How to Recognize if My Patient is at Risk for Falls & the Role of the Aide in Fall Prevention

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Objectives

- This session will:
  - Explore the risk factors contributing to falls
  - And, methods for identifying and addressing these factors by in-home aides

WHY THE INTEREST?

- Falls occur at all ranges of the population
- Aging population
- Elderly are more vulnerable to injury
- Falls are now seen as preventable
- Falls are a primary adverse event (potentially avoidable) home care indicator
DEFINITION OF FALL

- INADVERTENTLY COMING IN CONTACT WITH LOWER SURFACE OR GROUND
  - Slip
  - Trip
  - Stumble

EPIDEMIOLOGY OF FALLS

- 30% OF THOSE > 65 FALL EACH YEAR
- 1/2 OF THESE SUFFER MULTIPLE FALLS
- THE LIKELIHOOD OF FALLS INCREASE WITH AGE AFTER 75
- > 85 ARE LESS LIKELY TO FALL THAN 75-84
- In 2003 more than 13,700 > 65 died

Outcomes

- 40% OF INSTITUTIONALIZATION ARE ATTRIBUTED TO FALLS
- 10% OF FALLS IN THOSE > 65 RESULT IN SERIOUS INJURY
- 3.6% OF FALLS CAUSE A FRACTURE
  - 1% OF THOSE ARE HIP FRACTURE
  - HIP FRACTURES ARE THE MOST COMMON FRACTURE DUE TO FALLS AND THE MOST FEARED CONSEQUENCE
- INJURIES ARE THE 6TH LEADING CAUSE OF DEATH > 65
Outcomes Continued

- Falls are the #1 cause of injury related death in >65
- Falls may herald an acute illness
- 50% of those hospitalized for a fall will be dead 1 year later

Who Falls

- >65
- Up to age 75, women fall more than men
- Women 2x more likely to have a fall
- White race 2x more likely than other races to suffer fracture
- Women suffer fx of hip
- Men strike head
- Men have higher death rate

Consequences

- Morbidity
- Mortality
- Social consequences
- Financial
MORBIDITY

- Most falls do not result in injury
- 15% warrants medical attention
- 3-6% of falls cause fracture
  - Osteoporosis is a confounder in fractures of the elderly
  - Other fractures include: humerus, wrist, pelvis
- 5-10% soft tissue injuries
- Skin tears

HIP FRACTURES ARE #1

- 1% of falls lead to hip fracture
- 220,000 - 250,000 annually >65
- 90% falls / 10% spontaneous
- Women 4x risk than men

“LONG-LIES”

- Dehydration
- Pressure sores
- Restricted activity, immobility
- 2 months post 40% report continued pain or activity restriction
  - 40% of these had the same complaint 7 months later
FEAR OF FALLING

- Psychological Aspects
- Confrontation with own frailty
  - Depression
  - Shame
  - Loss of confidence
  - Anxiety

FEAR (CONTINUED)

- Post-Fall Syndrome
- 1/3 of those w/o Hx of falls report fear
- 10-50% w/ Hx of falls report fear of falling
  - "Fallaphobia"

WHO WILL SUFFER “FALLAPHOBIA”

- Lives alone, usually female
- Poor gait balance
  - Usually triggered by cluster of falls
- Symptoms
  - Decreased activity
  - Hesitant, irregular gait
  - "Clutch and Grasp"
  - Reject assistive devices
SOCIAL

- STRESSING FAMILY SYSTEMS
- STRAIN ON CAREGIVERS
- CONTRIBUTORY FACTOR IN 40% OF SNF PLACEMENTS
  - 40-50% OF THOSE IN INSTITUTIONS ARE PLACED
  - 30-60% OF THOSE HOSPITALIZED FOR HIP FX. ARE DISCHARGED TO SNF

MORTALITY, A CRITICAL PROBLEM

- INJURY 6TH LEADING CAUSE OF DEATH >65
- FALLS A MAJOR CATEGORY OF INJURY
- RISK IS HIGHER WITH CLUSTER FALLS
- CORRELATION BETWEEN REPEATED FALLS AND RAPID DETERIORATION IN HEALTH STATUS

