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Clinical Team Training: Building High-Reliability in VA Health Care

By James Hay, R.N., M.S.N., C.R.R.N., NCPS nurse educator

NCPS is pleased to announce a new program called Clinical Team Training (CTT). The program centers on building high-reliability teams by teaching specific behaviors that when used in the clinical setting can reduce risk and mitigate the effects of error for hospitalized Veterans.

The program features a multi-faceted approach to team training that is customized to the needs of a particular facility and patient care unit. The program builds on the successes of earlier NCPS programs with new faculty and a revised curriculum.

CTT is designed for multi-disciplinary, front-line care teams in any health care environment. Learning sessions feature interactive didactic instruction and high-fidelity simulation, for which participants receive four hours credit for continuing education.

CTT Design

Approximately eight weeks prior to the desired week of training, NCPS CTT faculty hold a teleconference with facility leadership to review the program in its entirety, determine which areas will receive training, and review the application process. Following the return of a letter of commitment, the facility's training date becomes part of the CTT calendar.

A logistics call is scheduled approximately six weeks prior to a learning session; another about two weeks prior to it. The calls ensure optimal facility support. Rosters are also provided that confirm clinical staff enrollment and are approved by NCPS.

A separate pre-work call is conducted by CTT faculty to prepare unit clinical leadership and staff. On the call, faculty will prompt leaders to begin identifying areas for improvement and discuss methods to implement a specific CTT project in their clinical setting.

The CTT learning session is approximately 4.5 hours in duration and includes three interactive didactic modules and a high-fidelity simulation scenario.

CTT project implementation includes an initial call two weeks following the learning session. This call will further prepare unit staff for safety project development and create a structured plan for implementation, to include process and outcome goals. Monthly coaching calls and data collection with

CTT faculty continue for one year after the initial learning session.

At the one-year point, NCPS returns to the facility to conduct recurrent learning sessions. As the official CTT project closes, many teams seek to continue their program through NCPS by enrolling additional clinical areas into the program.

The "Safety Attitudes and Teamwork Survey" is a tool devised to measure the perceptions of clinical staff regarding safety in their work environments. Survey results can measure success and assist with identifying future opportunities for clinical leadership to focus their safety efforts. The survey is offered at baseline, six months, and at the one-year recurrent learning sessions.

CTT Modules

In the first module, participants learn to identify the characteristics of a high-reliability organization. For instance, changes found in aviation after the implementation of Crew Resource Management (CRM) are compared to the common culture existing in health care today.

CRM was implemented by the airline industry in the early 1980s after a series of highly publicized accidents resulted not from mechanical malfunctions, but from poor communication and team decision-making. Today, the airlines enjoy an exemplary safety record, due in large part to the implementation and sustainment of CRM methodologies.

Following a discussion of CRM, participants learn to apply salient concepts of CRM to reduce risk in the clinical environment. They do so by discussing the attributes of a culture of safety and then seeking ways to manage error by developing redundancies, or "fault tolerance," in the health care system.

In the second module, participants delve into aspects of clinical leadership. They compare and contrast situations that require a leader to be task-focused versus people-focused. Specific leadership behaviors that facilitate the open exchange of information among team members are emphasized. Next, a description of the attributes of an assertive team advocate is highlighted. Teams practice "speaking up" by using a standardized assertive communication algorithm in various scenarios to resolve team conflicts and preserve patient safety.

Chief Resident in Quality and Safety: Fulfilling a Pivotal Role in Patient Care

By Joe Murphy, M.S., APR, NCPS public affairs officer

Chief residents represent tomorrow's physician leaders and fulfill a pivotal role in patient care: They educate junior residents, engage in patient safety efforts, and work closely with attending physicians and nursing staff in caring for patients.

"These young physicians can help their organizations develop a positive safety culture," said Douglas Paull, M.D., director, NCPS Patient Safety Curriculum Program. "Leadership is one of the driving forces behind a vibrant safety culture. For staff to believe that patient safety is a priority, that message must come from facility leaders."

The program represents a collaborative effort between the VA Office of Academic Affiliation (OAA), The Dartmouth Institute (TDI), and NCPS. Over the last several years, the program has enjoyed recognition and exponential growth.

By July 2013, there will be 41 Chief Residents in Quality and Safety (CRQS) positions across the nation at university-affiliated VA medical centers.

"The CRQS program could not be where it is today without the leadership and support from the OAA and TDI," he said. "OAA, TDI and NCPS staff have worked together, seamlessly, with field faculty to develop, plan and conduct the program."

Key elements of the curriculum's content include:

- Systems approach to safety, including the reporting and discussion of medical errors.
- Learning and improvement tools, such as root cause analysis and healthcare failure mode effects analysis.
- Teamwork and communication.
- Improvement methods and tools (developing and analyzing control charts).
- Implementing change through patient safety and quality improvement projects.
- Applying human factors engineering principles to health care-usability testing (e.g., smart pumps, information technology).
- Disclosure of medical errors.

