (18%)
- Physical abuse (7%)
Addressing Intimidation

- Establish a code of conduct that specifies unacceptable behaviors - blatant as well as those that subtly undermine team cohesion, morale, self-worth, and safety.
- Survey staff and start a dialogue.
- Develop a conflict resolution process.
- Encourage confidential reporting.
- Enforce zero tolerance - regardless of offender’s standing in the organization.
- Lead by example.
- Reward outstanding examples of collaborative teamwork, respectful communication, and positive interpersonal skills.

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Just Culture

- Creates an open, fair, and just culture.
- Creates a learning culture.
- Designs safe systems.
- Manages behavioral systems.

Person-Based Approach to Errors

- Focus is on human factors.
  - Forgetting.
  - Reactions.
  - Carelessness.
  - Negligence.
- Solutions focus on the specific person involved.
  - Disciplinary.
  - Blame and shame.
  - Legal action.

Systems-Based Approach to Errors

- Focus is on system factors.
  - Error is the result of the system.
  - Every system has the potential for error.
- Solutions involve improving the system.
  - System-wide barriers and safeguards should be implemented.
  - Focus on how and why the system failed - not the individual.

Challenges of Analysis Post-accident

- May be difficult and time consuming.
- Accidents are often investigated by insiders, who may be subject to biases.
- Accidents and subsequent investigations can both reflect the workings/problems with the same system.
  - Thorough systems analyses may be beyond the capability of those responsible.
- Often HIC investigations end with a finding of causality due to human error.
  - Don’t go beyond proximal cause.
  - Difficult, uncomfortable and time consuming to conduct a critical analysis.
  - Easier to place blame on front line operators.
  - Hindsight bias - cause of the accident seems obvious after the fact and front line operators should have prevented it.
Improving and Evaluating Systems

- Accidents are often due to small faults that create unsafe conditions.
- Accidents are not anomalies from human error but are normal events due to problems in complex systems.
- Complex systems move incrementally toward a point at which they become unsafe.
- Pressure is to decrease costs and maximize efficiency.
- It is difficult to see how changes can create new failure nodes and changes can be hard to reverse.
- Always ask why and how during an investigation, but also ask what if before the next big accident.
- Don’t strive for a specific fix that keeps 1 particular accident from happening again.

Root Cause Analysis and Action

RCA

- Identify hazards and vulnerabilities that impact patient safety; then prioritize them.
- Identify systems-based corrective actions.
- Ensure timely execution of the RCA, formulate effective sustainable improvements and corrective actions.
- Ensure follow-through to implement recommendations.
- Measure whether corrective actions were successful.
- Leadership should encourage RCAs are performed when appropriate, timely, and implemented.

Behaviors Involved in Errors

- Human error - unintentional behavior leading to undesirable outcome.
- Product of system design - i.e. weaknesses in the system.
- At-risk behavior - behavioral drift.
- Unsafe habits - due to immediate concerns rather than delayed/uncertain concerns.
- Making a choice that increases risk where risk is not recognized or is mistakenly believed to be justifiable.
- Leadership should discourage.
- Reckless behavior - perceives risk, unable to justify behavior and disregards potential outcomes.

Safety Culture Blueprint
Safety Culture Blueprint: Leadership
- Leaders in the organization must have patient safety as a priority and be knowledgeable.
- First safety practice for better healthcare by the National Quality Forum is creating/promoting a safety culture.
- All other practices rely on this.
- Leaders must be the driving force behind continuous quality improvement (CQI) and provide regular feedback to frontline operators.
- Leaders must be open to public disclosure.
- Leaders must require continuous staff training, team-based work re: CQI and systems analyses and optimization.
- Leaders must be pre-emptive.

Safety Culture Blueprint: Communication
- Foster a culture of open and respectful communication.
- Lead by example.
- Establish a code of conduct that specifies unacceptable behaviors.
- Encourage zero tolerance, regardless of offender’s standing in the organization.
- Reward outstanding examples of collaborative teamwork, respectful communication, and positive interpersonal skills.
- Mindfulness throughout an organization considers, but moves beyond, events and occurrences.
- Everyone in the organization is continually learning, adjusting, and redesigning systems for safety and managing behavioral choices.

Safety Culture Blueprint: Systems
- Create a non-punitive environment.
- Mindfulness - alertness/awareness of signals to avoid danger.
- Requires focusing constantly on failure avoidance, being resilient and having managerial attention focused upon the front line and not just the back-line.
- Listening to workers observations regarding processes and safety risks.
- Effective implementation of technology to promote safety.
- View near misses and adverse events as opportunities for improvement.
- Develop a team-based process to studying each error or preventable adverse event.
- e.g. root cause analysis.
- Develop FMEA (failure mode and effect analysis).
- Reviews process to pre-emptively identify problems.

Safety Culture Blueprint: Questions for any system
- What are the most severe accidents that could happen?
- High alert medications.
- Confused drug names.
- Complex processes that are not utilized often.
- Emergency situations.
- What do we do to prevent the worst accidents?
- What are the remaining vulnerabilities in terms of technology, organization/systems and staff?
- Do these become more dangerous in certain circumstances?
- Training at staff - tiers.
- What other systems or processes may be impacted by this?
- Is this a process that can be maintained?
- Translations of care and hand-off between the NIC team are vulnerable areas for accidents to occur. What can we do to improve this?

Safety Culture Blueprint: Bring Attention to Safety - Be Creative
- Crib of Horrors.
- Job shadowing/swapping.
- Start meetings with a quality or safety focus.
- Provide patients with questions ideas.
- Offer tours to patients and families.
"Our real power to protect patients lies in the systems we build around imperfect human beings. By ‘systems’ I mean the clinical processes, technology, environment, educational programs, and the overall structure within organizations in which patient care is provided."

Michael Cohen

When it comes to developing a culture of safety...

References

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