



# 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



# Data

- Up to 75% of stroke patients fall during the first 6 months post injury <sup>4</sup>
- 40% of stroke patients experience serious falls within a year of their stroke <sup>1</sup>
- Davenport et al. reported falls to be the most common medical complication after stroke <sup>4</sup>



# Data

- Prevalence of falls during an acute hospital period post stroke was 5% <sup>4</sup>
- Inpatient rehabilitation environment is considered “high risk” for falls because clinicians are challenging patients to achieve greater functional independence <sup>2</sup>
- Approximately 14% of stroke patients fall on an inpatient rehabilitation unit despite implementation of a fall prevention program <sup>2</sup>



# 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



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# Physical

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





# Cognitive

- Cognitive deficits
- Impulsivity
- Restlessness



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# 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



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# Solutions: Physical

- Transdisciplinary approach
- BERG assessments to evaluate risk
- Increase mobility, strength, and balance



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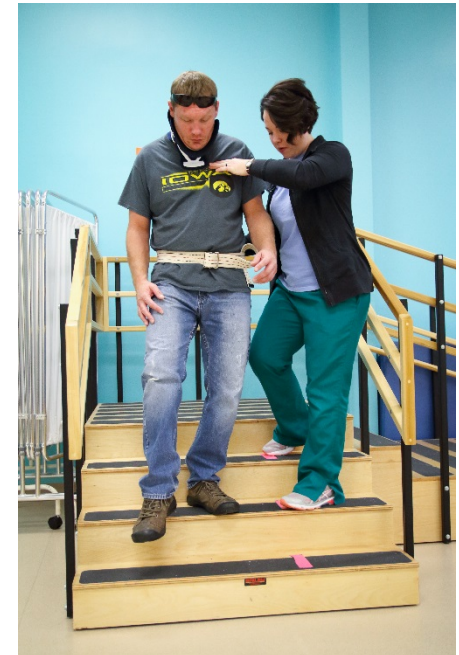
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# Solutions: Physical (continued)

- 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)

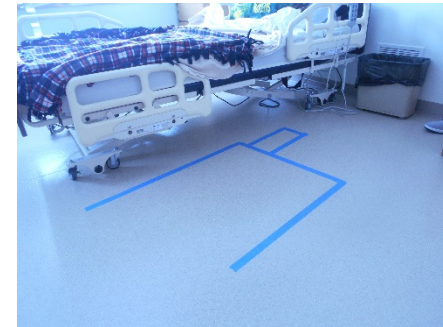
- Redirection
- Red stop sign over seat belt
- Pen release seat belt
- Dignity plan





# 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



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