ASSESSING FRACTURE RISK WITH PRESCRIPTION DRUGS IN MEDICARE-ELIGIBLE PLAN MEMBERS OF A TELECOMMUNICATIONS COMPANY
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Seniors are heavy users of medications. Despite strong evidence that some medications are associated with an increased risk of serious adverse consequences in seniors, physicians prescribe, pharmacists dispense, plans pay and seniors suffer. One such adverse consequence is a fall secondary to dizziness or instability of gait. A fall with a resulting fracture is a leading cause of hospitalizations and deaths of seniors.

OBJECTIVES: To advance the quality of its prescription drug benefit, a telecommunications company studied whether taking prescription drugs both known or suspected of causing dizziness or instability of gait in seniors increase the likelihood of fractures. The prescription drugs studied included: propoxyphene and combinations; hydantoin anticonvulsants; benzodiazepines; selective serotonin reuptake inhibitors; and tricyclic antidepressants.

METHODS: This analysis studied the rate of hip fractures in a group of 35,264 members over a five-year period from 1996 to 2000. Each member in the study reached the age of 65 by January 1, 1996. Parametric duration regression models were used to quantify the impact of taking certain prescription drugs on the likelihood of subsequently having a hip fracture and to control for differences between study members with hip fractures and those without.

RESULTS: Nearly 4% of the study population experienced a hip fracture during the time period. Each additional year of age increased the likelihood of having a hip fracture by 10.5%. Females were 73 percent more likely than males to have a hip fracture. Members who took amitriptyline were 48 percent more likely, and members who took temazepam were 27 percent more likely to have a subsequent hip fracture during the study period.

CONCLUSIONS: Amitriptyline and temazepam increased the likelihood of hip fracture among Medicare-eligible plan members. The telecommunications company will use this evidence to reduce the use of these medications, when appropriate, by its members.

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The FDA has designated 23 pharmaceutical entities as Narrow Therapeutic Index (NTI) drugs based on the range between therapeutic and toxic dose levels. The generic substitution of NTI drugs has been controversial due to perceived bioequivalence problems.

OBJECTIVES: We examined the ambulatory generic NTI drug use and cost from 1996 through 1998 and compared NTI drugs with non-NTI drugs in generic use. The relationship between generic use and retail pricing was explored.

METHODS: This study examined secondary data using 1996–1998 Medical Expenditure Panel Survey (MEPS) data. MEPS provides nationally representative estimates of health care use, expenditures, sources of payment, and insurance coverage for the U.S. civilian non-institutionalized population.

RESULTS: NTI drugs represent 7.0%, 6.3%, and 5.9% of total annual prescriptions from 1996 to 1998, respectively, which correspond to 6.1%, 5.2%, and 4.9% of total prescription expenditures. Among multiple-sources drugs, NTI drugs are more likely than non-NTI drugs to be dispensed by brandname with odds ratios of 3.9, 3.4, and 4.1 in 1996, 1997, and 1998, respectively (P < 0.05).

The median discount rates for non-NTI drugs are 0.35 and 0.32 for 1996 and 1997 compared to rates of 0.36 and 0.34 for NTI drugs. Accordingly, the realized savings from generic NTI drugs were 249.2 and 265.3 million dollars for 1996 and 1997. If NTI drugs had the same generic use rates as non-NTI drugs, an additional 293.6 and 147.7 million dollars could have been saved. The discount rates of generic drugs were positively associated with use in both NTI and non-NTI drugs in 1996 with a stronger effect in NTI drugs. The switch rates of NTI drugs were not different from those of non-NTI drugs.

CONCLUSIONS: Generic NTI drugs were used at a lower rate than non-NTI drugs from 1996 to 1998. Increased generic NTI drugs use could lead to more savings.

IMPACT OF MULTI-TIERED PHARMACY BENEFITS ON MEDICATION ADHERENCE
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OBJECTIVE: To examine the impact of two and three-tiered prescription drug benefits on medication adherence rates among managed care patients with selected chronic conditions.