SAFE PRACTICE 3: TEAMWORK TRAINING AND SKILL BUILDING

The Objective
Establish a proactive and systematic approach to developing team-based care through teamwork training and team-led performance improvement interventions that reduce preventable harm to patients.

The Problem
Team error is defined as human error made in group processes. [Sasou, 1999] Team errors are individual or shared errors that are not detected, indicated, or corrected by the team. [Sasou, 1999] Care has become fragmented and requires successful team communication to prevent system failures. Organizations are treating sicker patients at ever faster rates with treatments that are becoming increasingly complex. The aviation industry has determined that between 50 and 80 percent of all incidents and accidents can be directly attributed to human error involving poor group decision-making, ineffective communication, inadequate leadership, and poor task or resource management. [Freeman, 1991; US GAO, 1997] Comparable findings are now being reported in healthcare.

The frequency of medication errors, delays in treatment, and wrong-site surgeries is due primarily to communication failure, [Denham, 2008] with this being the primary root cause of approximately 70 percent of sentinel events reported to The Joint Commission from 1995 to 2004. Breakdowns in team communication are also the second most frequently cited root cause of operative and postoperative events and fatal falls. [Smith, 2005] A systematic review of emergency department closed claims determined that fundamental teamwork behaviors would have prevented or mitigated the adverse event in 43 percent of reviewed cases. [Risser, 1999]

The severity of harm resulting from teamwork failures can range from no harm to patient death. Common patient care errors resulting from such breakdowns include incorrect treatment, delays in treatment, and missed treatment. [Smith, 2005] Seventy-five percent of communication-related sentinel events reported to The Joint Commission between 1995 and 2004 resulted in patient death. [Smith, 2005] Poor team communication has been found to be a root cause in 80 percent of perinatal deaths and injuries, [TJC, 2004] and in 40 percent of maternal deaths and 45 percent of near miss morbidities. [Geller, 2004]

The preventability of team errors is not yet known; more evidence is needed to quantify the effectiveness of team training and skill building to improve patient safety. The aviation industry has demonstrated that Crew Resource Management (CRM) training has a positive impact on participants’ reactions and attitudes about its importance and perceived value, and it improves individual aviator knowledge and behaviors. [Salas, 2001] While it is suspected that CRM training has played a major role in this improvement in air safety, sufficient research has not been conducted to demonstrate its specific impact. [Salas, 2001] The importance of teamwork in promoting high-quality healthcare and preventing medical errors has been described in the Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) [AHRQ, N.D.c] training resources, [TEAMWISE, N.D.a] which are sponsored jointly by the Agency for Healthcare Research and Quality and the Department of Defense. [Clancy, 2007; AHRQ, 2009]
The cost of communication failures to the healthcare industry is unknown and difficult to determine. A study of international risk managers agrees that up to 80 percent of malpractice claims are attributed to failures in communication and/or a lack of interpersonal skills, usually on the part of the physician. [Woods, 2006]

Safe Practice Statement

Healthcare organizations must establish a proactive, systematic, organization-wide approach to developing team-based care through teamwork training, skill building, and team-led performance improvement interventions that reduce preventable harm to patients. [AHRQ, N.D.b; IHI, 2009; JCR, 2010]

Additional Specifications

Effective Team Leadership: Training programs should systematically address and apply the principles of effective team leadership and team formation. [Salas, 2008] Leadership at all levels of an organization should be fostered.

Effective Teamwork Training: Every organization should provide teamwork and communication training through basic and detailed programs. [Salas, 2008; Clark, 2009]

Basic Teamwork Training: Basic training should be provided annually to governance board members, senior administrative leaders, medical staff (both those who are independent and those who are employed by the organization), midlevel management, and frontline nurses. [Denham, 2006a; Denham, 2006b] The subject matter should include sources of communication failures, hand-offs, and team failures that lead to patient harm. The length and modality of training should be established by the organization. Participation should be documented to verify compliance. [Salas, 2008]

