TIPS

Medical Team Training — An Overview

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Introduction

POOR COMMUNICATION among clinicians is a leading source of adverse events in healthcare as evidenced by JCAHO goals related to communication. Within the VA, 82% of the 3533 RCAs in NCPS database identify a communication issue in at least one of the root causes of the event. To address the need for improved communication with the goal of reducing adverse events, the VA developed Medical Team Training (MTT). This program is based upon the principles of Crew Resource Management (CRM).

CRM was developed in aviation and is based upon teams working together well, communicating effectively and recognizing that individual technical skill alone isn't enough to ensure safety.[1]

Our program is founded on effective communication. To facilitate this, we teach participants a number of tools, such as assertiveness and rules of conduct, which are ground rules for communication that focus on respect and shared responsibility. Once teams have a shared understanding of communication skills, we progress to teaching specific tools for clinical situations as follows.

Briefings are fundamental to MTT. By this, we mean a briefing is a conversation facilitated by a team leader to establish a shared understanding of the management of patient care in an OR, ICU, ambulatory clinic or any other clinical unit. There are three basic types:

- **Patient-Centered Briefing**: A meeting with all team members prior to a procedure or when conducting multidisciplinary rounds with the patient and family at the bedside. The purpose is to communicate a shared understanding and to voice concerns regarding all relevant procedure-related and/or patient care issues (e.g., pre-op briefing in OR suite, multidisciplinary rounds in the ICU).
- **Administrative Briefing**: Staff meeting to communicate all relevant issues in the management of patient care on a clinical unit (e.g., ICU, med-surg unit, OR, ED).

- **Debriefing**: A brief meeting after a procedure, an event, or work experience to reflect on what happened and discuss needed improvements. The goal is to maximize learning from a recent experience. (e.g., debriefing surgical team after a surgical procedure in the OR suite, debriefing after a code, debriefing ED team after transferring a multiple trauma patient to the OR).

From December 2002 to the following July, NCPS developed an MTT curriculum heavily influenced by CRM. We presented MTT at the following six VAs in the fall of 2003:

- Central Iowa Healthcare System, Des Moines, Iowa
- VA Black Hills Healthcare System, Fort Meade, S.D.
- VA Boston Healthcare System, Brockton, Mass.
- Jackson VAMC, Jackson, Miss.
- VA Western NY Healthcare System, Buffalo, N.Y.
- John D. Dingle VAMC, Detroit, Mich.

We presented training for the eight facilities within VISN 7 in March 2004. In September 2004, we trained the entire OR staff at VAMC Houston, Texas. We are indebted to the six pilot sites who shared their work at the VISN 7 training and to Dr. Crittenden of the VA Boston Healthcare System, who presented in Houston.

The training involved didactic instruction, interaction with attendees, some faculty role-play, and films of clinical vignettes written and produced by NCPS faculty. Our program is unique because it also includes the principles of change management and provides follow-up support.

Prior to each site-based training session, trainees committed to the implementation of MTT projects. We held conference calls before and after the site-based training to support implementation of projects. One method to assess effectiveness of the training was through a pre-training and post-training questionnaire to measure organizational support, teamwork skills, communication skills and process improvement knowledge. In July and August 2004, NCPS faculty conducted less-structured, open-ended question interviews with pilot sites for an update on the progress of their projects, including success factors and barriers to implementation.

Team training experience and self-reported results from the original six pilot facilities:

Two sites focused on briefings and debriefings in the OR. These teams reported improvements in their use of instruments and equipment. One of these sites reported this helped with cost and time savings. This site also focused on reducing OR delays. Both sites started their project on one surgical service and subsequently expanded to additional surgical services.

Three facilities focused efforts in the ICU. Two sites conducted patient-centered rounds and one site conducted administrative rounds that included patient centered briefings (hybrid). One of the pilots reported improved staff communication and decreased use of sick leave and overtime. Another facility reported reduced inappropriate ICU admissions and they also wrote daily patient goals on communication boards for the patient, family and staff to see. A third site reported improved communication in general, a lower incidence of infections, and improved house officer knowledge of their work-related roles in the hospital.

One facility initially focused on patient-centered briefings on a med-surg unit. Although they were unable to sustain this effort, this team has continued to use the communication tools with surgical staff.

A success factor for implementing MTT at the pilot facilities was senior leadership support and collaboration from administration, nursing and medical staff. Implementation was difficult in sites lacking active support from senior leaders had and in facilities without effective collaboration between key physicians and nurses.

Team training experience and self-reported results from the VISN facilities:

VISN sites focused efforts on administrative briefings or patient centered briefings in the ICU, OR and mental health setting.

One facility ICU reported activities in administrative briefings and patient-centered rounds, which they indicate has helped with understanding bed availability and co-ordination of transfers.

Another ICU team found that patient centered briefings had improved interdisciplinary communication, decreased length of stay and facilitated transfers.

