

Comparative Analysis of Patient Falls in Psychiatric and Medical Populations at a Not-For-Profit Community Hospital

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INTRODUCTION & STUDY DESIGN

Patient falls are inevitable occurrences in healthcare facilities. Falls can result in injuries to patients and prolonged hospital stays. The Joint Commission's National Patient Safety Goal 9 states "reduce the risk of patient harm resulting from falls." These facts and this regulation establish the importance of fall prevention programs for hospitals. Analyzing falls in various patient populations can provide insight about circumstances surrounding falls. Data analysis can also reveal potential interventions that can be implemented to reduce the likelihood of patient falls and the injuries associated with them. This community hospital has utilized patient fall data to revise its fall assessment and prevention policy, and to develop specific patient population recommendations for patient fall safety.

PURPOSE

The study was designed to evaluate falls incurred by hospitalized psychiatric and medical patients for similarities and/or dissimilarities in age, gender, fall type, severity of injury, mental status, medication usage, and recurrence of falling over a 12-month time period.

METHODS

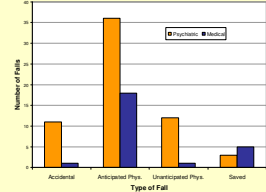
Data was collected from October 01, 2005 to September 30, 2006 using the fall evaluation tool, Risk Management data, and the hospital's medical record database ChartMaxx

Data was analyzed using t-Test and χ^2 analysis

PREVALENCE OF FALL TYPES

FALL TYPE	DEFINITION
*Accidental	Falls caused by patients slipping, tripping, or having some other mishap.
*Anticipated Physiological	Falls that occur with patients identified as fall-prone by scoring "at risk of falling" on the Morse Fall Scale.
Unanticipated Physiological	Falls that may be attributed to physiological causes but are created by conditions that cannot be predicted before the first occurrence.
Saved	An anticipatorily prevented fall, i.e., patient is "caught" and lowered to a chair or the floor breaking the impact of the fall, or patient grabs a handrail and does not fall on floor.

*Morris, JM. (1997). Creating a fall prevention program in Preventing Patient Falls (pp.5-8). Thousand Oaks, CA: SAGE Publications, Inc.



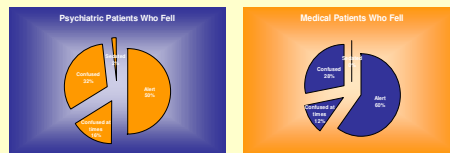
- Anticipated falls were the most common type of fall for both patient populations
- Psychiatric patients incurred more accidental and unanticipated physiological falls than did patients hospitalized on the medical unit
- Frequency of recurrent falls was 13% higher in the psychiatric population (data not shown)
- 92-93% of falls in both populations resulted in no injury or only minor injury to patients who fell (data not shown)

AGE COMPARISONS

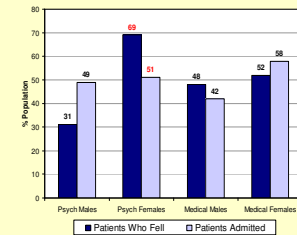
Age Analysis of all Patients Admitted to the Psychiatric and Medical Units During the 12-Month Study Period				
	Psychiatric Patients	Medical Patients	Analysis	P value ¹
Age (years)			t=38.41	4.884×10^{-86}
Mean	42.17	65.76		
ns	1248	1724		
Non-geriatric and Geriatric Patients (no.)			$\chi^2=772.29$	7.73×10^{-166}
<65 years	1145	721		
≥65 years	103	1003		

Age Analysis of all Psychiatric and Medical Patients Who Fell During the 12-Month Study Period				
	Psychiatric Patients	Medical Patients	Analysis	P value ¹
Age (years)			t=3.66	0.0005
Mean	59.34	71.16		
ns	62	25		
Non-geriatric and Geriatric Patients (no.)			$\chi^2=10.47$	0.0322
<65 years	41	7		
≥65 years	21	18		