Detailed Teamwork Training: All clinical staff and licensed independent practitioners should receive detailed training consisting of the best available teamwork knowledge; however, staff of clinical areas that are deemed to be at high risk for patient safety issues should receive such training first. The clinical areas that are prioritized should focus on specific patient safety risks. The subject matter should include the principles of high reliability, human factors applied to real-world care processes, interpersonal team dynamics, hand-offs, and specific communication methods. [Frankel, 2006; McKeon, 2009] Focus should be placed on the development and application of structured tools. Detailed training should include a specified period of combined instruction and interactive dialogue regarding the application of the knowledge determined and documented by the organization. If all staff cannot be trained within one year, a goal should be set to train all clinical service area staff and caregivers over multiple years.

Effective Teamwork Skill Building: To develop the characteristics of “team-ness,” [TEAMWISE, N.D.b] individuals should build their teamwork and communication skills by establishing a shared mental model, using structured and critical language, understanding communication hand-off methods, and using effective assertion behaviors such as “stop-the-line” methods. Individuals and teams also should develop the skills necessary to monitor team performance continuously over time. Organizations should employ methods to verify the demonstration of teamwork skills. [Manser, 2009] A specified number of care units or service line areas and length of training should be set and documented by organization leadership each year with initiatives for building and measuring teamwork skills.
Effective Team-Centered Interventions: In order to generate the greatest impact, team-centered performance improvement initiatives or projects should target the work “we do every day.” The units and service lines selected should be prioritized based on the risk to patients, which in turn should be based on the prevalence and severity of targeted adverse events. The interventions should address the frequency, complexity, and nature of teamwork and communication failures that occur in those areas. Each year, every organization should identify a specific number of teamwork-centered intervention projects it will undertake, such as those cited below and in the Example Implementation Approaches section. Ideally, team-centered interventions should be undertaken in all areas of care. [Baker, 2005]

Specific Team Performance Improvement Projects: Organizations should select high-risk areas for performance improvement projects; these include emergency departments, labor and delivery, intensive care units, operating rooms, ambulatory care, and other procedural care units. Performance targets and strategies to close known performance gaps should be identified. Such performance improvement initiatives should have the components of education, skill building, measurement, reporting, and process improvement. [IHI, 2004]

- Rapid Response Assessment: Annually, organizations should formally evaluate the opportunity for using rapid response systems to address the issues of deteriorating patients across the organization. [AHRQ, N.D.a; IHI, N.D.; Bellomo, 2003; Kaplan, 2009]

- Internal and External Reporting: The performance improvement that is generated by team-centered interventions should be reported to governance boards and senior administrative management. Depending on the projects selected, the organization should submit the information to the appropriate external reporting organizations. [Drozda, 2008]

Minimum Requirements of Practice 3: To meet the minimum requirements of this safe practice, an organization can satisfy the Detailed Teamwork Training, Effective Teamwork Skill Building, and Effective Team-Centered Interventions requirements, defined above, by targeting an organization-determined number of units or service lines initially and additional new units each year, if the Effective Team-Centered Interventions requirements are satisfied, because it is expected that those involved would receive the required training and skill-building experiences. The requirements of the interventions component of the Culture Measurement, Feedback, and Intervention safe practice also will be met if improvement of the culture survey scores is an aim of the specific performance improvement projects that are undertaken.

Applicable Clinical Care Settings
This practice is applicable to Centers for Medicare & Medicaid Services care settings, to include ambulatory, ambulatory surgical center, emergency room, dialysis facility, home care, home health services/agency, hospice, inpatient service/hospital, outpatient hospital, and skilled nursing facility.

Example Implementation Approaches
- Organizations should take a systematic approach and should provide clear leadership (governance boards and senior administrative management), including visible physician leadership and commitment. Teamwork should be a fundamental behavior of the organization, and it should be recognized that systematic and regular reinforcement of the principles of team
performance should occur across the organization. [Salas, 2008] Such fundamen-
tals should be applied through performance improvement projects that target specific patient safety goals.

