Solution: **Embedding Teamwork and Communication Improvement Strategies in the Work Environment: *The JHM Teamwork and Communication Program***

Organization: Johns Hopkins Medicine **Type:** Acute Care
Primary Contact: Hanan Aboumatar, MD, MPH, and Assistant Professor
Center for Innovation in Quality Patient Care
E-mail: habouma1@jhmi.edu **Phone:** 443.287.1419

IDENTIFICATION:

Communication problems are reported as the root cause for 65% of sentinel events reported to The Joint Commission. Teamwork & communication problems result in increased morbidity, prolonged hospital stay, higher healthcare cost, decreased patient satisfaction and decreased staff retention. Teamwork and communication challenges in healthcare have been attributed to multiple reasons including the complexity of healthcare operations, the hierarchal structure in healthcare, lack of interprofessional training, lack of communication skills training, etc.

Consistent with national findings, our root cause analysis of sentinel events and review of voluntary error reports at The Johns Hopkins Hospital have also revealed that teamwork and communication gaps are important contributors to adverse patient outcomes. As a first step towards addressing this, we started several years ago by offering classes on teamwork and communication to multiple health care teams. Those classes were built around lessons learned from other high-risk industries, mainly aviation, and aimed at raising awareness on teamwork and communication issues and how to address them. Classes discussed the need to 'speak up' when concerned about safety issues using assertive communication skills, along with teaching about situational awareness, red flags, and using the chain of command. Though feedback at end of classes was generally good to excellent, and participants perceived the topic as important and relevant to patient safety, they were less sure about the training classes' impact on their work environment and their colleagues abilities to 'speak up' and escalate concerns up the chain of command if need be.

Indeed, the issue of healthcare personnel's reluctance to 'speak up' about safety concerns has been widely discussed as a root cause for many adverse events, and multiple communication programs have been created focusing on addressing this issue via training on assertive communication skills and structured communication strategies. Crew resource management, TeamSTEPPS, and other similar programs all stress this concept and teach strategies for cross monitoring, 'speaking up', and escalation in hopes that all healthcare team members regardless of their discipline or rank will be ready to act whenever a situation arises that makes them concerned about their patients' safety. However, 'speaking up' is a challenging behavior to implement. In a national survey cosponsored by the American Association of Critical-Care Nurses (AACN) and VitalSmarts, 84 % of physicians and 62 % of nurses reported observing 'concerning' behaviors from their colleagues that could potentially threaten patient safety, yet less than 10% confronted their colleagues with their concerns.

PROCESS:

The human resources training literature shows that for training to be effective, the work environment should support trainees in applying their training. This is even more important for teamwork and communication training success since it is challenged by the personal nature of taught skills (as compared to checking blood pressure, for example) & potential for conflict (for example, with a nurse or resident speaking up to an attending physician).

We conducted several informal focus groups with healthcare providers from multiple disciplines, many of whom attended earlier teamwork and communication classes, to explore what they think is needed to help them implement taught concepts such as 'speaking up' and 'using assertive communication approaches such as SBAR' in their work environment. Group participants suggested teaching in multidisciplinary groups allowing opportunity for discussion, refresher training classes several times a year, frequent training offerings that reach all healthcare team members, having a clear chain of command, having supportive leadership, recognizing team members who are good communicators and team players, visual reminders at the workplace, verbal reminders by team leaders on taught strategies in work meetings, etc.

We then sought to develop and pilot test a program that teaches a state of the art curriculum and improves implementation of teamwork and communication strategies in the work environment. The program is based on behavior change principles and adult learning theory. Building on published literature, focus group feedback, and meetings with stakeholders, we used a '**Precede-Proceed**' framework to guide program development:

[PRECEDE: Predisposing, **R**einforcing, **E**nabling, **C**auses in, **E**ducational **D**iagnosis and **E**valuation. **PROCEED: P**olicy, **R**egulatory, **O**rganizational **C**onstructs in **E**ducational and **E**nvironmental **D**evelopment.]

Starting with a 'Precede' phase, we used the framework to: identify outcomes to be prevented - in this case adverse /sentinel events that are attributable to teamwork & communication gaps; identify desired behaviors to prevent such outcomes - we focused on speaking up and using assertive communication; and consider changes in the physical and/or social environment that could help promote such behaviors. We then brainstormed regarding the predisposing, reinforcing, and enabling factors for individuals to exhibit the desired behaviors and integrated those elements in our program design. In the Proceed phase we discussed program evaluation. Process measures for the program included # of departments/units enrolled and # of departments sustaining program. Impact measures include self-reported application of taught communication techniques; perceptions on ability to speak up, safety and teamwork; intervention- specific measures determined by the nature of implemented interventions in each department. Outcome measures vary by intervention. Reductions in sentinel events due to teamwork and communication gaps are obviously the key outcome of interest, however measuring reductions in sentinel events requires mandatory reporting of all events and tracking over long time periods.

