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Introducing the New *Falls Toolkit*

By Erik Stalhandske, MPP, MHSA, program manager, and Amelia Landesman, BA, statistical assistant

Among people 65 years of age and older —

- What was the leading cause of death due to injury in 2001?
- What was the leading cause of injury in 2001?
- What comprised nearly half of all safety reports and aggregated events that occurred in 2003?
- What unintentional adverse event leads to depression, anxiety, higher utilization of medical resources, and/or potentially death?

(*See back page for answers*)

Introducing the *Falls Toolkit*

In an effort to help facilities address falls and the injuries resulting from those falls, NCPS has developed the *Falls Toolkit*. The kit is designed to provide comprehensive, practical, evidence-based resources for the prevention of falls and fall-related injuries, as well as provide advice for developing a falls prevention program.

Why a *Falls Toolkit*?

Falls are a serious issue in both VA and non-VA hospitals. Of events occurring in 2003, 23,982[1] unique fall events were reported to NCPS using the SPOT database (see graphs below). Falls represented 47% of the safety reports and aggregate reviews of events occurring in 2003. Of the 23,859 safety reports and aggregated events, 1,914 resulted in a Safety Assessment Code (SAC) actual score of at least 2, meaning that the fall resulted in a permanent lessening of function not related to the natural course of the patient's illness.

Inside the *Falls Toolkit*

The *Falls Toolkit* is a three-ring binder that includes tabbed sections, videos, flyers, brochures, buttons and a CD-ROM. The tabbed sections comprise the bulk of the information, ranging from advice on forming interdisciplinary falls teams to measuring the success of a falls prevention program. Additionally, an annotated bibliography is included which directs users to journal articles related to specific areas of interest. The bibliography is indexed by topic and includes a synopsis of the articles, as well as NCPS staff "top picks."

The CD-ROM contains electronic versions of all the printed materials as well as some additional resources, including a technology assessment guide, an educational resource guide, and PowerPoint™ presentations.

Distribution Plan

The kit will be distributed to all patient safety managers in the spring of 2004. Each patient safety manager will receive two copies, one of which is for the falls team at the facility.

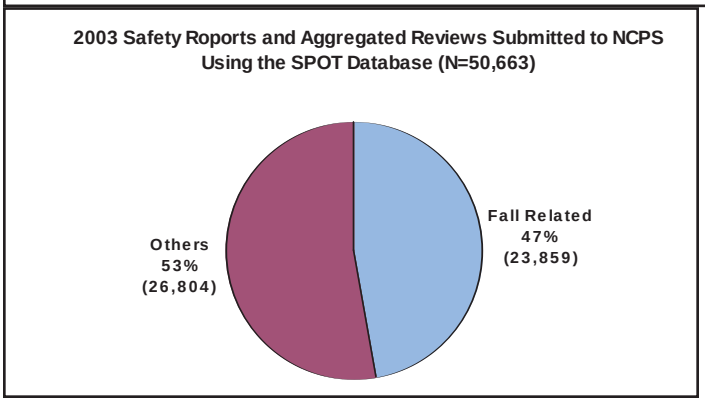
Supporting the *Falls Toolkit*

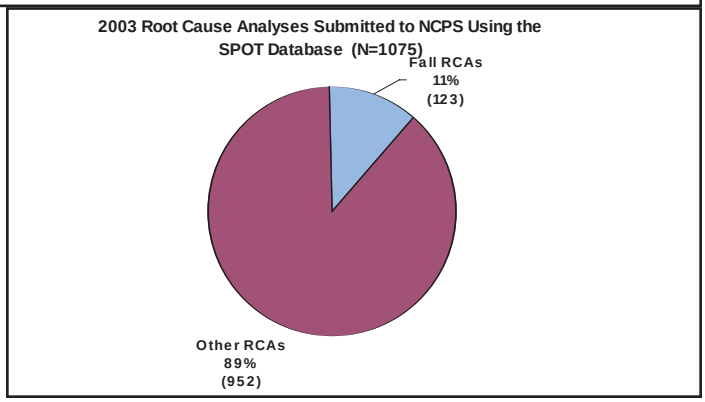
An interesting and easy-to-use Web site is available to support the kit. One can find and share electronic copies of brochures and posters, download a section of the kit, and find other suggested Web resources. The resources on the Web site will be updated annually to keep up with current research. One can visit the falls toolkit Web site at: *vaww*.ncps.med.va.gov/fallstoolkit (Intranet).

