NCPS Patient Safety Centers of Inquiry: An Introduction

By Peter Mills, Ph.D., M.S., director, NCPS Field Office, White River, Vt.

Patient Safety Centers of Inquiry (PSCIs) were first funded in 1999 and have made valuable contributions to the improvement of patient safety within the VA and beyond.

For example, the PSCIs have contributed to teamwork and simulation training; the application of usability testing and human factors design to Bar Code Medication Administration; Breakthrough Series Collaboratives, designed to reduce patient falls; and, many other highly significant projects.

We currently have six PSCIs in VISNs 6, 8, 16, 18, 19 and 20 (Note 1) and I am the NCPS point of contact for the PSCI program (Peter.Mills@va.gov). We hope the following list of projects will inspire others in the VA to participate in the program, as well as indicate the depth of commitment to patient safety shown by those who participate (Note 2).

Each PSCI is expected to:
• Develop, implement and demonstrate interventions in multiple VA medical facilities to promote practices that improve patient safety by reducing adverse events; or, that replace or improve practices known to be associated with patient safety problems.
• Document that changed practices and/or systems reduce the likelihood of adverse events in multiple VA medical facilities.
• Document the methods employed to foster changing practices and systems so that other VA medical facilities can implement similar or identical changes to improve patient safety.
• Develop, test, refine and facilitate active distribution of tools and products specifically designed to promote patient safety, such as: clinical tools, cognitive aids, educational materials, policy reports; VA information letters, handbooks, and/or directives. Tools and other output should also be evaluated for effectiveness and impact.

VISN 8 PSCI

Falls, wandering and patient transfers are areas this PSCI is working on to improve patient safety. Projects during the past two years have included:
• Fall prevention program customized for inpatient psychiatry.
• Unit peer leader program for falls in psychiatry units.
• Hip protector tool kit.
• Medication algorithms for fall risk in outpatient geropsychiatry.
• Hip protector/floor mats tool kit for psychosomatic settings.
• Safe patient hand-offs for patients at risk for falls in psychiatry.
• Business case for falls prevention.
• Lab testing of wandering technologies.
• Participation in Alzheimer’s Association Safe Return Project.
• Staff educational tool kit on wandering for community living centers.
• Mobility-related equipment redesign for safe use in psychiatry units.
• Technology resource guide (bedside floor mats).
• Patient education brochure (Anticoagulation: Preventing Injuries Falls).
• Web-based technology resource guide for low beds.
• Multifaceted program to reduce risk for fall injury in acute care.
• Fall resource for nurses (improving safety and quality of care in community living centers).
• Fall prevention amputee education tool.

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VISN 16 PSCI: (New in FY 2010)

The aim of this PSCI is to improve outpatient safety through effective electronic communication. Projects/areas of study include:
• Electronic communication break-downs in follow-up of abnormal diagnostic results.
• An instructional tool kit on alert management (includes the top 10 Computerized Patient Record System strategies for alert management).
• Delays in electronic consultation requests in a VA outpatient clinic.

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Participating in Proactive Nursing Rounds

By Cheryl Wolf, R.N., B.S.N., patient safety coordinator, VA Medical Center, Dublin, Ga.

Nursing rounds, or “rounding,” is not a new phenomenon, but rather something introduced by the founder of modern nursing, Florence Nightingale. During the Crimean War, Nightingale was kind and gentle to the soldiers she cared for, talking to them and comforting them as she made her rounds. At night, she carried her lamp to light the way and became known as “The Lady With the Lamp.” Nightingale revolutionized nursing and remains a hero in many of our hearts.

Research and a New Look at Rounding

I recently read many interesting articles about hourly nursing rounds and was reminded that regularly checking on a patient’s needs during nursing rounds uses the “4 Ps” – Positioning, Personal needs, Pain, and Proximity of personal items (such as the call light) – with the promise of returning in one hour.1 I can recall performing hourly rounding on the night shift over 30 years ago, as I began my VA career as a new, young, inexperienced graduate. It worked! Team nursing was also in vogue at that time, and there is a lot to be said for the concept. Teamwork requires cooperation and effective communication with all staff members.

How many times have you found an unresponsive patient during the night, when you last had them joking with you a few hours before? Our time now seems preoccupied with admissions, discharges, transfers, bed shortages, staff shortages, care planning, and a barrage of electronic documentation – rather than visibly seeing our patients on an hourly basis. Are we losing sight of the reasons that we selected nursing as our career?

Of course, a major difficulty is how to establish a workday design to make hourly rounding a success. This may be a particular problem in light of the nursing shortages today.

Hourly rounding does incorporate teamwork: It’s a group effort that includes nurse managers, R.N.s, L.P.N.s, nursing assistants, and even the unit secretary. Building a cohesive team on your unit is the first step to success.

