### TOPICS IN PATIENT SAFETY®

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#### VA National Center for Patient Safety PO Box 486

Ann Arbor, MI 48106-0486 Phone:.....(734) 930-5890 Fax:.....(734) 930-5899

E-mail: ..... NCPS@va.gov

### Web sites:

Internet .... www.patientsafety.gov Intranet...vaww.ncps.med.va.gov

VHA Chief Patient Safety Officer James P. Bagian, MD, PE

*Editor* Joe Murphy, APR *Graphics* Deb Royal

Copy Editing Amy Carmack Deb Royal

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# **Taking a Practical Approach to Hand Hygiene**

By Judith Anderson, M.D., patient safety fellow

The Ann Arbor (Michigan) VA Healthcare System has developed a hand hygiene initiative focused on creating practical solutions to challenges faced by VA and non-VA hospitals nationwide.

The facility's patient safety manager, Cindy Paterson, R.N., M.S.A., Ph.D., first assembled a 10-person interdisciplinary hand hygiene team whose members ranged from the infection control nurse to a representative from the medical media department. The team continues to meet on a regular basis to address ongoing hand hygiene issues.

One of Ann Arbor's challenges was the physical appearance of the soap and alcoholbased hand rub dispensers. Neither dispenser was marked in a way that identified what it contained – the only label on the dispensers



## Dispenser "Before" (left)

It was difficult to tell soap and alcohol-based hand rub dispensers apart with just the manufacturer's name appearing. Is this soap? Or hand rub?

## Dispenser "After" (right)

Alcohol dispensers now carry an additional, more colorful label designed to make them stand out from their surroundings and from soap dispensers. was the manufacturer's name. In addition, the off-white alcohol rub dispensers blended in with the walls of the facility, making them difficult to find.

All dispensers are now labeled. The alcohol dispensers carry an additional, more colorful label designed to make them stand out from their surroundings. Permanent alcohol foam dispensers have also been ordered for all medication carts.



## Clean Hands

A week-long contest for a campaign slogan drew 188 entries from staff and 12 from patients.

## **Summary of Team Actions**

The team's initial action was to hold a week-long contest for a hand hygiene campaign slogan. The contest drew 188 entries from staff and 12 from patients. The prizewinning entry, "Clean Hands – The Best Gift You Can Give," can now be seen on posters throughout the hospital.

## **Taking a Practical Approach to Hand Hygiene**

Continued from page 1

The team then began the hand hygiene awareness campaign with a twoday "blitz," during which team members visited all floors and all shifts. Laminated cards outlining critical hand hygiene practices were distributed. The cards were specifically tailored for different audiences – health care providers, EMS personnel, SPD employees, and those who work in all phases of food production and distribution.

"We also distributed 900 bottles of alcohol-based hand rub and some 500 buttons," said Paterson. She and Risk Manager Judith Kushiner, R. N., handmade all the buttons. "I was floored by the amount of people who participated in the contest and who saw the blitz as a critical boost to hand hygiene awareness," she added.



Keep a hand hygeine barrier between patients and between contaminated and clean sites

### Kill a Germ

Posters have been placed throughout the facility – many that depict senior staff members promoting hand hygiene efforts.

A series of posters have been placed throughout the facility that depicts a number of staff members encouraging others to "Make my day! Kill a germ" by using alcohol-based hand rub. Because of the importance of hand hygiene, senior staff members readily participated, including the chief of staff and hospital administrator.

Large signs are being posted at the entrance to all patient care areas that state "Mandatory Hand Washing Area."

A universal signal was adopted to promote hand hygiene awareness. "You simply raise your hands in front of you at shoulder level to indicate that you didn't see a caregiver wash his or her hands," said Kushiner. "It's neither a rude way to get another's attention nor a way of finger-pointing."



**Hand Signal** 

A neutral hand signal was adopted to promote hand hygiene awareness.

Glo Germ kits were found to be an additional aid in teaching good hand washing technique. These kits offer a lotion containing plastic that simulates germs and is rubbed on the hands before washing. After washing, an ultraviolet light illuminates residual "germs" to test the effectiveness of the employee's hand washing technique.

A brochure explaining the importance of clean hands is being placed in the patient admittance package. The material also provides tips to patients on hand washing and sanitizing techniques. Patients will also be offered cards that question whether or not a provider washed his or her hands. "They will be able put them in box, so patient identification will be unknown," said Kushiner.

Alcohol-based hand rub dispensers are being moved inside patient rooms to promote patient involvement. "The patient can tell whether or not the provider is using the hand rub," said Paterson. "This is not the case when the dispenser is placed outside a patient's room." Unannounced in-house audits of hand washing practices are scheduled to be conducted on an ongoing basis. The auditors will also distribute cards that either remind caregivers to wash their hands if they have been observed not doing so; or, to thank staff members who are seen as practicing good hand hygiene. A monthly drawing will be held and a prize given for those collecting the "thank you" cards.