One mental health unit reported that administrative briefings had clarified admission criteria, discharge needs and acuity/staffing needs.

The remaining sites focused efforts on OR/surgical services, using administrative briefings, or a combination of administrative and pre-op briefings, and debriefings. Some facilities reported the following: improved coordination between OR staff and the anesthesiology department; better communication between the OR and SICU; and improved communication between the OR and SPD. They also observed enhanced bed availability for surgical patients, improved use of instruments and equipment, and an increased ability to identify OR case delays in advance.

Some success factors that facilitated implementation of VISN pilot site projects were senior leadership support, staff responsiveness, an appreciative physician relationship with nursing, and functional relationships between surgeons and anesthesiologists.

Projects that tested changes on a small scale before implementing them more widely were more likely to be successful.

Reported barriers to project implementation for the VISN sites were similar to the pilot facilities. In addition, we discovered the value of pre-work, which had not been offered to VISN facilities.

Pre-work involves the selection of a "change team" (a small group of clinicians and leadership) responsible for iden-

tifying communication issues in their clinical area of focus. During the several weeks prior to the training, the change team works with NCPS faculty to plan team training projects, which they will lead and manage following the training session.

Questionnaire results:

Responses from the original six pilot sites (see figure, page 3) indicate significant improvements from pre- to post training in the following areas:

- General process improvement skills
- General communication skills

- Methods for insuring other team members heard and understood all important communications
- Teams routinely discusses procedures before starting
- Everyone on the team feels comfortable in giving feedback to other team members
- Respondents indicating their healthcare facility had a non-punitive method of investigating medical incidents

One change we did not expect was a *decrease* in the percentage of

participants reporting: "fatigue, distraction and high levels of stress increase the chances that I will make a mistake."

An important caveat to keep in mind is the small number of respondents and a short time horizon for measuring change in our pilot facilities.

Next Steps:

MTT will be offered in FY05 and future years to facilities that express an interest and a commitment to integrate CRM-based tools into their healthcare delivery system.

Each participating team from a facility must include a nurse leader, a physician leader, a representative from administration, and front line clinical staff to maximize success. Other personnel will be welcomed members of the team.

If your facility or VISN is interested in MTT, please contact Rodney Williams at NCPS (e-mail: rodney.williams@med.va.gov).

NCPS would like to thank the other faculty involved for all of their hard work and dedication to the program: Kathleen Dropp, NCPS program analyst; Geoff McCarthy, chief medical officer, VISN 20; Clive Tomsett, assistant director, Safety Solutions, NPSA, England; Sherry Van Horn, network MVAC director, VISN 2; John Wakefield, deputy director, medical services, Princess Alexandra Hospital, Queensland, Australia; and Rodney Williams, NCPS program manager.

[1] To learn more about CRM and healthcare see:
www.ahrq.gov/clinic/ptsafety/pdf/chap44.pdf or
www.hcs.harvard.edu/~epihc/currentissue/musson_helmreich.pdf

Original Six Pilot Sites: Differences from pre-training to post-training (three pre-training and six post-training)
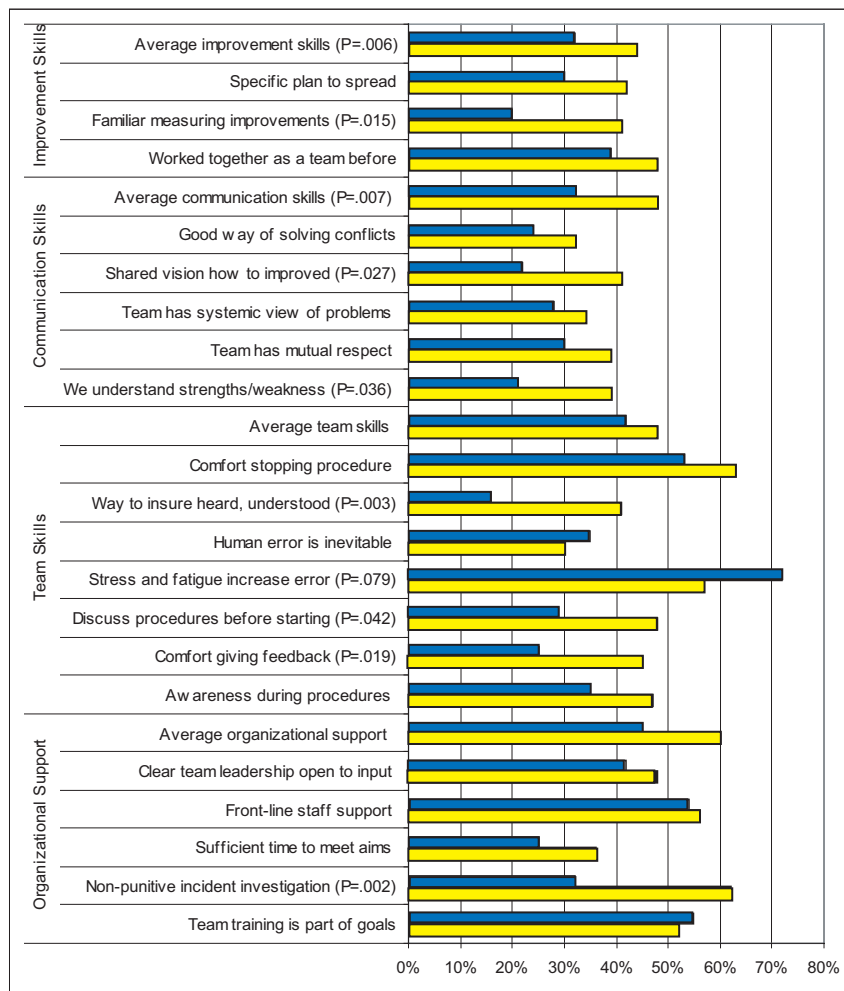
Horizontal Axis = percentage of teams reporting "Agree" or "Strongly Agree" to the perceptions listed
P-values represent Chi-Square analysis of pre- to post-training change

