

An Evaluation of Medical Patient Falls Contributing to Revision of the Hospital Fall Prevention Policy

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INTRODUCTION & STUDY DESIGN

Patient falls have been found to be the most common adverse events reported in acute care facilities (Hendrich 2003). With a high proportion of falls occurring while patients are hospitalized, it is imperative that hospitals provide adequate measures to prevent falls and to protect patients from harm if they fall. This research study was designed to investigate medical inpatient falls during a 2-year period in a 258-bed, not-for-profit healthcare facility in North Carolina's Piedmont region.

OBJECTIVES

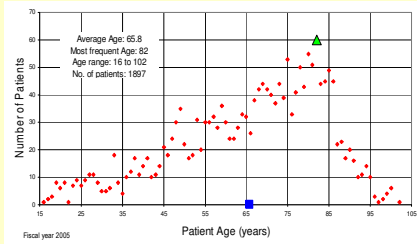
- ◆ to determine the profile of the medical patient who falls
- ◆ to evaluate the effectiveness of the Morse Fall Scale (MFS) assessment tool for predicting patients' fall risk

APPROACH

- ◆ Data collection- risk management reports and patient medical records from January 2004 to December 2005
- ◆ Data analysis- chi square statistic, Pearson correlation, injury rate calculation, Spearman ranked correlation

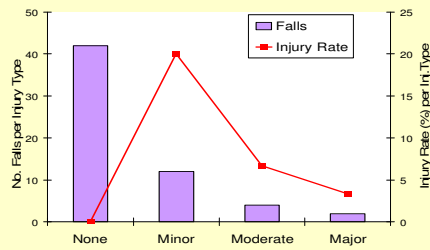
DEMOGRAPHICS & AGE ANALYSIS

Age Distribution of Patients Admitted to Medical Unit



- ◆ Age range of patients who fell: 19 - 95 years
- ◆ Mean age of patients who fell : 66 (+/- 19) years
- ◆ Chi square analysis revealed no correlation between patients 65 years and older and fall events
- ◆ A positive correlation between fall risk and increasing age ($r = 0.448$) was found for patients ≥ 65 years who fell during the first 5 days of hospitalization

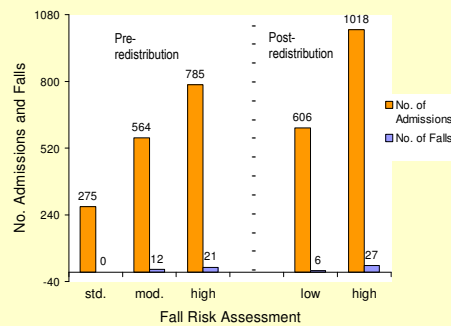
INJURIES FROM FALLS



Injury Classifications*	
Severity	Definition
None	No evidence of abrasion/bruising and no complaint of pain after fall.
Minor	Any bruise/abrasion not requiring medical treatment that will heal in several days.
Moderate	Injury requiring medical treatment not considered major: cut requiring sutures, contusions or sprains requiring treatment, suspected bone injury that X ray reveals no fracture.
Major	Serious injury: any bone fracture, head injury, or wound requiring major suturing.

*Morse 1996

USING MFS SCORES TO DETERMINE FALL RISK LEVELS



Spearman Rank Correlation: $r_s = 1 - ((6 \cdot \sum d^2) / (n(n^2 - 1)))$

- ◆ 97.053% correlation between standard, moderate, and high fall risk assessment and medical inpatients who fell
- ◆ 97.045% correlation between low and high fall risk and patients who fell in the medical unit in 2005

FALL ASSESSMENT & PREVENTION POLICY REVISIONS

MODIFICATION OF FALL RISK LEVELS

- ◆ Low Fall Risk for patients with a MFS score below 45
- ◆ High Fall Risk for patients with a MFS score of 45 or above - previously: standard (0-24), moderate (25-50), high (≥ 51)

RISK ASSESSMENT ADDITIONS

- ◆ Types of falls defined - Saved Fall, Accidental Fall, Anticipated Physiological Fall, Unanticipated Physiological Fall (Morse 1996)
- ◆ Assessment protocols tailored for specific populations - Inpatients, Outpatient Invasive Procedure Patients, Emergency Department Patients, Birthing Center Patients

NEW FALL PRECAUTIONS and INTERVENTIONS

- ◆ Low Fall Risk Patients:
 - lock movable equipment prior to patient transfer
- ◆ High Fall Risk Patients:
 - display high fall risk sign when transporting patient via stretcher or wheelchair
 - utilize Posey monitors for patients who forget their limitations
 - inspect mobility aids (canes, walkers, etc.) for non-skid tires

STAFF AWARENESS & EDUCATION

AWARENESS AIDS

- ◆ Fall Button
- ◆ MFS Fall Assessment & Risk Precautions Pocket Card

RISK FACTOR	SCALE	SCORE
History of Falls	Yes (immediate or within last 3 months).....	15
	No.....	0
Secondary Diagnosis	Yes.....	15
	No.....	0
Ambulatory Aid	Furniture (holds for support).....	10
	Crutches/Cane/Walker.....	15
	None/Bed Rest/Nonmobile.....	0
IV/Y Access	Yes.....	20
	No.....	0
Gait	Impaired - can't ambulate w/o assist.....	20
	Weak - assistance provides reassurance.....	10
	Normal/Bed Rest/Nonmobile.....	0
Mental Status	Forgets Limitations/Disoriented/Confused.....	15
	Oriented to own ability.....	0
	TOTAL	0-50

High Risk = 45 and above Low Risk = below 45

EDUCATION

Prior to and subsequent to implementing the revised policy, a hospital-wide initiative was undertaken to educate staff on the revised Fall Assessment and Prevention Program. The initiative involved:

- ◆ Direct care employees- tutorial, interactive DVD, skills lab, and requirement for yearly education update
- ◆ Non-direct care employees- video

PATIENT EDUCATION

Emphasis was placed on the direct care providers' consistent use of educational materials already in place for patient awareness. Additionally, the following aids were developed to enhance patient and family awareness:

- ◆ Educational Brochure
- ◆ Patient Room Fall Prevention Information Sign



CONCLUSIONS

- ◆ Most medical patients who fall do not incur injury or require treatment
- ◆ 2-category fall risk assessment is as effective as 3 categories for predicting the likelihood a patient will fall
- ◆ It will be more manageable for direct care providers to deal with 2 fall risk levels and the patient interventions and precautions associated with them than with 3 categories
- ◆ Hospital policy revisions clarify patient fall risk assessment and prevention precautions

REFERENCES

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- ◆ Morse, JM. (1996). Monitoring falls in the institution & Predicting physiological anticipated falls. In *Preventing Patient Falls* (pp.29-43). Thousand Oaks, CA: SAGE Publications, Inc.

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