"The completion of these curricular elements prepare the CRQS to teach

junior residents and staff patient safety and quality," said Dr. Paull, "as well as lead safety and quality efforts at their own facilities. Because of this, chief residents help operationalize the NCPS mission to prevent inadvertent harm to patients as a result of their care."

Participants are introduced to the program during a patient safety "boot camp." The curriculum is then largely delivered through a series of interactive video conferences. The cornerstone of the program is the mentoring participants receive from distinguished patient safety and quality faculty at their own institutions, culminating in chief residents leading a quality or safety improvement project.

Chief resident improvement projects have included:

- Improving medication reconciliation.
- Enhancing quality and value of cardiac isoenzyme blood drawing.
- Hosting morbidity, mortality and improvement conferences.
- Reducing discharge delays.
- Decreasing medication errors.

"The face-to-face boot camp at the beginning of the program sets the perfect tone for a year of concentrated quality and patient safety work," he continued. "It allows the chief residents to develop relationships with one another and with faculty from across the nation."

The boot camp also allows for exposure to and immersion in high-fidelity simulation as a tool for teaching patient safety.

The workhorse of curriculum delivery is a series of two-way interactive video calls, which are held monthly for two hours and involve all program sites. Pre-work and assigned reading allows the calls to be interactive, with problem-solving and discussion of patient safety and quality issues.

"We keep the video calls informal, which facilitates learning," Dr. Paull said. He indicated that the program not only heightens young physicians' understanding of quality and patient safety, but has been tailored to match core competencies of the Accreditation Council for Graduate Medical Education, such as those recently emphasized by the organization's "Clinical

Learning Environment Review" and "Next Accreditation System" expectations.

"These competencies include interpersonal communication skills, systems-based practice, and practice-based learning and improvement, which encompass communication, teamwork and reflection on practice, respectively," he said.

Dr. Paull noted that local mentorship is a fundamental aspect of the initiative: Local site faculty mentors are recognized experts in health care quality and safety and participate in all aspects of the program. The program's effectiveness is being assessed by the Kirkpatrick model of evaluation, the best known methodology for judging a learning process.^{1,2}

A significant amount of preparation has gone into the effort, particularly because so many parties are involved. "It has sometimes been a challenge," he said, "but all concerned have worked hard to ensure the success of the program, knowing how important it is to the VA's ongoing patient safety and quality efforts."

Planning is under way for the chief residents' "graduation" in June, which is intended to highlight their efforts. "We are hoping to include two days of resident presentations using the VA Live Meeting system," Dr. Paull noted. "We want to recognize their outstanding work. Their accomplishments are a source of pride for everyone."

"The CRQS are developing a vision of a new health care system that puts the highest priority on safety and quality," said Dr. Paull. "They inspire the junior residents to share in their vision. By providing the junior residents with new tools and techniques, the CRQS empower junior residents to solve the patient safety problems inherent in a sometimes unpredictable, complex health care environment."

References

1. Donald Kirkpatrick. *Wikipedia*, retrieved April 18, 2013 from http://en.wikipedia.org/wiki/Donald_Kirkpatrick
2. Kirkpatrick's Four-Level Training Evaluation Model. *Mind Tools*, retrieved April 18, 2013 from <http://www.mindtools.com/pages/article/kirkpatrick.htm>

A Synopsis of Patient Safety Awareness Week Programs, March 5-7, 2013

By Beth J. King, R.N., B.S.N., M.A., C.C.M., NCPS program manager

Let me begin by extending my appreciation for your support for Patient Safety Awareness Week at VHA facilities across the nation. Without consistent efforts by patient safety managers and officers like you, we could not have enjoyed the success we did.

Some held fairs and special events, either day or night for staff, distributed the NCPS program flier, gave presentations, offered feedback, or took other actions in support of Patient Safety Awareness Week...and it all added value. Again, thank you!

Running March 5-7, VA's national program included more than 40 Live Meetings. Presenters included subject matter experts from NCPS and other VA activities who discussed topics ranging from medication reconciliation, to

delirium, to the evaluation of innovative research and evidence-based fact sheets.

You showed outstanding support for this national offering by publicizing these efforts, which resulted in so many of your colleagues attending the sessions.