Follow-Up

In FY 2005, NCPS will follow up with facilities to find out how the kit is being used and how useful it has been.

The graphs below represent RCAs, Safety Reports and aggregated events occurring in 2003 (submitted and categorized by 3-12-04)





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Falls Resulting in Patient Injury or Death

"Severe falls in VA medical centers are the result of many factors, including: incomplete patient fall risk assessments, incomplete medical record documentation, and fall prevention equipment that is disabled or malfunctioning."

By Dea Mannos, MPH, program analyst

Descriptions

RCAs involving falls, in which the patient experienced a fracture, another injury, or death, occur in a variety of locations and varied situations. Some examples follow below.

Regularly, they occurred in the patient's room or private bathroom. In one event, a patient was found on the bathroom floor the morning after he fell. The patient told the nursing staff that he was trying to go to the bathroom when he slipped. Another patient believed that he could try to walk by himself, because he had walked in physical therapy earlier that day. Later that evening, he fell while trying to walk to the bathroom

Other patient falls, however, occurred in non-direct care areas of the hospital. In one such event, a patient fell in the ambulance bay while exiting from his car, fracturing his left hip.

Some falls occurred several times before they were adequately assessed. In one event, a patient was attempting to sit, missed the dining room chair, and fell to the floor on his right side. The patient told the nursing staff that he had also fallen 15 minutes earlier. Later, the same patient told the nursing staff that he was trying to transfer from a geri-chair to the toilet with the help of another patient who had turned off the chair alarm. The patient was treated in the ER for a head laceration and underwent a CT scan, which was positive for a right hip fracture.

Other falls occurred even while patients were identified and being treated as a high-fall risk. In one event, a patient was part of the Falling Star Identification Program. Another patient alerted the nursing staff that a high-fall risk patient was on the floor in the TV lounge, having unlatched his Velcro safety belt and having attempted to walk unassisted.

Facility Identified Vulnerabilities

While there are many different reasons for injuries associated with patient falls, common causes appear across RCAs. Failure to clearly identify the patient as a fall risk was a vulnerability. The absence or malfunction of specific fall prevention equipment also contributed to patient falls. In other events, delays in identification and treatment of hip fractures increased the patient's morbidity associated with the fall.

The following vulnerabilities and systems weaknesses were identified:

Appropriate Fall Assessment and Patient Record Documentation

- Lack of identification of the patient as a fall risk
- Differing interpretations of the Morse Fall Risk Scale questions led to inaccurate scoring and contributed to incomplete fall prevention plans.
- Lack of written guidelines detailing patient needs and handling instructions during transport between nursing units or between other departments

Equipment Related Issues

- The height of an air mattress, its slick surface, and the lack of raised lower side-rails contributed to a patient sliding out of bed when turning over, thus resulting in a fall.
- The lack of the use of technology, such as hip protectors that disperse force during falls, increases the likelihood that patients could suffer from hip fractures.
- The lack of an alarm device to warn staff may have contributed to this patient's fall and fractures. During a change of shift report, the patient took off his wheelchair safety belt and either slid from the wheelchair or attempted to transfer without assistance.

Delays in Fall Treatment

- No radiology coverage during weekends, evenings, and nights for the reading of plain films to rule out fractures following a patient fall.
- The walk-in doctor and nurse were not informed that the patient had fallen and that x-rays were ordered.

Actions Taken By Facilities

To address the reliability of fall assessments and improve patient record documentation of fall risk, some facilities took the following actions:

- Two different units, chosen by the facility's Associate Director for Patient Care Services, performed an inter-rater reliability test on the Morse Fall Risk Scale for one month.
- Units trialing the Hendrich Fall Risk Assessment completed inter-rater reliability testing.
- A "routing" sheet was designed in one month that outlined special needs of patients and transportation instruction requirements.
- The following was added to the mental health monthly and quarterly patient status reviews:

Has the patient fallen since last review?
_____no _____yes _____date of fall
If yes, was Fall Risk Protocol initiated?
_____yes _____no Why not?

