Healthcare Safety Culture: A Seven-Step Success Framework

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In 2016 the total cost burden for patient harm in the U.S. was $146 billion. Of these adverse events, 30 to 70 percent were potentially avoidable, leaving a significant opportunity for healthcare to improve patient safety. Successful and sustainable patient safety improvement rests heavily on an organizational culture of patient safety, in which leadership supports systemwide attitudes, actions, teamwork, and technology to reduce the risk of patient harm. In an era in which healthcare IT is guiding critical decisions affecting patient safety, health leaders need a sociotechnical improvement framework that addresses culture, process, and technology.

According to a 2016 study, an improved safety culture and teamwork can help health systems reduce patient harm across entire hospital systems and multiple harm types. Based on results from the Safety Attitudes Questionnaire (SAQ), as workforce attitudes towards safety improved, all-hospital harm decreased significantly, as did serious safety events.

Organizations that don't prioritize a safety culture risk the following adverse consequences:

- Underreported safety events.
- Lack of improvement.
- A higher rate of harm.
- Workforce burnout and turnover.
- Rising costs.

This article describes the sociotechnical framework of a safety culture in which staff can openly share safety information and leverage healthcare IT to support safety goals. This structure gives health systems a roadmap to improved patient safety, better healthcare and employee outcomes, and lower costs.

Safety Culture: A Blame-Free Environment that Prioritizes Patient Safety

The Patient Safety Network (PSNET) bases its concepts of a patient safety culture on research in industries outside of healthcare that carry out complex, hazardous work. High reliability organizations minimize adverse events despite inherent risks in the workplace. In healthcare, high reliability organizations commit to a culture of safety that observes four key features:

1. Acknowledges the high-risk nature of the organization's activities and commits to consistently safe operations.
2. Supports a blame-free environment, in which individuals can report errors or risks for harm without fear of repercussions.
3. Encourages systemwide collaboration to resolve patient safety problems.
4. Dedicates organizational resources to address safety concerns.

Cultural Challenges to Improving Patient Safety

To establish an effective and sustainable safety culture, healthcare leaders must have strategies and tools to navigate several known cultural challenges:

- Underreporting of safety events—frontline clinicians (particularly those who are not managers or supervisors) do not consistently report safety events because they fear blame and negative repercussions.
- Lack of commitment from senior leadership—senior leaders may have inadequate commitment to patient safety compared with supervisors and frontline clinicians.
- Inadequate teamwork and communication—caregivers in the operating room have different perceptions of teamwork by role (e.g., surgeons versus nurses), potentially impacting safety coordination efforts.

Seven Ways a Sociotechnical Framework Improves a Safety Culture

As explained above, organizational culture often blocks meaningful improvement or gains in patient safety. To address the cultural challenges of improving safety culture, as well as the process and technology elements that support and sustain a culture of safety, health systems can use a sociotechnical framework. Culture includes patient- and family-centered care, leadership, teamwork, frontline staff burnout, and economic impact of culture; process includes organizational fairness, reliability, and process improvement; and technology includes healthcare IT.

Figure 1 shows how a sociotechnical approach combines culture, process, and technology. The laddered score measures the three elements and shows whether a health system is doing poorly (very low) or well (very high) with its safety culture.
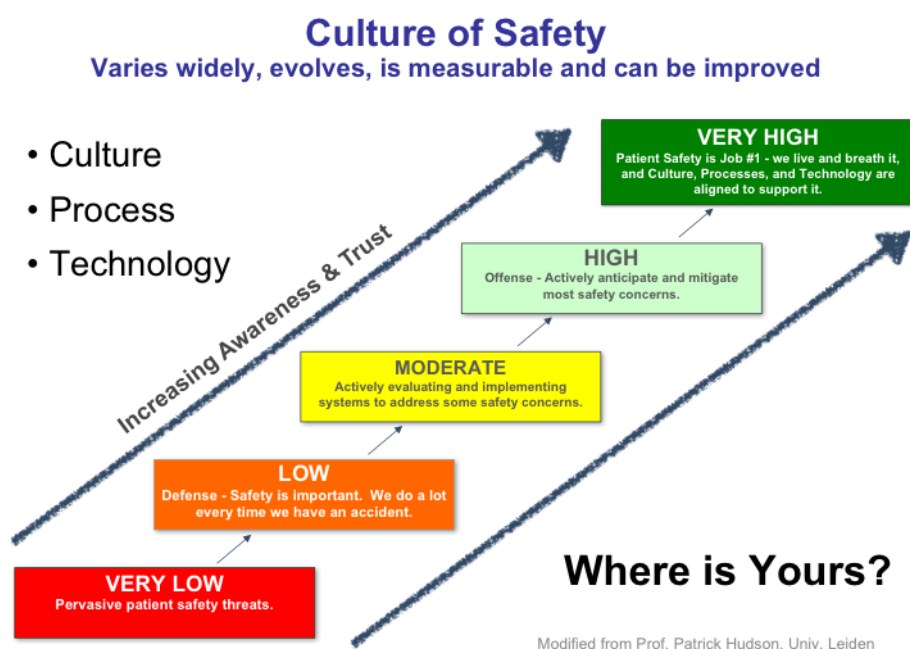

