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 75-85
- 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 HI P 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% warranted medical attention
- 3-6% of falls cause fracture
  - osteoporosis is a confounder in fractures of the elderly
  - other fractures include: humeral, wrist, pelvis,
- 5-10% soft tissue injures
- 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 GRAB"
  - 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

MORTALITY, A CRITICAL PROBLEM

- DEATHS DUE TO FALLS MAYBE UNDERESTIMATED
- RISK INCREASES WITH AGE
- MEN 2X GREATER RISK TO DIE THAN WOMEN
- 60% OF FATAL FALLS IN HOME (COMMUNITY DWELLERS >65)
- LONG-LIES 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 SEQUALAE LEAD TO INCREASED HEALTH CARE UTILIZATION
  - UTILIZATION INCREASES WITH AGE
- FALLS ARE LEADING CAUSE OF ER VISITS >75
  - 1984 $10 BILLION SPEND OF TX. OF FALLS IN >65
  - $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" (Thorbahm)
- "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

- Muti-factorial focus- falls usually occur from the interaction of several factors
- Fall may heard latent disease
- Falls in the frail more due to intrinsic factors
- Falls in more active are 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< >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 (psychotrophics, 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
  - Herald underlying process
  - Syncope, arrhymias, myocardial infarction, pulmonary embolism, seizures, CVA, febrile
- Chronic
  - Deterioration
    - Visual, neuromuscular, cardiovascular

VISUAL DISORDERS

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

Cardiovascular

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

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, sidewalks)

COMMON ENVIRONMENTAL HAZARDS

- POOR LIGHTING
- CLUTTERED FLOORS
- POOR 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 (34%)
- 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
    - Gait
    - 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
    - Assistive deices
    - Environment

ROLE OF THE CNA

- 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