In response to these cases and to address device issues, some facilities took the following actions:

- The BioMed Chief, along with SPD, evaluated various methods to supplement bedside rails for patients with overlay air mattresses.
- Alarms were purchased and staff received in-service training on their use for patients who are at high-risk for falls.
- A system for securing, storing, laundering and using hip protectors for high-fall-risk patients was implemented for a long term care facility.

To decrease delays in fall treatment, some facilities took the following actions:

- Coverage was provided on a 24/7 basis for Radiology to read plain films to rule out fractures.
- The Health Systems template in CPRS was amended to mandate a provider co-signature on the initial radiology report.

NCPS Comments

Severe falls in VA medical centers are the result of many factors, including: incomplete patient fall risk assessments, incomplete medical record documentation, and fall prevention equipment that is disabled or malfunctioning.

NCPS, in conjunction with Patient Safety Center for Inquiry 8 and several VA medical centers, developed the *Falls Toolkit* to target these multi-dimensional vulnerabilities.

Successful fall prevention programs must not merely implement a new policy or device, but address fall risks at all levels of patient care, including: admission, medical record management, and patient monitoring. The *Falls Toolkit* attempts to bridge these gaps in fall prevention strategies by providing medical centers with a wealth of information and supplies to implement a comprehensive fall prevention program that is visible to caregivers, administrators, and patients.

Visit the NCPS Intranet Web site (*vaww*.ncps.med.va.gov) or Internet Web Site (*www*.patientsafety.gov) for additional information on the NCPS *Falls Toolkit*.

Preventing and Responding to Myiasis

Based on VHA Information Letter 2002-017

By Noel Eldridge, MS, NCPS executive officer

Myiasis is the condition of infestation of the body by fly larvae (maggots).

A case in VA received some notoriety in 2002 and a VHA Information Letter (IL) (*http://www.va.gov/publ/direc/health/infolet/10200217.pdf)* was subsequently developed to provide VAMCs with basic information on this little-studied topic.

Myiasis is a relatively rare occurrence in the United States and in U.S. healthcare facilities, but it does happen — even in hospitals without an obvious problem with cleanliness. The complexity of healthcare, an aging population, and the severity of illness of many patients in healthcare facilities creates a venue in which myiasis can occur. This is especially true in spring and summer when flies are more widespread.

There are two aspects of myiasis relevant to improving patient safety: preventing myiasis and making the appropriate interventions after myiasis is discovered.

Prevention focuses on the care of at-risk patients, inside and outside the healthcare facility. This is especially true of those with chronic skin lesions. Other preventative measures center on the environment of care that can influence the potential occurrence of myiasis.

Most flies that cause myiasis deposit eggs or larvae directly onto the host at predisposed sites, such as chronic wounds and necrotic or infected tissue. Blood, body fluids, body substances, excrement, and volatile products of putrefaction act as olfactory attractants for common flies. Recommendations provided in the IL include standardized wound care measures, such as keeping chronic wounds dressed at all times and visually inspected daily.

With respect to the environment of care, the key to prevention of myiasis in a healthcare facility is fairly obvious: to minimize the number of flies that could come into contact with patients.

Unfortunately, this turns out to be a complex issue that involves multiple services throughout the facility. Both the external and internal environment of the facility must be considered. Specifically, cleanliness and sanitation cannot be considered merely an aesthetic need.

A specific cleaning regimen, including cleaning intervals and protocols, needs to be in place – and staff members must be continually vigilant that all is being accomplished as planned. Sample schedules and protocols can be found in the Emerging Pathogens guidebook available to VA facilities on the Intranet (click to: *http://vaww.ceosh.med.va.gov,* then to "Guidebooks," on the left-hand side of the screen). The IL also contains an appendix dedicated to "Fly Control in Health Care Facilities" that provides additional guidance.

