



## Escorts Improving Patient Safety

Hospitals are all too familiar with the potential risks in transporting oxygen-dependent patients:

- Patients may be transported without their ordered oxygen
- Patients may be transported with ordered oxygen, but the tank has inadequate capacity for transport
- Transport may take longer than expected and the patient's portable oxygen tank runs out

To address these issues, Eileen Hagarty, a pulmonary clinical nurse at Hines VA Medical Center, and Barbara Springer, the patient safety manager, worked together to develop and implement an O<sub>2</sub> transport program with various components, including the *Oxygen Patient Transport Communication Tool*. The tool was designed to ensure that sufficient oxygen is available when a patient is transported with a portable E cylinder.

Nursing staff use the tool to indicate the approximate minutes of E cylinder capacity. This is determined from a neatly constructed table that

compares flow in liters/minute with tank pressure in pounds per square inch (psig). The tool is handed off to an escort who rechecks the approximate minutes of operation and transports the patient to the appropriate destination within the available time. As of February 2000, oxygen patient transport practices at Hines mandated the use of this tool.

Escorts are an essential part of the team because they are responsible for rechecking the amount of O<sub>2</sub> available and assuring that the patient arrives at the destination with sufficient oxygen. As part of their orientation process, all escorts must demonstrate competency on using the tool. This includes the ability to read E cylinder flow meters and tank pressure gauges as well as demon-

strate how to shut off the cylinder in an emergency situation. To date, 758 staff from 13 different services are trained in using the tool.

Monthly analyses of the program monitor compliance rates, education/training competency, and the required flow meter rates being set. Noteworthy results from this program include:

- The lack of standardized regulators led to problems in estimation of O<sub>2</sub> supply duration so now regulators are being standardized.
- Escorts and other staff are more aware of other transport-related safety issues, such as the proper

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### Drop the Draft!

## Final Patient Safety Handbook Now on Web

On January 30, 2002, the VHA National Patient Safety Improvement Handbook (VHA Handbook 1050.1) was officially adopted and the old 1051.1 was rescinded. The draft version that has been used by direction from the Under Secretary for Health is also rescinded, so please discard these drafts. The current version of the Handbook may be accessed on the NCPS website at <http://www.va.gov/ncps/ncps/NCPShb.doc>.

The current version of the Handbook

has benefited from many questions, inputs, and other contributions from dedicated VHA personnel at all levels of the organization. Additional information on aggregate reviews is provided in this version of the final Handbook along with some minor editorial changes. Everyone involved in the process of developing the Handbook should be proud of their efforts and the National Center for Patient Safety wants to extend our thanks to them for their help.

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# SAFETY SPOTLIGHT

(On a regular basis we feature teaching examples pulled from medical literature and similar RCAs that we feel are applicable and of interest to the entire VHA health care system. The following represents information taken from an aggregate of RCAs; it is presented to spark discussion and does not represent NCPS policy. Depending on the specific circumstances at any given facility, there are various systems-level solutions that will be most appropriate.)

## Patient Fall from Window

### Description

This event occurred in a locked second story psychiatric unit that was constructed to care for psychiatric patients. The unit's windows were 2' x 3' glazed panels that were installed in a curtain wall system. (The curtain wall system consists of a series of glass panels held in a framed metal grid.) A psychiatric patient who had been demanding to go home was able to kick out a glass panel and crawl out of the opening, falling to the concrete sidewalk one floor below. The patient was injured and taken to the emergency room. Even though the unit was very crowded and busy, no staff members witnessed the patient kicking out the

glass panel or crawling out of the window.

### Facility Identified Vulnerabilities

- The existing VA construction master specifications relied on industry standards for window systems and these were found to be inadequate to prevent a patient from dislodging them in a psychiatric unit.
- The activity level in the psychiatric unit increased the probability that staff would not be able to adequately monitor all of the patients.

### Actions Taken by Facility

- Contacted VA Office of Facilities Management to study using glazed curtain wall window systems in psychiatric buildings and units.
- Retrofitted existing curtain wall windows in psychiatric unit by installing interior windows to block access to the curtain wall windows.
- Staff activities are more closely scheduled throughout each shift to ensure that the patients are more closely monitored.

### NCPS Comments

*As a result of this event, VA has now modified master construction specifications for curtain wall systems in psychiatric units. These window*

*systems were initially designed to meet industry standards and tested to withstand exterior wind load, but not unusual and heavy interior pressure. VA standards now require curtain wall window systems in psychiatric units to withstand stronger internal forces and minimizes their use in psychiatric areas.*

*The actions taken on this event led to VA-wide changes and demonstrate the power that RCA teams can have.*

**"Never doubt that a small group of thoughtful committed people can change the world; indeed it's the only thing that ever has!"**

— Margaret Meade

### In Memoriam

We at NCPS are saddened at the recent death of John Eisenberg, M.D., M.B.A., after a lengthy illness. Dr. Eisenberg was the Director of the Agency for Healthcare Research and Quality (AHRQ) and was a well-respected leader in the field of health services research. His visionary efforts to improve patient safety and health care quality will sorely be missed.

# Tips on Reducing Falls

(The following was submitted by the VASN Patient Safety Center of Inquiry [PSCI] on lessons learned.)

In July 2001, 40 teams from VA and non-VA hospitals came together to begin a Collaborative Breakthrough Series on Reducing Falls and Injuries in both acute care and nursing home care settings. Collectively the teams have achieved a 45% reduction in their serious injury rate over the last nine months.