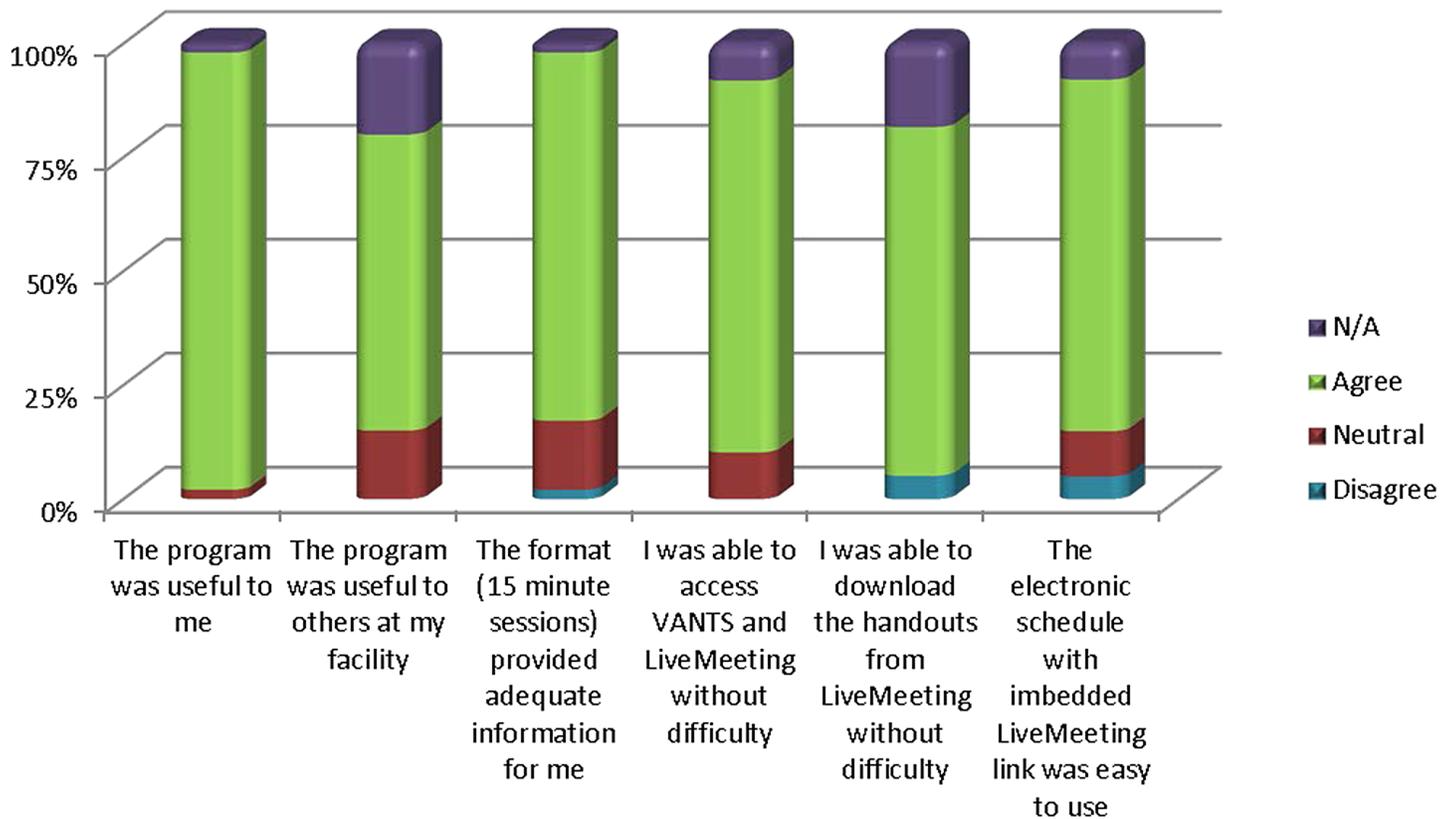
It was memorable hearing Dr. Petzel, Dr. Jesse and Dr. Agarwal share opening comments during the program. Their expression of the importance of patient safety within VHA was tremendous. Our national goal of preventing inadvertent harm to our Veterans as a result of their care – though emphasizing every VHA employee's role in patient safety – was clearly defined.

We received feedback from 40 patient safety managers and officers concerning the program. The majority of comments were very positive and

we appreciated their thoughts on how to make the program even more user-friendly. Many respondents asked that we increase the time spent on a number of subjects to provide more in-depth information.

Looking Ahead

Next year we hope to do something similar nationally, making sure it is easily accessible for staff in each time zone. We'll also explore options for expanding the program, to include asking you to consider sharing a story about improving patient safety at your facility. The VHA is rich with knowledge and expertise and connecting and learning from one another greatly improves our progress in patient safety.



Summary of comments from 40 patient safety managers and officers concerning this year's national program.

Clinical Team Training: Building High-Reliability in VA Health Care

Continued from page 1

In the third module, the importance of maintaining situational awareness is explained within the context of clinical decision making. Participants identify specific threats to situational awareness in the clinical environment and then implement countermeasures that will improve situational awareness for their teams.