If myiasis is discovered, care for the patient is the first priority. The second issue is mitigation of the factors contributing to the infestation.

Fly larvae found on a patient need to be removed. The IL contains guidance on how that procedure should be performed, as well as on vaccinations and on related treatments that may be appropriate.

While the issue of the beneficial effects of maggots for cleaning a wound may be medically relevant, this should only be done using laboratory-reared, disinfected fly larvae.

Mitigation should begin by addressing the source of the flies. Identifying specific genus and species of the larva(e) may also be appropriate. Precise identification is complex, since dead fly larvae may be difficult to identify, even by an experienced entomologist. Whether or not live larvae are submitted for identification, it is appropriate for several larvae to be placed in alcohol or formalin and sent to Pathology, as would be done for any other clinical specimen from a patient. An official pathology report will then be generated for future reference.

In general, a case of myiasis should be a cause for action and re-evaluation of practices, not a cause for hysteria or panic, as adverse patient consequences are almost always modest. To help prevent myiasis or to respond to a case that occurs, the IL is an excellent resource for VA personnel.

Introducing the New Falls Toolkit *(continued from front page)*

Inside the Falls Toolkit

The tabbed sections:

- Background
- Falls Team
- Falls Policy
- Interventions
- Measuring Success
- Resources

Educational & Awareness Raising Materials:

- Posters on falls prevention and hip protectors aimed at patients and staff
- Flyers on performing the "Timed Up & Go Test"
- Brochures for patients on hip protectors and on evaluating a home for fall risks
- Three videos for patients and staff
- Buttons for identifying fall resources/advocates on units/shifts
- *Technology Assessment Guide*
- *Educational Resource Guide*

Buttons that will be available with the Toolkit

Hip Protector Quality Improvement Project: Success Factors for Implementing Hip Protectors

NCPS supported the Hip Protector Quality Improvement Project at 13 facilities. Below are some of the general factors that were found to increase the success rate of their programs:

#1 Staff Ownership/Involvement in the Program

- Education/orientation
- Obtaining staff input
- Supportive management
- Developing unit champions
- Reporting results of the interventions

#2 Program Logistics

- Assigning responsibility to one person or one team
- Planning the process from beginning to end
- Including stakeholders in development (purchasing, SPD, facility management, nurse managers, LPNs/NAs, etc.)

#3 Communication

- Communicate through a variety of methods, post signs where people need the information
- Identification of high-risk patients
- Talking with staff and answering their questions

#4 Patient/Family Involvement

- Family support and reinforcement
- Communicating with the family, during visits and treatment team meetings, and through letters
- Obtaining patient input leads to patient involvement

#5 Other Factors

- Active patient safety program
- Using small cycles of change
- Patient/family education

Answers to the questions on page 1:

Among people 65 years of age and older:

Q: What was the leading cause of death due to injury in 2001?

A: Unintentional falls were the leading cause of death: 11,623 (29.6%)[2]

Q: What was the leading cause of injury in 2001?

A: Unintentional falls: 1,642,135 (61.6%)[2]. People aged 65 years and older were the only age group where motor vehicle accidents were not the leading cause of injury[2].

Q: What comprised nearly half of all safety reports and aggregated events reported to NCPS that occurred in 2003?

A: Falls represented 23,859 or 47%[3] of all the safety reports and aggregated events.

Q: What unintentional adverse event leads to depression, anxiety, higher utilization of medical resources and/or death?

A: **FALLS**[4]

[1]VA NCPS RCA database. Events categorized as of Mar. 1, 2004

[2]Centers for Disease Control and Prevention. Web-based Injury Statistics Query and Reporting System (WISQARS) [Online]. (2002). National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (producer). Available from: URL: *http://www*.cdc.gov/ncipc/wisqars/. [2004 Mar 19].

[3]VA NCPS RCA database. Events reported as of Mar. 12, 2004

[4]Centers for Disease Control and Prevention Web site. National Center for Injury Prevention and Control. Available from URL: *http://www.cdc.gov/ncipc/factsheets/nursing.htm* [2004 Mar 30].

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