- DEATHS DUE TO FALLS MAY BE UNDERESTIMATED
- RISK INCREASES WITH AGE
- MEN 2X GREATER RISK TO DIE THAN WOMEN
- 80% OF FATAL FALLS IN HOME (COMMUNITY DWELLERS >65)
- LONG-TERM LEAD TO INCREASED MORTALITY
- OF THOSE HOSPITALIZED FOR FALLS 50% DEAD 1 YEAR LATER
MORTALITY, A CRITICAL PROBLEM

- 10% falling in hospital die before discharge
- Hip fracture leading cause of fall-morbidity
- 12-20% higher than for those w/o fall
- Reasons for fall mortality
  - Pulmonary embolism
  - Pneumonia

FINANCIAL

- Falls sequelae lead to increased health care utilization
  - Utilization increases with age
- Falls are leading cause of ER visits >75
  - $10 Billion spend of 7% of falls in <45
  - $2.5 spend on SNF care secondary to falls

Review of literature

- Studies that predict
- Studies that report
- Studies that intervene
STUDIES THAT PREDICT

- "Predicting the Probability for Falls in Community Dwelling Older Adults" (Shumway-Cook, et al)
- "Use of the Berg Balance Test to Predict Falls in Elderly Persons" (Thorburn)
- "Use of the 'Fast Evaluation of Mobility, Balance, and Fear' in Elderly Community Dwellers: Validity and Reliability" (Di Fabio)

STUDIES THAT INTERVENE

- "A Multifactorial Intervention to Reduce the Risk of Falling Among Elderly People Living in the Community" (Tinetti, et al)
  - 30% decrease in falls among control group
- "The Effects of Exercise on Falls in Elderly Patients." (Province et al)
  - Treatment including exercise reduce the risk for falls

PREVENTION AND INTERVENTION

- "Preventing falls in the elderly at home: a community -based program" (Thompson)
  - Behavioral change as well is important to fall prevention programs
  - Intrinsic and extrinsic factors must be considered
  - Risk of falling can be lowered by 1/2 by simple modifications to the home
CONCLUDING FACTS

- Multi-factorial focus - falls usually occur from the interaction of several factors
- Fall may be related to latent disease
- Falls in frail may be due to intrinsic factors
- Falls in more active may be due to extrinsic factors
- Fall maybe harbinger of deterioration
- Intervention should address reducing identified risk factors
- Intervention can reduce falls

The Home Care Advantage

- Assessment and intervention must evaluate the patient, the activity, the environment - the Home Care Advantage

WHERE FALLS OCCUR (in community dwelling elderly)

- Most falls by community dwelling residents occur in the home
- Most falls occur in the bedroom, bathroom
- Most falls occur during normal activities, on level surfaces with low to moderate displacement of the center of gravity (transfers, sit-to-stand)
54% of falls occur in and around the home: (Devito, C, et al, 1988)

- 42% in the bedroom
- 34% in the bathroom
- 9% in the kitchen
- 5% on stairs
- 4% in the living room
- 6% in other areas

RISK FACTORS FOR FALLS  (Tideiksaar, Kay, 1986)

- Woman over age 75
- Homebound
- Expressed fear of falling
- Lack of social supports
- Decreased steppage height
- Low vision
- Impaired balance
- Cognitive dysfunction
- Nocturia
- Drugs (psychotropics, diuretics, hypnotics)
- Performs independent stair climbing

INTRINSIC FACTORS

- Implicated in > 50% of the falls
- Physiological changes associated with aging
- Pathological
- Disease processes
- Chronic, acute- transient
Physiologic changes associated with aging

- Hearing loss
- Diminished sense of taste and smell
- Visual system: acuity, color sensitivity, depth perception, light sensitivity, glare sensitivity, visual field
- Balance
- Posture
  - Proprioception, visual, vestibular
- Recovery strategies

