

Background



Overview

Falls are one of the most common adverse patient events in the VHA and the consequences can be devastating. Many of our patients are elderly, which makes them more likely to suffer the most severe and life threatening consequences of falls.

I. Scope of the Problem

Falls are the leading cause of injury-related death for those 65 years of age or older, and can lead to severe consequences, including femur fractures, traumatic brain injury, fear of falling and premature death. Within VA nursing homes approximately 20,000 of the 44,000 patients are expected to fall during a year-long period.

In 1996, one VISN broke down their fall rates as follows:

- 20.4% of falls were located in the Nursing Home Care units
- 14.8% of falls were located in the Acute Care unit
- 60% of falls occurred in patients over the age of 65

Falls are often the result of an adverse drug event. Many falls go unreported.

II. Cost of Falls

In 1994, the total cost of fall injuries for those over the age of 65 was \$20.2 billion dollars and by 2020 the cost is expected to be at least \$32.4 billion (without adjusting for inflation).¹

One estimate of the average cost of a hip fracture in the VA is over \$33,000² for additional care, medication, rehabilitation, surgery, and so on.

As fall and fall injury prevention strategies become more readily available, health care providers are increasingly being held legally accountable.

III. Understanding Falls

There are many risk factors for falls, which can be grouped into two categories – intrinsic and extrinsic factors.³

Related to the Person’s Condition – this includes factors that address a person’s physiological condition (intrinsic).

Related to the Environment – this includes factors that address the physical environment (extrinsic).

Additionally, these risk factors can be either **anticipated** or **unanticipated**. The anticipated risk factors are the ones that we can address *before* a patient falls.³

Examples of some risk factors follow:^{3,4}

	Related to the Person’s Condition (Intrinsic)	Related to the Environment (Extrinsic)
Anticipated	<ul style="list-style-type: none"> -Recent history of falls (most significant risk factor) -Incontinence, etc. -Cognitive/psychological status -Mobility/balance/strength problems -Dizziness/vertigo -Postural hypotension -Age (over 65 years old) -Osteoporosis (can lead to pathological hip fractures and increases likelihood of fracture if a fall occurs) -Overall poor health status 	<ul style="list-style-type: none"> -Environment (wet floor, floor glare, cluttered room, poor lighting, inadequate handrail support, monochromatic color schemes, loose cords or wires) -Inappropriate or lack of footwear -Low toilet seat -Wheels on beds or chairs -Restraints (including side rails in the up position) -Prolonged length of stay -Unsafe equipment (unsteady IV poles) -Broken equipment -Beds left in high positions
Unanticipated	<ul style="list-style-type: none"> -Seizures -Cardiac arrhythmias -CVA or TIA -Syncope -“Drop attacks” 	<ul style="list-style-type: none"> -Individual reactions to medications

IV. Relationship to Restraint Reduction

JCAHO limits the use of restraints to “emergencies in which there is an imminent risk of a patient physically harming himself or herself, staff, or others, and non-physical interventions would not be effective.”⁵

Use of restraints must be closely monitored requiring higher staffing levels.

A patient at risk for falling is *not* sufficient to use restraints.

Restraint use is hazardous to patients:

- It *does not* reduce the rate of serious falls
- Results in muscle weakness & deconditioning, increasing the patient’s risk of falling and sustaining an injury from the fall
- May lead to more severe injuries than if the restraints had not been used at all

The interventions in this toolkit focus on *restraint-free* alternatives to fall and fall-related injury prevention.

V. Consequences of Falls

There are many consequences of falls:

A. Hip Fracture — a fracture of the femur near the greater trochanter

- One year mortality rate of 20-30%
- Increased risk of future falls

See Hip Fracture Education Presentation on CD-ROM

B. Traumatic Brain Injury

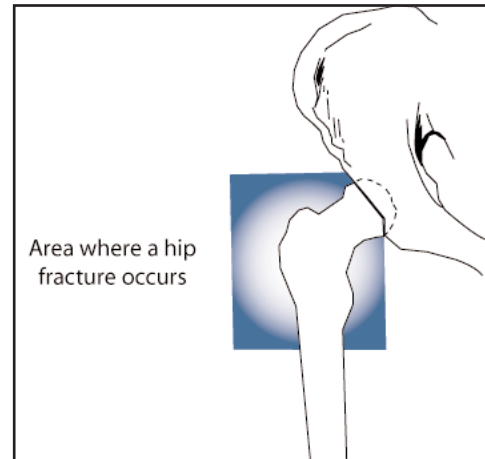
- 20% of serious head injuries lead to mental decline⁶
- Less than 45% of those over 75 years of age are discharged home following a traumatic brain injury⁷

C. Fear of Falling

- Self imposed restrictions on activity and mobility
- Reduced independence
- Can contribute to future falls and the risk of more serious injuries

D. Loss of Independence

- Related to decreased mobility and functional abilities
- Increased rates of institutionalization related to hip fractures and traumatic brain injuries



Additional consequences of falls include other types of fractures (e.g., vertebrae and forearm), prolonged hospitalization, loss of self-esteem and death.

¹ NCIP. *A Toolkit to Prevent Senior Falls*. Centers for Disease Control (CDC) Web site. Available at www.cdc.gov/ncipc/pub-res/toolkit.htm. [Accessed August 2003]

² Business case data from Patient Safety 202. 2003

³ Morse, HM. *Preventing Patient Falls*. Sage Publications 1997.

⁴ Noelker E. Fall training materials. Louis Stokes VA Medical Center. Brecksville, OH.

⁵ JCAHO. *Certification and Accreditation Manual for Hospitals (CAMH)* version 4. 2003

⁶ *Falls resulting in serious head injury may cause mental decline in elderly*. Doctors guide global edition.1999. Web site. Available at: <http://www.pslgroup.com/dg/e5e96.htm>. [Accessed April 4, 2004]

⁷ Centers for Disease Control and Prevention. *Public health and aging: nonfatal fall-related traumatic brain injury among older adults --- California, 1996 - 1999*. MMWR 2003;52(13):276-278.