

# Evidence-Based Fall Prevention Program Among Psychiatric Patients

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## Introduction

Safety in the hospital setting is a high priority, which includes falls prevention as a quality improvement goal of every health care organization. For hospitals in the United States, there are approximately 700,000 to one million patients that experience a fall each year. This accounts for inpatient fall incidents resulting in some injury, with 1- 3 % resulting in a fracture (Schwendimann, Buhler, De Geest, 2006). Each emergency room visit resulting from a serious falls injury costs \$34,000 (Centers for Disease Control and Prevention, 2013). In the majority of these cases, a negative outcome is experienced by the patient, regardless if an injury occurred or not from the fall. As a consequence, patients in these situations become hesitant to engage in activities and treatments aimed at increasing their strength and independence. Falls are also a major factor leading to substantial rates of mortality and morbidity, as well as, immobility (Bonner, 2006 and Rubenstein, 2006). With unintentional injuries being the fifth leading cause of death in older adults, falls constitute two-thirds of these deaths (Rubenstein, 2006). The Joint Commission (Joint Commission for Accreditation of Health Care Organizations, 2011) requires hospitals that are accredited to conduct fall-risk assessments for hospitalized patients. Thus, prevention measures are implemented on identified fall-risk patient.

## Purpose

The goal of this project is to answer the question: In psychiatric high fall risk patients, how would a new evidence-based fall prevention program compare to the current practice in decreasing fall rates and injuries?

This evidence-based fall prevention program utilized a fall prevention tool kit to facilitate easy access on assessment, fall analysis reports, training, patient centered care planning, and analysis of the system. This is done for continued quality improvement. This project presumes a reduction in fall rate and injury rate related to falls.

## Method and Materials

When analyzing the effectiveness of fall programs, rates of both fall incidence and severity of injury should be included. Clinical outcomes will address the following four variables: decrease in falls rate, and decrease in minor, moderate, and major injury.

Implemented in the medical unit of Big Spring State Hospital, a 200 bed state psychiatric hospital located in West Texas, the Southwest region of the United States. Include both psychiatric and geriatric patients.

The fall prevention toolkit developed in this project by this writer included: Fall analysis report, fall injury report, template for nurses' notes on fall incident, nursing care plan for fall prevention, fall training module and competency test, fall prevention education for patient, fall prevention education for patient and family upon discharge, door signage for fall risk patient, bed area signage for fall risk patient, fall prevention campaign poster, copy of the provider order group to expedite writing of new orders for treatment, training on safe use of equipment, imminent fall risk activity form, pink bracelet, medication education on medication side effect poster to prevent fall risk, training and competency test for all workers and nurses.

## Results

The demographics of the psychiatric patients who fell within the 6 month period included 35 patients belonging to the age group of 51-65. There were a total of 51 males and 22. Three months after the project was implemented, there was a decrease of only 4 fall incidents involving patients receiving prn medications (Haldol, Ativan and Benadryl) 8 hours prior to the fall. There were no incidents of falls where patients were given atypical antipsychotic agents. One important thing to note is that there were a total of 14 falls in 6 months, which is equivalent to 18% of total falls for the period, involving patients who received the combination of Haldol, Ativan, and Benadryl within 8 hours. There were 5 incidents caused by environmental factors and by recent medication changes (4 were psychiatric medications and 1 was an antihypertensive medication). There were 4 incidents of falls where patients had positive orthostatic hypotension. There were 3 incidents caused by medical problems, seizures, wearing improper footwear, and one incident due to another patient's aggressive behavior.

Null hypothesis:  $H_0: \mu_{\text{before}} = \mu_{\text{after}}$   
p-value =0.09687

Conclusion:

At the 0.10 level of significance, we reject the null hypothesis. The intervention did lead to a statistically significant reduction in the average fall rate.

## Conclusion

Falls incidents are multifactorial in nature and require multidisciplinary intervention to have effective and sustainable results. The implementation of fall prevention tool kit decreased the fall incidents and fall related injuries. The interdisciplinary team of BSSH as a whole gained meaningful knowledge on fall prevention. Discussion of all fall events with the patient and treatment team led to modifications in the individualized care plan, thereby promoting patient centered care in the attempt to prevent future falls. In utilizing antipsychotics with potential EPS symptoms that may cause gait or balance problems. The use of lowest effective dose should be prescribed. With cautious medication adjustment during the initiation of benzodiazepine and antipsychotic medications, a slow titration of medications may help prevent fall incidents in a psychiatric hospital. The actual outcome in this study showed a decreased in fall incidents/rate, decrease in injury rate and increased knowledge of the nurse clinicians regarding their role and effectiveness in implementing an EBP fall prevention program. There was also an increase in patient satisfaction

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Paired Samples Test									
Pair 1	FR1-FR2	Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
		2.72	.94	1.6			1.9275	2	0.194