"We also conducted a 'Continued Readiness Fair' in early April to promote compliance with Joint Commission guidelines," said Paterson. Hand hygiene compliance was prominently reinforced at the fair. In addition, a patient health education fair was held during which the importance of hand hygiene was emphasized, including proper techniques for hand washing and using alcohol-based products.

A hand washing LMS module will soon be mandatory for all hospital employees. "Simply put," said Paterson, "everyone must be involved."

Want further information on the team and their project? Email me: NCPS@va.gov



### Glo Germ Hands

Glo Germ kits were found to be an additional aid in teaching good hand washing techniques. The lotion simulates germs. After washing, an ultra-violet light illuminates residual lotion to test the effectiveness of the employee's hand washing technique.

## **New Challenges in Acute Mental Health Wards**

By Joe Murphy, NCPS public affairs officer

With acute mental health admissions rising and a new mix of patients requiring a higher level of care, Elaine Kersten has had to begin rethinking patient safety challenges at the Northampton (Mass.) VA Medical Center's acute mental health ward.

Kersten, Ed.D., CAGS, is the facility's patient safety manager.

During the past three years, she has noticed a considerable change in the patient population. "We now have patients ranging in age from 20 to 80," said Kersten, "and many require a much higher level of care and of direct supervision than in the past."

Previously, most patient admissions were associated with detoxification or chronic psychiatric conditions. Admissions were mostly World War II, Korean, or Vietnam veterans – and almost all of them were men.

"We had 11 admissions in one day alone recently," she said, "including three veterans in active suicide states." She also noted a growing frequency of female veteran admissions, with at least one or more women on the ward on a regular basis. This can complicate security and care issues (e.g., additional staffing hours/overtime to ensure privacy, etc.).

"Our acute ward is in an old building that has narrow hallways and a poor structural layout. As we engage in the ward reconstruction process, meeting the life safety standards is a real challenge," Kersten said. "As a result, we require more staff due to the increase in our admissions rate and changes in types of patients than in the past."

Additional staffing is required because of the current patient acuity and mix. This is creating a strain on the existing ward's staffing budget.

The requirement to provide oneto-one staffing is a daily constant at this point, far exceeding expectations. "Patient safety, as related to staffing demands, trumps budget constraints," Kersten noted. "Fortunately at Northampton, patient safety issues receive ongoing support from senior leadership."

To include ward staff in continuing patient safety challenges, Kersten and the facility suicide prevention coordinator offer monthly in-service training and dialogue sessions.

## Northampton VA Medical Center Nursing Daily "Change" Risk Assessment

reeling
Comments:
7 1 1
Verbalize
Comments:
Acting
Comments:
Physiology
Comments:
Referral to physician/psychiatrist
Comments:

The assessment is straightforward. It's done every 24 hours by an R.N. Any positive findings trigger an immediate communication to the ward psychiatrist, who conducts a suicide assessment. Positive findings are defined as changes in observed behavior in any one of the criteria.

The safety topics concern veterans in the acute mental health ward. "The suicide prevention coordinator deals with a specific topic at our monthly in-service meetings," Kersten said. "We review acute ward cases and environmental challenges relative to safety."

A newly developed behavioral "change" risk assessment is completed by RN staff on a daily basis. She said the staff assesses how individuals relate to one another in what has become a more dynamic care environment, based on higher admittance levels.

"Patient behavioral change is

assessed every 24 hours by nursing," said Kersten. "The assessment looks at changes in such areas as eating, socialization, appearance and mood." Depending on the daily results of the assessment, patients can be further assessed by a ward psychiatrist.

Results from the monthly meetings are beginning to create greater ward efficiency. For instance, one of the aims of those involved has been to streamline paperwork so that nurses can spend more time on the floor.

"We also wanted to significantly improve the treatment environment. As a result of Mental Health Environment of Care Check List reviews, we stripped down the whole ward for safety reasons over time," she said. "Consequently, it has begun to look very barren and institutional."

Re-evaluating the ward from a patient's point of view led to rethinking its appearance. "When we started discussing the overall appearance and comfort level of the care environment, we thought about adding wall murals," said Kersten. "We're working aggressively to improve the look and feel of the ward so that we can raise the comfort level of our patients."

The facility is considering pursuing a grant from the Johnson & Johnson Foundation in an effort to provide funding for this effort. "As we work to reduce vulnerabilities related to the complex mix of patients, we must also pay attention to the comfort level in the environment of care," she said.

"The way a ward looks and feels is as important in some ways as other focus areas, and must be conducive to becoming 'better,' "Kersten noted. "We need to create a comfortable environment to stabilize and care for those with acute needs. Many won't come to us if they feel they are coming to a cold, hostile environment."

## **Hospital and Nursing Home Bed Safety**

By Christine M. Olney, Ph.D., RN, inter-professional patient safety fellow

### Introduction

While death or injury due to entrapment is rare, it's important to recognize that part of our veteran population is at risk, in particular the elderly.