Organizations that are making a fresh start in establishing the activities required by this safe practice, but are constrained by resources, could consider combining the requirements of the Detailed Teamwork Training and Effective Teamwork Skill Building specifications of Effective Teamwork Training, thus targeting two areas of high risk. Early wins with such projects will help build momentum and reduce resistance, easing the development of additional broader programs.

The didactic elements of training may be delivered through multimedia or distance learning strategies that can be updated with the latest evidence. Documentation of participation can be maintained to verify compliance and to ensure that new and temporary staff receives such training.

Intensive Care Unit (ICU) Team Example Projects: [Reader, 2009] Projects employed by interdisciplinary teams in ICU are creating daily goals to help guide therapy. Nurses are using checklists to ensure that patients who have central catheters receive evidence-based interventions (see the Nursing Workforce safe practice).

Labor and Delivery Team Example Projects: Applying fundamental teamwork skills, common definitions of fetal well-being, and standardized approaches to fetal and maternal monitoring interpretation, as well as practicing for emergencies, is reported to have a dramatic impact on preventable newborn adverse events. A dominant theme in root cause analyses of perinatal deaths and injuries is a breakdown in team function.

Emergency Department Team Example Projects: [Fernandez, 2008a] The emergency department provides fertile ground for opportunities to undertake team training projects, because there are many failures in performance that are preventable in certain high-risk conditions. [Rosen, 2008b] Such projects could implement the principles of high reliability, communication, and communication hand-offs. They could also involve initiatives that confirm the closure of information loops with physicians who are managing patients after an emergency department discharge.

Operating Room Team Example Projects: The operating room is an environment that is conducive to the application of principles of communication, such as briefing, structured language, critical language, and team leadership. [Salas, 2008]

Rapid Response Systems Examples: Many organizations have embraced team-based approaches to early intervention for deteriorating patients. Whether they are intensivist-led, hospitalist-led, or nurse-led programs, many anecdotally report a reduction in codes, in improved mortality rates, and in unplanned ICU admissions. All such programs require critical teamwork skills. For the purposes of compliance with this practice, the establishment of a rapid response team could be considered one of the hospital patient care units’ team-centered intervention projects.

Team Simulation Examples: [Fernandez, 2008b; Rosen, 2008a] Many organizations use simulation for knowledge transfer and skill-building. Low-fidelity simulations, such as scenario-based techniques and the use of standardized patients, may address low-frequency, high-impact scenarios that will allow staff and physicians to practice...
teamwork skills. Simulations also may be used to assess teams in action. High-fidelity simulation offers the benefits of procedural competency and risk identification.

- **Tactical Team Techniques**: Certain techniques that are effective in sustaining gains and accelerating the adoption of teamwork practices and skills include using internally developed coaches and clinical champions, taking advantage of external performance improvement collaborative initiatives, and collaborating with outside experts. Early and clear gains from projects that are led by internal clinical champions provide evidence to the rest of the organization that supports the investment made in teamwork training and team interventions.

**Strategies of Progressive Organizations**

- Many organizations have embedded the development of team-based methods very broadly and systematically across clinical, operational, and financial activities. Some have extensively adopted simulation techniques. Some organizations are exploring the use of virtual teams using telephony and Internet-based tools. Certain progressive organizations have established a “Patient Safety College” that provides Internet-based training for all staff and leaders, allowing them access to training according to their own schedules. Many organizations have participated in the 100,000 Lives Campaign developed and launched by the Institute for Healthcare Improvement and have made team-centered rapid response teams a major feature of their performance improvement programs. Early findings show that these teams are having a dramatic impact. Clearly, this area will be a focus of further research.

**Opportunities for Patient and Family Involvement**

- Include patient and/or family members in teamwork training and planning committees. [NPP, 2009]

- Provide education and support to patients, families, and staff on patient- and family-centered care and on how to collaborate effectively in quality improvement and healthcare redesign. For example, provide opportunities for administrators and clinical staff to hear patients and family members share stories of their healthcare experiences during orientation and continuing education programs.