Figure 1: A sociotechnical approach to improving patient safety

A patient safety culture based on sociotechnical framework has seven key strengths:

1. Leverages Qualitative and Quantitative Data (Versus Quantitative Safety Scores Alone)

High quantitative cultural scores at the unit level don't reflect whether an organization is using healthcare IT safely, or that its healthcare IT systems are safe. To determine if a culture of safety exists among team members or if they have a fundamental understanding of the principles of patient safety and are practicing them, health systems need qualitative data (e.g., focus groups).

2. Doesn't Rely on HIMSS Stage Levels to Tell the Complete Safety Picture

The HIMSS Analytics Electronic Medical Record Adoption Model (EMRAM) scores health systems on their EMR capabilities, but these scores may not align with clinical safety. Clinical units can score a HIMSS stage five or higher, but, according to qualitative feedback from frontline staff, can still experience safety issues. HIMSS levels, however, don't measure patient safety and culture of safety issues.

3. Gives Frontline Clinicians a Voice in Decision Making

When decision making is relegated to and centralized at healthcare IT higher management levels, frontline caregivers are less able to quickly act on safety issues they identify. With local (versus top-down) oversight, frontline clinicians can address potential harm immediately. Empowering frontline clinicians with patient-specific safety analytics allows for immediate clinical decision making to mitigate or prevent harm.

4. Makes IT Solutions Accessible to Non-Technical Users

Frontline clinicians must be able to easily access and use safety analytics solutions to make timely safety-related decisions. Inefficiencies with technology not only delay addressing safety issues and increases risk, but also create stress for users, which increases the risk for workforce burnout. Organizations can make efficient patient safety solutions accessible to frontline clinicians with a secure, cloud-based software module (e.g., the Patient Safety Monitor™ Suite: Surveillance Module). The Surveillance Module helps detect, monitor, and prevent patient safety events and automates reporting to provide predictive data and all-harm identification and analysis.

5. Encourages Frontline Clinicians to Report Safety and Quality Issues

With an organizational culture in which frontline staff are comfortable reporting any safety or quality concerns, health systems can more accurately measure safety issues (an essential step in reducing risk). To ensure that staff are comfortable speaking up, leadership must uphold an environment of non-negotiable mutual respect for all team members.

6. Treats a Safety Issue in One Area as a Potential Systemwide Risk

An IT-related safety issue in one unit of a health system may indicate risk throughout the system. For example, if a medication reconciliation form for all patients in the emergency department (ED) has an error in the underlying structure and is a potential safety risk, it would affect every patient admitted to the health system from its ED. By identifying issues in one unit that can repeat across the system (e.g., incorrect/inaccurate protocols, problems with auto-population, and inaccurate medication mapping), organizations can mitigate systemwide risk.

7. Performs Thorough Due Diligence Before Taking Safety IT Solutions Live

For health systems to fully leverage IT solutions to improve patient safety, they must perform thorough due diligence before going live with the tools. Organizations risk derailing technology and improvement goals when they launch tools before testing for even basic functionality (e.g., logging on to care modules).

The Sociotechnical Framework: Combining Culture, Process, and Technology to Improve Patient Safety

By incorporating qualitative and quantitative data, a simplified sociotechnical framework of culture, process, and technology gives health systems a comprehensive guideline to measure and improve their safety culture, including how they use healthcare IT solutions. Organizations can keep safety improvement on track by using the sociotechnical framework to guide periodic reassessments of their safety work and culture.

About the Author

Prior to Health Catalyst Stan has held several executive, clinical and research roles. Most recently he was the Chief Strategy Officer for Pascal Metrics a federally-certified Patient Safety Organization. Prior to that Stan was the founding CEO of TheraDoc, which he led for 10+years until its acquisition. For 2+ decades Stan was a clinician, researcher and educator at the University of Utah School of Medicine, College of Pharmacy and at IHC-LDS Hospital. Stan is clinically trained as a pharmacist specializing in infectious diseases as well and has an advanced degree in medical informatics specializing in clinical surveillance and expert system decision support technologies.