MENTAL STATUS OF PATIENTS WHO FELL



GENDER DISTRIBUTION OF PATIENTS WHO FELL versus PATIENTS ADMITTED



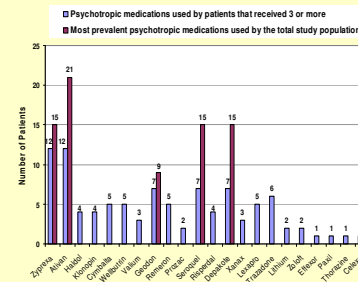
- Approximately equal numbers of male and female patients were admitted to psychiatry, yet a disproportionate percentage of females fell compared to the percent of females admitted
- Both genders were similarly represented among medical patients who fell though more females were admitted to the medical unit than were male patients

MEDICATIONS TAKEN BY PATIENTS WHO FELL

Patient Medication Profiles 24 Hours Prior to Fall			
	Psychiatric (n=62)	Medical (n=25)	χ^2
No. of Patients on Psychotropic Medications¹	59	15	17.3
Patients on >1 Psychotropic Medication	50	6	10.4
No. of Patients on Antihypertensive Medications	24	11	50.1

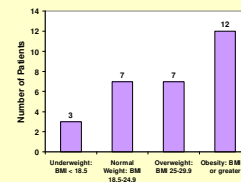
¹ D.F.=1, $\chi^2_{(1)}=7.879$, P=0.005
² Psychotropic medications included antipsychotics, antidepressants, anxiolytics, and mood stabilizers. Valproic Acid was the only anticonvulsant included in the medication review with formal FDA approval for treatment of bipolar disorder and was therefore the only anticonvulsant included.

- 28 psychiatric patients received 3 or more psychotropic medications, while this was the case for only 1 medical patient (a female)
- 86% of psychiatric patients on 3 or more psychotropic medications were females



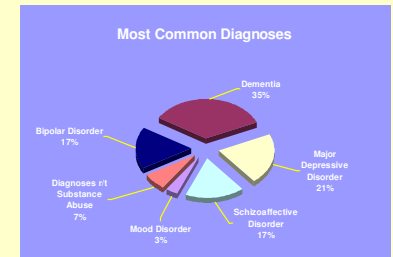
- Ativan and Zyprexa were both used 41% of the time in the 29 individuals that received 3 or more psychotropic medications 24 hours prior to falling
- Among the 87 patients that were evaluated for medications, Ativan was the most commonly prescribed medication

BODY MASS INDEX OF PATIENTS TAKING 3 OR MORE PSYCHOTROPIC MEDICATIONS



- Of the patients taking at least 3 psychotropics who fell, 66% were overweight or obese

DIAGNOSES AND AGE DISTRIBUTION OF PATIENTS ON 3 OR MORE PSYCHOTROPIC MEDICATIONS



- Based upon Axis I of DSM-IV diagnosis list, the most common diagnosis among patients who fell was dementia
- DSM-IV diagnoses are not utilized in the medical service; however, the one medical patient that received 3 or more psychotropic medications had a diagnosis of dementia
- 19 patients were < 65 years of age and 10 patients were ≥ 65 years of age

CONCLUSIONS

- In both populations, the majority of patients who fell were not injured or incurred only minor injury
- Mental status of patients who fell did not differ substantially between populations, but gender differences were evident in fall tendencies and medication profiles for psychiatric patients
- Medication and diagnoses trends were observed in patients taking 3 or more psychotropic medications
- Elevated BMI, psychotropic usage, gender, and increased fall risk require further study to determine if any relatedness exists

RESEARCH EVIDENCE USED TO GUIDE PRACTICE

- Revised fall policy is more manageable for RNs, while maintaining a high standard of patient care
- Posey Sitter Select™ and video monitoring are being utilized with appropriate patients, while unit trials are underway with hip pads and floor mats
- Tutorial, interactive DVD, skills lab, and requirement for yearly education keep RNs abreast of policy revisions, while plans to produce an educational video for all employees are in process
- Psychiatric-specific recommendations are being developed for consideration by the fall assessment and prevention team

ACKNOWLEDGEMENTS & CONTACT INFORMATION

Sarah Bailey, RN, MBA
Alan Miller, RPh
Phyllis Whitener, RN, CNA-BC
Patty Tucker, RN, MSN
Lisa Wike, RN, C, MSN

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