I even found a script that nurses can use when conducting the hourly rounding role:

I am here to do rounds. How is your pain? Do you need to use the rest room? Do you need help to reposition (or get up, or get back to bed, or whatever the activity is)? Once all that is complete, the nurse should make sure the call light, telephone, TV remote, bed light, bedside table and tissues are within the patient’s reach. Then tell the patient, Is there anything else I can do for you? I have time now while I am in the room. Also, someone will be back in about an hour.1

Scripting is important for a number of reasons. If a patient is aware of when to expect you back, you have increased their trust and decreased their need to call you. Asking the patient if there is anything else that you can do for them is proactive. The patient might have one more request that they would have called you back for, had you not asked. Fundamentally, patients are more likely to feel that you really do care and are not just “doing your job.”

The benefits of hourly rounding are many. Hourly rounding saves nurses’ time. This time could be redirected to complete other nursing tasks without interruption and improve patient safety.2 Fewer interruptions allow more time to complete charting, patient education, etc. A study3 has also shown that the anticipation of patients’ requests promotes timely and organized care, improves work satisfaction, makes the staff’s jobs easier, and can reduce falls. Patients were more satisfied, too, due to the enhanced care they received. The use of call lights was reduced, since patients knew that the nursing staff would be back to check on them regularly – and this can also help reduce a patient’s anxiety.

Transforming care at the bedside is never an easy task. It requires staff buy-in to the process and additional accountability. Proactive nursing rounds involve the active participation of the staff. It is not a “rote” exercise.

For instance, instead of just popping your head in the door during the night, if you notice one of the patients is awake, you might ask: “Since you are awake, may I assist you to the bathroom?” How many times do patients fall while attempting to go to the bathroom, yet nursing rounds had just been made?

Proactive nursing rounds involve anticipating and being attentive to the needs of your patients. This seemingly simple step has powerful advantages for patients, staff, hospitals and the community as well. Satisfied patients and better patient outcomes enhance the hospital’s reputation.

Summary

Scheduled patient rounds give nurses and clinical staff a concise updated awareness of their patients’ needs. This awareness is crucial, as it allows the staff to anticipate patient requests.

Wireless communication enhancements, such as cell phones and staff locator systems, are often used to summon staff members who are caring for a patient; therefore, these devices can be used in combination with rounding to optimize communication between patients and staff.

Scheduled proactive rounding can improve staff morale and help with nurse retention. Cost savings can be realized because better patient outcomes reduce the cost of care and may also reduce liability claims against the hospital. Participating in proactive nursing rounds on an hourly basis is truly a win-win situation for everyone involved.

References

A New Effort to Promote Fire Safety in the OR
By Joe Murphy, NCPS public affairs officer

The San Francisco VA Medical Center has developed a checklist, “The Surgical Fire Assessment Protocol,” which has been placed on the reverse side of the Medical Team Training (MTT) preoperative checklist.

“Before any operation, our OR teams review the preoperative checklist, which now includes questions about fire safety,” said Diane Laney R.N., B.S.N., one of the facility’s two patient safety managers.

The preoperative checklist was developed as part of NCPS’ MTT initiative. The idea for MTT came from the realization that many safety issues in health care are related to miscommunication and the failure of groups to operate as effective teams.

About midway through the preoperative checklist (below), facility OR teams now find a question that asks them to review the reverse side of the checklist (right) and develop a “Surgical Fire Risk Assessment Score.”

### Surgical Fire Risk Assessment Protocol

<table>
<thead>
<tr>
<th>Alcohol-based prep solution dried for &gt;5 minutes. No post-op observed.</th>
<th>☐ Yes</th>
<th>☐ No</th>
<th>☐ NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Circle appropriate option)</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>* Surgical site or incision above the xiphoid, or involving airway or pulmonary components</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>* Open oxygen source, &gt;40% oxygen (supplemental oxygen via face mask or nasal cannula) potential airway leak, proximity of ET, double-lumen tube</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>* Available ignition source: i.e. monopolar electrosurgery unit, laser, thoracic light source</td>
<td>1</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

**Total score**

**Scoring:**

3 = High risk
2 = Low risk
1 = Potential to convert to high risk

### Fire Risk Protocols:

**Score 3 – High Risk**

The circulating nurse, surgeon and anesthesia providers take these precautions and communicate at handoff:

- **Circulating nurse:**
  - Write “Fire Risk High” on dry erase board
  - Ensures appropriate draping techniques to minimize oxygen
  - Suction by O2, prone to “scavenge” O2
  - Maximizes the perimeter around the incision point
  - Confirms verbally the heat source setting.
  - Assesses first enough time has been allowed for flames of alcohol-based prep solutions to dissipate (minimum of 3 min)
  - Use of saline-soaked sponges
  - Basis of sterile saline and bulb syringes are available for fire suppression mode when not in use. Secures laser foot pedal to prevent accidental activation

For the surgical field:

- on field
  - In scler: light source turned off when not in use

- is activated:
  - used as barrier between ESU and oxygen source
  - initial intent to use igniter source
  - at the anesthesia provider has reduced the O2 concentration to the minimum acceptable level for first using igniter source
  - fully in heat source setting – minimize ESU setting if possible

**Form:**

Revised 9/15/10

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A fire risk is initially developed from questions at the top of the protocol. If the score adds up to three, the risk is considered to be high and the entire back of the form must then be completed. The protocol was initiated at the medical facility in September 2009 after it had been developed by an interdisciplinary team.