By using this model we were able to go beyond an isolated educational intervention, to develop a comprehensive program that promotes application of taught Teamwork & Communication strategies in the workplace and guides local, departmental, and institutional leadership to what they can do to support and sustain such application.

SOLUTION:

We developed a comprehensive program that teaches and promotes Teamwork & Communication (T&C) improvement strategies in the healthcare setting through leadership guidance, multidisciplinary training, and program evaluation. The program follows a cooperative approach by which the program team collaborates with a single department at a time. A teamwork and communication committee assigned by the participating department/ unit works with the program team through three program phases: Preparation, implementation, and follow up. Below is a brief description of key events in each phase:

1. Preparation phase:
   - Identify participating department (all departments are candidates for this program)
   - Departmental leadership buy-in is secured
   - Department leadership assigns a departmental T&C committee with all disciplines represented. Members have to hold frontline responsibilities and be good 'opinion leaders' on T&C issues.
   - Program team collaborates with departmental T&C committee to:
     - Identify 2- 3 high risk areas for communication breakdown & devise solutions
     - Customize training to department using real stories and hypothetical scenarios
     - Secure multidisciplinary engagement and participation in phases 2 & 3.

   This phase helps team building among departmental T&C committee members, educates them on T&C improvement strategies, and prepares them for upcoming phases.

2. Implementation phase:
   - All department faculty and staff attend the T&C workshop.
   - Workshop includes brief didactic presentations, case based discussions based on real stories from the department, and a communications lab. T&C committee members participate as facilitators in communications lab.
   - Workshop time is used to educate on and 'roll out' any solutions that the committee and program team have designed to address high-risk areas for miscommunication and reduced teamwork.
   - Customized educational materials & tools are provided for future reference.

3. Follow up phase:
   - Departmental Committee supports training implementation & updates department leadership on program progress.
   - Program evaluation takes place.
   - Barriers to application of taught strategies are discussed and addressed.
   - Departmental T&C committee members are mentored and supported to assume a 'trainer' role in teaching future T&C workshops within their department.
   - Department takes ownership of program and participates in periodic reviews/updates and lessons learned meetings.
   - T&C workshops are repeated every 6-12 months.

Program components:

- Standardized Curriculum
- Customized Case Examples and Scenarios that make training relevant to the trainee's work setting
- Training Delivery Support
- Leadership Support tools (roadmap to success, leader checklist, committee awards)
- Implementation Aids (checklists, flip charts, posters)
- Evaluation Tools (before and follow up surveys, intervention- specific measures as needed)

Curriculum description:

- Offered over 4 - 6 hrs
- Modules on Safety in Healthcare, Human factors, Team structure and dynamics, Assertive communication and Conflict Resolution.
- Communication Lab: Role play exercises teaching structured communication strategies including SBAR (Situation-Background-Assessment-Recommendation) communication for situational briefings, DESC script for conflict resolution, Two attempt rule/Escalation for addressing safety concerns via using the chain of command, Read Back when receiving verbal orders, etc.

Results:

To date we have piloted our program in two departments/work units and are in the preparation phase with the third.

Our first pilot is in its second year of program implementation. Two full workshops have been implemented. Key interventions introduced in addition to the educational workshops include creating an electronic multidisciplinary hand-off tool and multiple new communication forums that foster interdisciplinary communication. T&C committee has started to take ownership of their program and participated in teaching the second year's workshop.
Over the past 2 consecutive years, safety and teamwork climate scores have increased by 60-90 % among nurse and physician groups. (Safety and teamwork climate scores are measured by our institution wide safety attitudes questionnaire and are reported for physician and nursing groups separately).

Our second pilot is still in its first year of program implementation. 95% of department faculty and staff attended the educational workshop. Key interventions introduced in addition to the educational workshops included devising an Information Technology solution to quickly notify and communicate key information about urgent/emergency referrals in order to avoid unnecessary patient waiting, and creating a detailed chain of command for communications about emergency/urgent patients.

Long-term evaluation on this pilot is still pending; however our preliminary data analysis of the post-workshop follow-up is promising. We had conducted a baseline survey at workshop time

and followed up with another at 6-7 months. The response rate on the follow-up survey was 37%. Respondents' disciplinary breakdown was similar for the baseline and follow-up survey respondents. We assessed extent of implementation of taught assertive structured communication approaches before the workshop and at follow up, along with perceptions of safety and teamwork. Key results include:

SBAR communication: The percentage of survey respondents using SBAR communication increased from 15% at baseline to 42% at 6 months (p=0.000)

Two Attempt rule: The percentage of survey respondents using the two-attempt rule increased from 17% to 36% (p=0.059)

DESC script: The percentage of survey respondents using DESC conflict resolution script increased from 20% to 66% (p=0.000)

Perceptions of 'speaking up': In response to the statement "In this clinical area, it is difficult to speak up if I perceive a problem with patient care" the percentage of survey respondents who agreed or strongly agreed with this statement decreased from 65% at baseline to 20% at follow up (p= 0.000).