Standing Tall: Preventing Fall Post Stroke

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Objectives:

1. Discuss fall percentages as it relates to the stroke population
2. Recognize 4 reasons for falls in the stroke population
3. Discuss 4 solutions to reduce falls for a stroke patient during the rehab process
4. Discuss 2 possible teaching methods to educate patients/family members on reduction of falls post discharge

CONFIDENTIAL
Data

• Up to 75% of stroke patients fall during the first 6 months post injury \(^4\)
• 40% of stroke patients experience serious falls within a year of their stroke \(^1\)
• Davenport et al. reported falls to be the most common medical complication after stroke \(^4\)
Data

• Prevalence of falls during an acute hospital period post stroke was 5%.

• Inpatient rehabilitation environment is considered “high risk” for falls because clinicians are challenging patients to achieve greater functional independence.

• Approximately 14% of stroke patients fall on an impatient rehabilitation unit despite implementation of a fall prevention program.
Why does a fall occur?

A combination of reasons to explain cause of fall which includes:

- Medical
- Physical
- Cognitive
- External
Medical

• Vestibular disorders
• Urinary disorders
• Orthostatic hypotension
• Pain
• Polypharmacy
Physical

- Balance impairment
- Impaired strength, endurance, ROM
- Increased muscle spasticity
- Self-care deficit
- Visual/Perceptual changes
Cognitive

• Cognitive deficits
• Impulsivity
• Restlessness
External

- Room layout
- Uneven floor surfaces/thresholds
- Equipment
- Ill fitting clothing
- Noise
- Lighting
Solutions: Medical

- Fall huddle post fall to evaluate cause and initiate interventions
- Vestibular testing/treatment
- Assess for incontinence every 2 hours and offer toilet/urinal prior to leaving room
Solutions: Medical (continued)

• Orthostatic blood pressure assessments
• Effective pain relief from pharmacological and non-pharmacological interventions
• Medication management/review
Solutions: Physical

- Transdisciplinary approach
- BERG assessments to evaluate risk
- Increase mobility, strength, and balance
Solutions: Physical (continued)

• Proper placement of items prior to leaving room
• Transfer check off list
• Massed practice
• Vision assessment
Solutions: Cognitive

• Safety checks
• Anticipate needs:
  position change
  personal needs
• Massed practice
• Space Retrieval Techniques
Solutions: Cognitive (continued)

• Redirection
• Red stop sign over seat belt
• Pen release seat belt
• Dignity plan
Solutions: External

- Room layout - How best to set up room
- Assess surroundings
- Building safety checks to improve environment
- Educate on proper use of assistive devices
- Assess for correct fit of clothing and footwear
- Reduce noise
- Maintain appropriate lightening when up on feet
Benefits of “smart” technology to reduce falls

• Cloud camera in room to monitor risk of fall
• Amazon Echo Show: For patients to call for help or their loved ones can video drop in to check on them
• Glow in the dark duck tape for path finding
• Tile device to locate items
• Motion-activated reminders
• Day clocks to clearly display day of week/time/date
Education for fall preventative after discharge

- Continued participation of task-specific exercises:
  - Home Exercise Program
  - Continue with Outpatient Therapy
- Adapting home to reduce fall risk
- Home Evaluation to assess safety and set-up
- Educate proper use of assistive devices
- Educate patient on vision, vestibular and proprioceptive deficits and how it affects balance
- Educate family on strategies and supervision
References


References