**Outcome, Process, Structure, and Patient-Centered Measures**

These performance measures are suggested for consideration to support internal healthcare organization quality improvement efforts and may not necessarily address all external reporting needs.

- **Outcome Measures** include patient harm (death, disability, or harm causing unanticipated treatment or increased length of stay), as well as operational and financial outcomes.

- **Process Measures** include the correlation of culture survey measurement with team performance and team domains; the use of observational markers for team behaviors; and the use of other measures based on the performance improvement projects undertaken.
Structure Measures include the verification of basic and detailed training programs; the existence of documentation of attendance at those programs; the existence of performance improvement programs with stated performance goals; and the existence of structures for reporting to senior administrative leaders and governance board leaders.

Patient-Centered Measures include the verification of the involvement of patients and their families in the team approach to their care, as well as satisfaction with the communication between patients and their caregivers.

Settings of Care Considerations

Rural Healthcare Settings: Teamwork is as important in small and rural hospitals as it is in larger urban or suburban hospitals. In fact, a smaller environment may lend itself more readily to team-based approaches to care. High-impact events that occur infrequently offer valuable opportunities to apply team-based methods, and are particularly important patient safety occurrences in settings where the infrequency of the events can cause mitigating diagnostic and treatment opportunities to be missed. Regional alliances with other hospitals offer teamwork opportunities as patients move between care settings.

Children’s Healthcare Settings: All relevant requirements of the practice apply to children’s healthcare settings.

Specialty Healthcare Settings: All relevant requirements of the practice apply to specialty healthcare settings.

New Horizons and Areas for Research

Research on the linkage between teamwork behavior and clinical outcomes should provide even more evidence to support investing in team performance improvement. Rapid response systems design and early warning assessment approaches will likely hold promise for the development of improved rapid response practices, as will work in the area of simulation, as noted previously. The WHO 19-item checklist for surgical patient safety has been estimated to save 1 in 144 surgical patients’ lives. [Haynes, 2009] Further research is needed to validate other system checklists and composite activities that reduce harm to patients.

Other Relevant Safe Practices

All elements of this safe practice are directly relevant. All practices involving performance improvement projects, and those for which teamwork is important, are relevant.
Notes


Denham, 2008: Denham CR. Are you listening ... are you really listening? J Patient Saf Sept 4(3):148-161


June 1, 2010

Dear Healthcare Leader:

We are delighted to announce that the National Quality Forum has graciously given us permission to distribute copies of the NQF Safe Practices for Better Healthcare – 2010 Update. This section has been provided to you in the interest of helping you implement, and/or educate others to adopt the suggestions and implementation examples into your safe practices.

The National Quality Forum is dedicated to providing evidence-based practices as ready-to-use tools to improve safety. The practices in the NQF Safe Practices for Better Healthcare – 2010 Update have been evaluated, assessed and endorsed to guide large and small healthcare systems in providing the safest care in every area of patient safety. We give our highest recommendation for them as a valuable resource toward patient safety from hospital bedside to boardroom. It is in the fulfillment of this mission that NQF makes the gift of this to you in your pursuit of your quality journey.

We hope that you will recommend that others purchase the report from NQF. The home page of the National Quality Forum can be accessed at the following link: http://www.qualityforum.org/ and an abridged report of the NQF Safe Practices for Better Healthcare—2010 Update can be downloaded free online at: http://www.qualityforum.org/Publications/2010/04/Safe_Practices_for_Better_Healthcare_--_2010_Update.aspx. To obtain the full report for a cost of $29.99, please contact NQF by phone during business hours at 202-783-1300 or via e-mail at info@qualityforum.org and their staff will contact you for payment details.

If you want to have a free copy of the entire set of practices, you may receive one if you fill out a web-based survey that may be filled out at http://www.safetyleaders.org/2010nqfResearchStudy/index.jsp.

We want to acknowledge you and your institution for your current efforts in patient safety. We hope you enjoy this important information and find it useful in your future work.

Sincerely,

Charles R. Denham, M.D.
Chairman