■ Pre-training scores
■ Post-training scores

Safety on Inpatient Psychiatry Units — Always a New Challenge

By Chris Ketron, nurse manager, Inpatient Psychiatry; Lori Hagen, patient safety manager; Randall Nentrup, risk manager; James H. Quillen VAMC Mountain Home, Tenn.

IT SEEMS there are never enough eyes available to discover potential problems when working to ensure patient and staff safety on an inpatient psychiatry unit!

We routinely perform administrative environment of care rounds at our medical center in each patient care area; we completed a specialized inpatient psychiatry unit safety audit about two years ago.

We used the VHA NCPS tool, PSAT (Patient Safety Assessment Tool), as many VA facilities do, to evaluate the psychiatry areas for patient safety concerns. We discovered potential areas of concern that had not yet become a part of PSAT.[1]

We think it is important to use every available tool, especially since each facility is different. For instance, we have a seclusion room, a locked inpatient psych unit, and an open inpatient psych unit. Reviewing each area can be difficult – which is why we believe it's important to combine a broad-based with facility-specific approach.

With all this in mind, we thought we had been so thorough — but then, the nursing staff reported an incident that made us realize there are always new safety deficiencies or concerns to be identified!

The incident

The nursing staff found an approximately 40-inch piece of heavy black rubber weather stripping hidden behind a patient door in the locked section of the psychiatry unit.

We soon discovered that a patient had removed the window stripping from one of the patient rooms. This piece of black rubber could have been used by patients to harm themselves or others.

RCA Actions

A member of the safety staff, the nurse manager, and the patient safety manager went through each room in the locked section and removed all of the window weather stripping. We found that most of the moldings could easily be removed using a finger or a key to loosen an end. A work order was generated to replace it with the appropriate caulking.

We reviewed the literature on inpatient psychiatry safety and design from various references.

Some additional thoughts and tips

Strategies for minimizing environmental risk of suicide in healthcare settings begin with following local and state regulations.

We also found two sources that proved particularly helpful: the JCAHO Environment of Care newsletter and the American Institute of Architects (AIA) Guidelines for Design and Construction of Hospital and Health Care Facilities.

We decided to complete another thorough – and revised – safety audit of the entire inpatient psychiatric unit, with a new goal of repeating this audit at least annually.

Due to our findings, more attention to detail is now required in these new audits: For instance, ensuring correct installation of "tamper-proof" screws in all light, vent and/or electrical receptacle covers in each room.

Here are a number of additional points to take into consideration:

- Hardware in all patient-accessible areas (such as day rooms) should have tamper-resistant fasteners.
- All permanently attached bathroom fixtures such as shower heads and hot and cold water controls should be angled downward to prevent suspension of weight.
- Areas under sinks should be boxed-in so that piping and P-traps are not accessible.
- Ensure that heating and air conditioning grilles are tamperproof.
- Avoid use of closet poles, drawers, shelves and clothing hangers. Use only non-weight bearing hooks, such as those that "breakaway" at minimal force.
- Use solid, heavy furniture that is free of removable parts (such as drawers) that may be used as weapons.
- Do not use "wire molding" or conduit on the face of the walls to run power to electrical receptacles. Recess or remove as many of the nonessential utility systems and receptacles as possible. Required electrical receptacles should be provided with ground fault circuit interrupters to limit risk of shock if an individual inserts an object such as a paperclip.

Though it may seem sometimes like one needs a new set of eyes to identify all areas of concern on an inpatient psychiatry unit, we hope that you will step back, take a second look, and not be surprised as we were!

[1] In this case, weather stripping was discovered to be a safety hazard and is now being incorporated into PSAT, along with other recommendations made by this RCA team. The updated version of PSAT including additions to the Behavioral Health Unit Element (7.2) can be found by VA employees on the NCPS Intranet at: *vaww.ncps.med.va.gov/PSATver10-2004.xls*.