GAIT and Cardiovascular

- Age-related gait changes
- Musculoskeletal
  - Loss of muscle mass
  - Postural changes
  - Articular changes
- Cardiovascular
  - Baroreceptor, decreased cerebral blood volume regulation

Pathological (disease processes) chronic or transient

- More implicated than physiological
- Acute
  - Hemodynamic process
  - Syncope, arrhythmia, myocardial infarction, pulmonary embolism, seizures, CVA, fever
- Chronic
  - Determination
    - Visual, neurovascular, cardiovascular
VISUAL DISORDERS

- DIABETIC RETINOPATHY
- GLAUCOMA
- CATARACTS
  - 33%
- MACULAR DEGENERATION
  - 45%

CARDIOVASCULAR

- Orthostatic hypotension
  - post prandial hypotension
- Syncope
- Hypertension
  - hypertensive medications
- Arrhythmia

IMPAIRED GAIT

- Gait abnormalities affect 20% - 50%
- Balance disorder
  - neuromuscular
  - neuropathies
  - orthopedic
Musculoskeletal Disorders

- Osteoporosis
- Osteoarthritis
- Muscle weakness
- Foot abnormalities

OTHER

- Psychological factors
- Cognitive changes
- Drug interaction
  - non-compliance
  - alcohol use

Extrinsic risk factors (environmental)

- Fall assessments must include an evaluation of the patient, the activity in the environment
- The environment has been implicated in 1/3 to 1/2 of all falls or fall injuries (Sattin, 1992)
Exterior including community

- Doorways
- Surfaces (uneven terrain)
- Pathways (cement, sidewalk)

COMMON ENVIRONMENTAL HAZARDS

- Poor lighting
- Cluttered floors
- Poorly fitting shoes
- Loose carpet
- Low seating
- Door jams
- Cords/wires
- Poorly maintained gait aids
- Broken steps
- Cracked sidewalks
- Lack of handrails
- Lack of grab bars
- Steps
- Thick carpet
- Wet/slippery surfaces
- Toys/pets
- Assistive devices

Interior (54% of falls occur around home)

- Bedroom (42%)
- Bathroom (14%)
- Kitchen (9%)
- Stairs (5%)
- Living room (4%)
- Other (6%)
Environmental Relocation

- Unfamiliar surroundings
- Nocturia
- Lighting
- Examples

Problem identification - identifying risk factors

- History and physical assessment
- Referrals and consultation with other disciplines
- Home assessment
- Observing the task
- Risk assessment tools
- More tests and measures
  - Eye
  - Balance
  - Strength
  - Mental/cognitive
  - Depression

Risk Mitigation

- Trying to minimize the risk
- The interdisciplinary approach
  - Mitigating intrinsic and extrinsic factors
  - HHQI 4-Cs
    - Consistent
    - Cross Disciplines
    - Coordinated
    - Culture
Contributions of the multi-disciplinary home care team

1. Patient/caregivers
2. Nurses
3. OT
4. PT
5. Physician
6. MSW
7. RD/pharmacist/orthotists
8. HHA
9. Community referrals

ROLE OF THE CNA

- Observation
  - The patient in their environment
  - The patient with the activity
  - Compliance with plan of care
  - Observation, reporting and intervention or the risk factors previously discussed
  - Detection
    - Vital signs
    - Orthostatic hypotension
    - Oxygen use
    - Atrial fibrillation
    - Environment

- Suggesting referrals to other disciplines
- Reinforce teaching of others
  - Medication reminders
  - An extension of therapy for tasks that do not require the skills of a therapist
ASSISTANCE BY CNA

- ADL
- TRANSFERS
- GAIT
- EXERCISES
- ENVIRONMENTAL SAFETY
- OTHER SAFETY

Community referrals

- DME
- Home adaptations
- Life-line
- Physicians
  - Hearing assessment
  - Visual screening
  - Other-assistive technology

Bonus Questions
Conclusions

- You can make a difference
- Falls are preventable
- Post test