The following program elements were reported as being effective in mitigating falls:

## Targeted clinical interventions:

- **Use of a toileting program to prevent falls related to bathroom use.** A high percentage of falls occurred while patients were attempting to go to the bathroom.
- **Use of signage/identification methods to increase all staffs' awareness that the patient is at risk to fall.** For example the use of the "falling star" sign on the door and above the bed.
- **Methods to ensure patients wear shoes or non-skid slippers.** Teams that were able to keep appropriate footwear on patients saw injuries decrease.
- **Use of Post-Fall debriefing programs.** Teams used a post-fall debriefing form (available online at [www.patientsafety.gov/FallReport.doc](http://www.patientsafety.gov/FallReport.doc)).
- **Regular environmental assessments to identify fall risk in the environment.** Don't forget to use your engineering and maintenance people.

## Staffing and patient interventions:

- **Use of a falls expert.** Begin to train staff on every unit to take the lead in reviewing falls and testing new interventions.
- **Changes in care delivery and staffing patterns:** For example, one facility identified a high number of falls in their day-room and reduced falls by placing staff in the day-room.
- **Educate patients on their fall risk.** Teams that have included patient education have seen decreases in their fall rates.

## Use of measurement:

- **Use simple measurement to be sure your changes are resulting in improvements.** Be sure to track the injury rate, not just the number of falls. Use process measures to make sure the interventions are actually being accomplished. If the staff is unable to do the interventions, look for the systemic reasons for this result.
- **Use the Morse Scale to systematically assess patients at risk for falls** (see the VHA Fall Prevention and Management flipbook). Most facilities are now using this tool to identify those at risk for falling after developing education programs, policies/guidelines, and inter-rater reliability systems.

## Organizational aspects of success:

- **Form a truly multidisciplinary team.** Make sure the people that will be doing the changes are on your team. Include physicians, pharmacy, nursing, physical therapy, nurses' aides, engineering and maintenance.
- **Establish and maintain good communication with your senior leaders.** Make sure your facility director and chief of staff know about your improvement team, and that your improvement goals are aligned with the goals of senior management. Let them know your team will demonstrate quality and safety improvement during JCAHO reviews.
- **Teams have learned to value the use of small, planned change that is action-oriented.** Before implementing any new intervention on a large scale, test it on a small scale to "work out the bugs" and modify the intervention to fit your local environment.
- **Pilot test new products such as hip protectors and alarms.** Teams need to find the products that work in their facilities with their patient populations. Good success has been experienced with hip protectors.

Also, use the VHA Fall Prevention and Management flipbook. Fifty copies of these were distributed to each VHA facility in November 2001. To request additional copies, e-mail [NCPScognitiveaids@med.va.gov](mailto:NCPScognitiveaids@med.va.gov). More information on reducing falls and injuries related to falls can be found on the NCPS intranet ([vaww.ncps.med.va.gov/PPt/AggRev.html](http://vaww.ncps.med.va.gov/PPt/AggRev.html)) and internet ([www.patientsafety.gov/falls.html](http://www.patientsafety.gov/falls.html)) sites.

## Oxygen Patient Transport Safety

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attachment of the E cylinder to the patient's wheelchair.

- Escorts are recognized by clinical care providers as an essential part of the team for

their contributions to the care and safety of patients.

- Oxygen transport adverse events and close calls are much less likely to occur.

Through their communication tool, Hines has achieved considerable patient safety success. Reported oxygen transport-related adverse events have declined to almost zero.

Communication gaps between escort, Nursing Service, and treatment area staff have been bridged. For more information about Hines' Oxygen Patient Transport Communication Program and Tool, please contact Eileen Hagarty (708-202-8387 x25016), Barbara Springer (708-202-8387 x23996), or Dea Mannos at NCPS (734-930-5839).

Liters per Minute	Pressure (psig) in E Cylinder							
	500	750	1000	1250	1500	1750	2000	2200
	Approximate Minutes of Operation *							
1	140	210	280	350	420	490	560	616
1.5	93	140	186	233	280	326	373	410
2	70	105	140	175	210	245	280	308
2.5	56	84	112	140	168	196	224	246
3	46	70	93	116	140	163	186	205
4	35	52	70	87	105	122	140	154
5	28	42	56	70	84	98	112	123
6	23	35	46	58	70	81	93	102
10	14	21	28	35	42	49	56	61
12	11	17	23	29	35	40	46	51
15	09	14	18	23	28	32	37	41

(NOTE: Minutes in the shaded areas are in a risk zone.)

The oxygen grid above appears on the Hines VAMC Oxygen Patient Transport Communication Tool (please note that Hines never transports patients using cylinders with less than 1000 psig). It was designed to easily determine if there is a sufficient amount of oxygen in a portable cylinder before transporting a patient with oxygen. The entire tool can be found on the NCPS intranet ([vaww.ncps.med.va.gov/O2transportform.doc](http://vaww.ncps.med.va.gov/O2transportform.doc)) and internet ([www.patientsafety.gov/O2transport.doc](http://www.patientsafety.gov/O2transport.doc)) sites.

\* CAUTION: Actual times may vary due to differences in gauge calibration. It is strongly recommended that you consult with your respiratory therapy department or other appropriate departments or individuals at your facility to ensure that this tool will accurately reflect conditions at your location.



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