Concern about entrapment has been evidenced by the FDA's 1995 safety alert "Entrapment Hazards with Hospital Bed Side Rails," <sup>1</sup> one of the first VHA Patient Safety Alerts developed by NCPS <sup>2</sup> (published July 2001), and the 2002 Joint Commission's alert on bed entrapment deaths.<sup>3</sup>

The FDÂ developed guidelines for hospital bed safety in partnership with stakeholder groups. Based on the recommendations, the FDA issued the "2006 FDA Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment." The guidelines describe seven potential entrapment zones.<sup>1</sup>

Aware since 2001 that guidelines were being created, manufacturers have been increasingly designing beds that meet the dimensional criteria. These newer beds are often designed with other safety features, such as:

- Varying heights from the floor.
- Smaller bed rails.
- Built-in bed exit alarms.

### Our VISN 8 Quality Improvement Project

Recognizing that some VISN 8 facilities have purchased new beds, we are conducting a project to examine compliance with the 2006 FDA guidance previously noted. We will compare the new data to that collected in 2001.

### Procedure

The bed safety compliance data are being collected from each VISN 8 hospital and nursing home by designated employees; in most cases, the patient safety manager (PSM). Those involved were specially trained in bed assessment and data collection at a workshop in September 2007.

If your VISN or facility decides to undertake a similar project, we have posted information about the bed assessment and data collection training on our web site.<sup>4</sup> The focus of the assessment and data collection were potential entrapment zones 1-4. Measurement of the bed entrapment zones is accomplished with a validated instrument – the B4000 bed measurement device.<sup>1</sup>

The device is designed to emulate the head and neck measurements of a small elderly person. It is manipulated through the zone areas to determine if those spaces could possibly allow for entrapment of the head or neck of a patient. A pass or fail is assigned to each zone.

VISN 8 medical centers maintain a database with information on the following: the type of injury (i.e., bedrelated fall or entrapment); the level of injury (i.e., minor, moderate, major, or death); and, if available, the unit, date, time, and location. (We will only examine rates in nursing homes.)

The 2007 adverse event data will be compared with the 2001 VISN 8 data to predict the probability of adverse events per 100,000 bed days of care.<sup>5</sup>

### Summary

Knowledge gained through a project of this type can:

- Guide the purchase of beds and replacement mattresses.
- Provide a method to interpret whether or not compliance can reduce adverse events or close calls.
- Potentially reduce the risk of injury to patients.

### **A Collaborative Effort**

When we first began, the PSMs were using a data-gathering instrument we developed called the "Guidelines for Bed Safety Measurement" tool, but found the process too burdensome.

The PSMs worked with us to develop a more user-friendly spreadsheet that has streamlined the verification of the bed compliance process. You can find this spreadsheet on our web site.<sup>4</sup>

As we progressed through the project, the PSMs, with whom we phone-conference every month, discovered that the replacement mattress purchasing process can be a barrier to compliance.

With a bit of investigative work, one PSM found that the replacement mattresses were not purchased necessarily for size and fit to the bed frame. The purchasing agent was not aware that the dimensions of the mattress were so important.

To overcome this barrier, as a group, we have developed recommendations for bed systems and replacement mattress purchases. A copy of this can be found on our web site.<sup>4</sup>

Most importantly, we recommend a knowledgeable person, such as the PSM, advise the bed/mattress purchasers to ensure that all purchases are in compliance with the "2006 FDA Hospital Bed System Dimensional and Assessment Guidance to Reduce Entrapment." <sup>1</sup>

We also recommend that each facility develop a plan for replacing all noncompliant, outdated bed systems.

### **Final Thoughts**

Not all hospital beds need to be upgraded to meet entrapment criteria. Patients can be assessed for entrapment risk and placed in an appropriate bed. If the bed has a noncompliant entrapment zone, it can be corrected by using stuffers, wedges, etc.

Many bed types are also exempt from the FDA entrapment criteria, including specialty mattresses.

We believe that it is important to consider the advantages of conducting a quality improvement program concerning entrapment issues, as we are doing at VISN 8.

The road to bed safety is a long one that requires lots of team work and effort – but it is one that must be traveled.

### References

- For this and a wide range of other issues discussed by the FDA: http://www.fda. gov/cdrh/beds/
- 2. To read all VHA Patient Safety Alerts and Advisories: http://www.va.gov/ncps/
- 3. For more information from the Joint Commission: http://www.jointcommission.org/SentinelEvents/SentinelEventAlert/sea\_27.htm
- VISN 8: http://www.visn8.med.va.gov/ patientsafetycenter/bedSafe
- Hoffman, S., Powell-Cope, G., Rathvon, L., & Bero, K. (2003). BedSAFE: Evaluating a program of bed safety alternatives for frail elder. *Journal of Gerontological Nursing, 29*(11), 34-42.