Evaluation of a Novel Fall Prevention Program at Inpatient Rehabilitation Hospital

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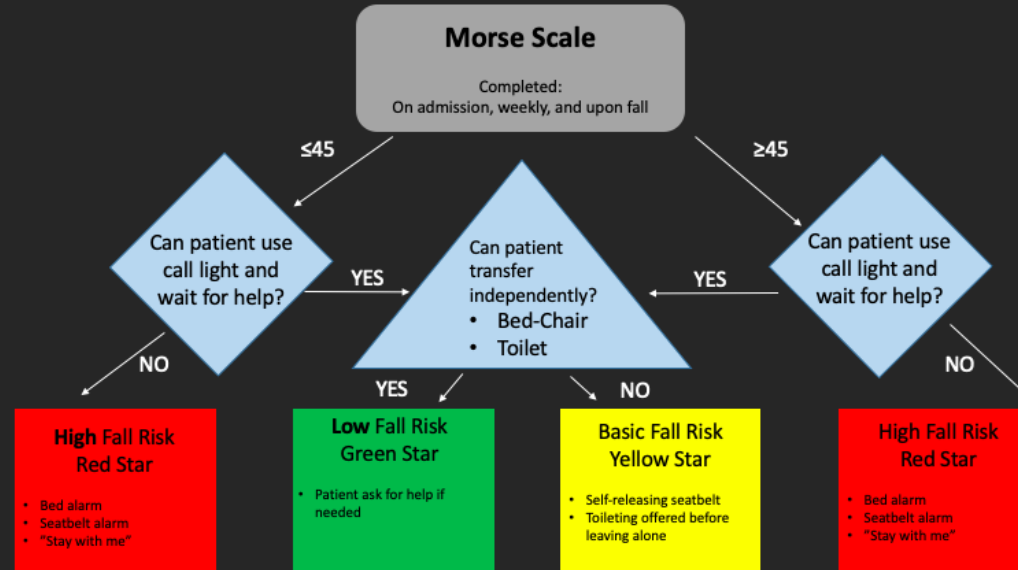
Objective

- Evaluating the effectiveness of an interdisciplinary fall risk stratification program.

Methods

- Retrospective case control study with 1078 patients admitted to freestanding inpatient rehabilitation facility totaling 15,803 total patient days

Interventions

- Fall risk, capacity for attention, and ability to transfer independently were used to stratify patients into 3 categories: high (red star), medium (yellow star), and low risk (green star).
- These were assessed and adjusted: upon admission, weekly, and after any fall.
- Red star status triggered use of bed and seat belt alarms.
- Yellow star patients had self-releasing seat belts and cues for nursing to offer toileting assistance regularly.
- Green star patients did not have specific nursing interventions.

Morse Scale
Completed:
On admission, weekly, and upon fall

≤45 → Can patient use call light and wait for help? — YES → Can patient transfer independently? • Bed-Chair • Toilet ← YES — Can patient use call light and wait for help? ← ≥45

- NO → **High Fall Risk Red Star**
  - Bed alarm
  - Seatbelt alarm
  - "Stay with me"
- YES → **Low Fall Risk Green Star**
  - Patient ask for help if needed
- NO → **Basic Fall Risk Yellow Star**
  - Self-releasing seatbelt
  - Toileting offered before leaving alone
- NO → **High Fall Risk Red Star**
  - Bed alarm
  - Seatbelt alarm
  - "Stay with me"

Falls Per 1000 Patient Days

(Bar chart: Pre-Intervention vs Post-Intervention)

Categories: Amputee, Hip fracture, Stroke, SCI, TBI, Brain Injury
Legend: ■ Pre-Intervention ■ Post-Intervention

Results

- Data were collected for 5 months prior to, and 7 months after intervention.
- Pre-intervention falls per 1000 patient days (M=11.6, SD=4.4) were higher than post-intervention days (M=9.3, SD=2.9), however, the difference was statistically nonsignificant, (p=0.296).
- Subcategorizing by admission diagnosis revealed decreased falls per 1000 patient days post-intervention amongst all diagnoses except spinal cord injury.
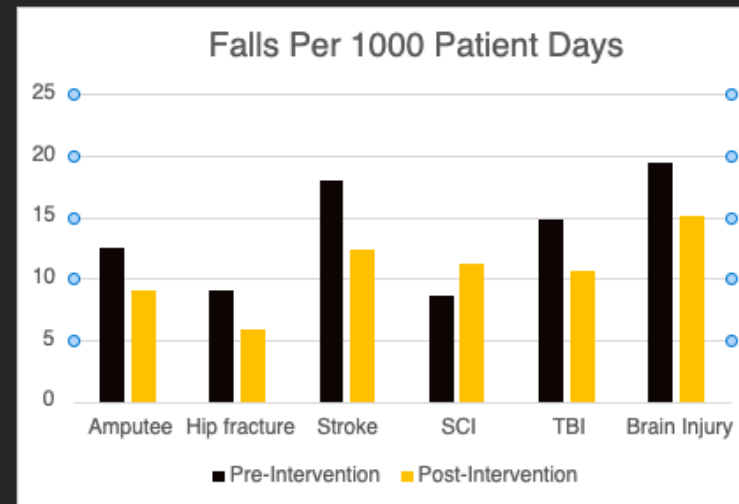
Conclusion

- Implementation of this fall prevention protocol resulted in a trend towards a decreased fall rate per 1000 patient days. The lack of statistical significance is important for the evaluation of the fall algorithm. Further variables contributing to the occurrence of falls should be investigated in future quality improvement projects, perhaps based on patients underlying diagnoses, which may prompt more specific interventions.