“It wasn’t a difficult sell to the chief of surgery and the OR staff,” Laney said, “the protocol heightens the awareness of all staff regarding the potential lethality of a surgical fire.”

Laney also said the communication level among OR staff members has improved, which is a critical aspect of providing safe, quality care.

The checklists are available online in conjunction with this issue of TIPS: www.patientsafety.gov
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• Communication through the computerized provider order entry window
• A national survey of VA primary care providers regarding the use and usability of the alert notification system at various VA facilities
• Interventions to reduce volume of alert notifications
• Does making an alert mandatory improve follow-up?
• Qualitative analysis of electronic communication break-downs in alert notification and the referral process
• Do amended imaging reports create opportunities for missed or delayed diagnosis/treatment?

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VISN 18 PSCI (New in FY 2010)

This PSCI is the VA’s Center for Evaluation of Human Factors in Reprocessing Safety, studying the human factors that influence the reprocessing of reusable medical items.

Projects thus far include the following:
• Supply Processing and Distribution (SPD) immersion: Gain understanding of SPD and the reprocessing environment from the user’s perspective through participation in reprocessing observations, informal staff interviews, and SPD training
• Usability testing: Novice participants simulate reprocessing an endoscope to identify the most commonly made errors, yielding opportunities for training improvements and product design implications
• Expert interviews: Using the knowledge of expert reprocessing technicians at three VA sites to identify problem areas and common difficulties in endoscope reprocessing

Preliminary results: Thus far, project findings have shown converging evidence of three themes that appear as primary factors contributing to error in endoscope reprocessing: lack of visibility, high memory demands, and inconsistent feedback.

The PSCI is also currently working to develop and disseminate products, including: The top five problems in endoscope reprocessing for novice users; recommendations to manufacturers’ on product redesign; recommendations for training; and, manuscripts.

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VISN 19 PSCI (New in FY 2010)

As the VA Center for Human Factors in Patient Safety, the overall goal of this PSCI is to add a human factors engineering approach to patient safety improvement tools used at the VA. Currently, the PSCI is focused on reducing hazards and risks associated with central line associated blood stream infection. The PSCI is pursuing:
• Human factors-based assessment of current best practices to manage patient safety risks in the context of hospital-acquired infections (HAIs)
• Development of a human factors-based intervention to improve patient safety in the context of HAIs
• Assessment of a human factors-based patient safety intervention
• Development and implementation of a human factors education program that provides human factors-based training and that disseminates human factors knowledge regarding patient safety
• Integration with local and national patient safety improvement activities

During this PSCI’s first year, the best practices to reduce central line-associated blood stream infection and obstacles to increase compliance with best practices were identified. One of the challenges noted was a lack of standardization of equipment used for central line insertions, and maintenance, in conjunction with overall complex procedures.

By using a human factors approach, with the goal of reducing the cognitive demand of the procedures while supporting compliant behavior, an insertion kit and a maintenance kit were developed.

Currently, the PSCI is in the process of collecting data on baseline performance for peripheral and central line insertion and maintenance. After completion of 14 weeks of data collection, the new kits will be introduced and post intervention data will be collected for another 14 weeks. The focus of the data collection will be assessing protocol compliance and hazards. In parallel, the PSCI is developing a human factors education program and a VA Intranet Web site to disseminate human factors knowledge relevant to patient safety.

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VISN 20 PSCI

Focused on medication reconciliation, work in this PSCI includes:
• Fostering a patient-centered model of medication stewardship
• Identifying medication discrepancies for the purpose of reducing medical errors and system-based root causes of error
• Developing system-based strategies and cognitive heuristics to better predict and recognize high-risk prescribing situations
• Integrating of highly reliable business processes into enterprise operations
• Applying human factors engineering principles (e.g., heuristic evaluation, usability testing) to the evaluation and installation of clinical decision support systems

The PSCI developed the “Automated Patient History Intake Device” in 2007 to support completion of medication reconciliation tasks in ambulatory care, which they continue to evaluate. The long-term goals for this PSCI are:
• Design, implement, and test a suite of medication reconciliation tools that address major interfaces in care (hospital admission, hospital transfer, clinic-based encounters, home health encounters)
• Identify and manage the unique system-of-care barriers intrinsic to specialty care venues (where the primary prescriber is unavailable)
• Create a modular medication reconciliation solution strategy that could be installed at other interested hospitals within the VA

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Notes
1. VISN stands for Veterans Integrated Service Network, which is a regional office that oversees a number of VA medical facilities in its geographic area. A list is available online: http://www2.va.gov/directory/guide/division_fish.asp?dnum=1
2. The author would like to thank all the PSCI points of contact listed above, and their staffs, for their help with this article.