Simulation is the final step in CTT training. Participants join faculty in a life-like, simulated environment to practice specific CRM behaviors and use the tools introduced in the learning session. Focusing on a safe environment to learn, participants explore applications of CRM while interacting with each other.

CTT Project Options

Project option one, a unit-based briefing, is initiated by the team leader prior to the start of a shift or a non-invasive intervention. The briefing is short, structured and offers a standardized format through the use of a checklist. A unit-based debriefing is initiated and facilitated by the team leader after the occurrence of a significant event, such as: a resuscitation/rapid response team event, a fall with injury, a significant medication error, or an occurrence of violent patient behavior. It is a team-building tool that allows the opportunity to review both individual and team performance in a blame-free environment for the purposes of improvement.

Project option two, a pre-procedure briefing, is conducted immediately prior to an invasive procedure. The briefing is conducted with all team members present. Certain segments of the briefing may include the patient. The briefing is accomplished using a checklist. A post-procedure debriefing is conducted immediately after an invasive procedure. It is initiated by the team leader and is also guided by a standardized checklist. Process and equipment issues are identified and assignments made to assure correction.

Project option three, checklist implementation, includes “read and verify” checklists that are designed as memory cues for routine tasks. A second type of checklist, “read and do,” is developed for rare or critical situations, as in the case of a code or anaphylactic reaction.

Project option four is based on a federal regulation termed the “sterile cockpit” rule. This rule was created to shield pilots from extraneous interruptions that would

otherwise pull them away from their primary duties during critical flight regimes. Applying the sterile cockpit methodology to clinical situations creates a set of agreed upon procedures, guidelines and behaviors to reduce distractions so that teams can safely complete critical tasks.

Project option five focuses on situational awareness countermeasures, which are employed by teams to manage environmental threats to human cognition. For example, as a rapid response team struggles to manage a deteriorating patient, the team leaders apply the “1, 2, 3 rule,” which includes asking the team to step back for a moment, inserting an artificial pause in the action, and then analyzing the situation by reviewing clinical information. Lastly, the team considers using additional resources that may be available and takes action.

For project option six, a fatigue management plan, specific actions or countermeasures are designed and implemented to mitigate the effects of fatigue on all clinical disciplines. Leaders encourage open communication regarding staff concerns about situations that induce fatigue.

When choosing project option seven, standardized hand-offs and communication, clinical teams devise standardized communication templates that assist clinicians in relaying patient information to decision-makers or other team members in a specific, direct and concise manner.

Project option eight, acute care interdisciplinary patient rounds, is designed to improve communication across disciplines, improve team situational awareness and create a shared mental model for managing patients in complex clinical settings. All disciplines are committed to be present during rounds. Each team member contributes their discipline-specific assessments and the plan of care for the patient is reviewed.

NCPS Team-Training Outcomes

NCPS has celebrated significant gains from previous team training programs and looks to do so in 2013 with CTT. A past Safety Attitudes and Teamwork Survey revealed several successes, including:

- 75 percent improvement in willingness to speak up about a concern
- 54 percent improvement in perception of staff morale

- 29 percent improvement in perception of the ability of nurses and physicians to work together as a coordinated team
- Reduction in failure to rescue events from 32 percent in 2009 to 8 percent in 2010

NCPS team training improves efficiency for procedural areas. A significant increase, from 35 percent to 60 percent, in on-time starts for the first case of the day was reported by surgical services participating in NCPS-based team training. Clinical team members are empowered to identify issues, communicate with other disciplines, and resolve issues.

CTT has demonstrated effectiveness in the clinical environment. A VA study conducted in 2010 and published in *The Journal of the American Medical Association* found a significant decrease in the annual surgical mortality rate in groups trained in CTT methods, as opposed to untrained groups.¹

Summary

CTT includes comprehensive training on CRM-based behaviors to reduce risk in the operational environment; and, incurs no direct costs for participating VA facilities willing to make a commitment to the program.

In addition to on-site learning sessions and simulation modules, the program includes a one-year project implementation with data collection and monthly coaching calls by CTT faculty. At one year, CTT conducts recurrent learning sessions that reinforce CRM behaviors and unit gains made through project implementation.

Learn More

For more information about enrolling in CTT, VA employees are encouraged to visit the NCPS website or CTT SharePoint.

- NCPS website: <http://vawww.ncps.med.va.gov/Education/CTT/index.html>
- CTT SharePoint: <https://vawww.mopnational.va.gov/CR/ncpsoit/CTT/SitePages/Home.aspx>

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1. Neily, J., et al. (2010). Association Between Implementation of a Medical Team Training Program and Surgical Mortality. *Journal of the American Medical Association*, 304 (15):1693-1700.