

Abstract

Name: Sarah D. Berry

Title: Medications as Acute Falls Precipitants in the Nursing Home Setting Background

In the nursing home setting, medications are a common risk factor for falls, yet little is known about the temporal relationship between medications and falls.

Objective: Determine the acute effect of medication administration or medication changes (increasing or starting a new medication) on the risk of falls. Determine if there is an interaction between functional status and medication administration or medication changes.

Methods: We propose a case-crossover study of 400 nursing home residents with a fall to examine the acute effects of medication use on the risk of falls. Falls, defined as unintentionally coming to rest on a lower surface, will be ascertained through a computerized falls-database, and will be confirmed through nursing records. Medication exposure will be determined from a retrospective review of medication logs during the 1-week preceding the fall. Ambulatory status will be determined from the ADL selfperformance scale of the Minimum Data Set closest to and preceding the fall. The effect of medication administration or medication changes on falls will be determined from the ratio of the frequency of medication exposure during hazard periods compared to the frequency of the same medication exposure during control periods using the Mantel-Haenzel equation for each class of medications separately. Stratified analyses will be performed on significant predictors based on ambulatory status.

Anticipated Results: Antidepressants, antipsychotics, benzodiazepines, other sedative hypnotics, diuretics, dementia medications, and hypoglycemic agents will be associated with an acute increased risk of falling between 1-12 hours following administration and/or within 1-week of medication changes. The acute effects of medication administration and medication changes will be greater among ambulatory nursing home residents compared with non-ambulatory residents.

Conclusion: Future falls prevention strategies in the nursing home setting should consider the acute effects of medication use on the risk of falls in their design.