OBJECTIVES: Limited evidence exists on the risk of falls/fractures with use of anticholinergic medications in the elderly. This study examined the risk of falls/fractures associated with anticholinergic medication use. METHODS: A nested case-control design was conducted using regional Medicare Advantage Plan database. The base population included individuals aged ≥65 years, who survived during the entire study period (2009-2010). At least one institutional and one outpatient claim in the first 6 months (January-June 2009) and no event of falls/fractures during the first 6 months (Base Period). Cases were identified as patients who experienced incident diagnosis of falls/fractures (ICD-9: 820.0-2) 30 days before the hospitalization date. Anticholinergic exposure was defined based on the Anticholinergic Drug Scale (ADS). Conditional logistic regression analysis was performed with conditional matched controls being used. RESULTS: The study sample consisted of 449 cases diagnosed with falls/fractures and 1,796 controls. After adjusting for other covariates, anticholinergic use was not associated with an increased risk of falls/fractures (Relative Risk, RR 1.03; 95% CI, 0.82-1.31) compared to no use. The study findings remained consistent when high-level anticholinergic drugs (level 2/3) were considered (RR 1.19; 0.85-1.65). CONCLUSIONS: Use of anticholinergic medications was not associated with a higher risk of falls/fractures compared to no use, among patients with no history of falls/fractures. Future studies are needed to address the role of dose and concomitant use of anticholinergics to evaluate falls risk in the elderly.

PIH5 USE OF ANTICHOLINERGIC MEDICATIONS AND RISK OF ALL-CAUSE HOSPITALIZATION IN THE ELDERLY
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OBJECTIVES: Anticholinergic medications are frequently prescribed in the elderly, and have been associated with potential central and peripheral adverse events. The current study examined the risk of all-cause hospitalization associated with anticholinergic use in the elderly.

METHODS: The study used a case-control design nested within a cohort of elderly individuals enrolled in a regional Medicare Advantage Prescription Drug Plan. The base population consisted of individuals aged ≥65 years, who survived during the entire study period (2009-2010). For each case, 4 age and sex-matched controls were selected using incidence density sampling (incidence density 1:4). The primary outcome measure was all-cause hospitalization. Prescription of any anticholinergic medication 30 days before the hospitalization date formed the primary exposure, and was defined using the Anticholinergic Drug Scale (ADS). Conditional logistic regression stratified on matched case-control sets was used to model the hospitalization risk, after controlling for additional risk factors predictive of the outcome. RESULTS: There were 295 cases that experienced incident hospitalization, and 1,180 age and sex-matched controls. After controlling for other covariates, use of anticholinergic medications was not associated with a significantly higher risk of hospitalization (Relative Risk, RR 1.05; 95% CI, 0.82-1.37) compared to no use. The findings remained unchanged after considering higher level (Level 2/3) anticholinergic use (RR 0.97; 0.61-1.54). CONCLUSIONS: The study found that anticholinergic medication use was not associated with a significantly higher risk of hospitalization compared to no use in the elderly, with no history of falls. Future research with diverse samples are required to address the role of dose and concomitant use of anticholinergic agents in the elderly.

PIH6 VITAMIN B12 STATUS IN FRAIL OLDER ADULTS ADMITTED IN A GERIATRIC ASSESSMENT UNIT: CAN THE USE OF CERTAIN DRUGS BE DETERMINANT?
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BACKGROUND: Use of proton pump inhibitors (PPIs) and metformin have emerged as potential risk factors of vitamin B12 (V12) deficiency. Conversely, calcium supplements were shown to counteract the detrimental effect of metformin on serum vitamin B12 absorption. These drugs are commonly prescribed to frail older adults in whom V12 deficiency is prevalent and has serious consequences. OBJECTIVES: To examine proportions of PPI, metformin, and calcium supplement users according to vitamin B12 status in the elderly admitted to a geriatric assessment unit (GAU). METHODS: This cross-sectional study was based on 173 medical chart reviews of patients discharged from the GAU between 2008 and 2012. V12 status at admission was categorized as follows: ongoing treatment for V12 deficiency, low (<148 pmol/L), normal (148-221 pmol/L), and high vitamin B12 status (>221 pmol/L). Use of PPIs, metformin and calcium supplements were determined from the pharmacist report. Proportions of PPI, metformin, and calcium supplement users were compared between V12 status categories. RESULTS: Most patients were women (67%), 75 years old (7%), and community-living (90%). Serum V12 concentration was low and low-normal in 19% and 25% of patients, respectively, 19% had ongoing V12 treatment. Prevalence of PPI and metformin users were 7% and 8%, respectively. Conversely, these proportions were 3% and 7% for calcium users, respectively, and 56% according to V12 status. The use of calcium supplements was also prevalent (56%). Interestingly, proportions of calcium supplement users was found to vary significantly between categories of V12 status (P<0.001), being of 21%, 35% and 62% in those with low, low-normal and normal status, respectively, and of 54% in those ongoing V12 treatment. CONCLUSIONS: PPI and metformin use did not appear as determinants of vitamin B12 status in GAU patients whereas calcium supplements seem promoting better V12 status. Whether calcium has counteracting effect on PPIs and metformin should be further examined using adjusted-analyses in a larger sample.

PIH7 ADVERSE DRUG EVENTS IN THE ELDERLY OCCURRING IN EMERGENCY, INPATIENT, AND OUTPATIENT DEPARTMENTS IN AN ADMINISTRATIVE CLAIMS DATABASE
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OBJECTIVES: Adverse drug events (ADE) in the elderly are important sequelae of drug treatment playing a role in non-adherence and increased hospitalizations and emergency visits. This study sought to describe the rate of ADEs in an elderly population and to compare the demographics of the ADEs to those who did not. METHODS: This study was a retrospective cross-sectional analysis that used a 10% random sample of the IMS LifeLink Health Plans commercial claims data during the period January 1,2003 through December 31, 2009. Subjects were admitted to EDs or hospitals and had a maximum of 1 lifetime prescription filled during the year preceding cohort entry were excluded. Demographic statistics. RESULTS: ADEs were defined based on previously published schema using ICD-9-CM codes that mention drug therapy or “due to drug” or “drug induced”. ADEs occurring in hospitalizations, emergency department visits, and outpatient physician visits are reported. Demographics, comorbidity, and health resource use were compared between persons with one or more ADEs compared to those without an ADE. RESULTS: 402,078 persons were eligible with 2.1% having at least one ADE. The ADE exposed group (7.7 v 5.4%, p<0.001), included more males (59.4% vs 54.5%, p<0.001), had higher CCI scores (2.27 ± 1.53, p<0.001) and incurred nearly three times the average health care cost per person ($8,386 ± $2,962, p<0.001). The most common ADEs were infections (9.4%) and heart failure (4.4%). DISCUSSION: Approximately 2% of all persons aged 65 and older experienced at least one ADE. ADEs frequently required ED care underscoring the severity of many ADEs and the need to develop interventions that can reduce ADE occurrences in the elderly.

PIH8 COMPARING THE EFFECT OF SEQUENTIAL THERAPY WITH TRIPLE DRUG THERAPY FOR HELICOBACTER PYLORI ERADICATION IN CHILDREN: A SYSTEMATIC REVIEW AND META-ANALYSIS
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OBJECTIVES: To evaluate the meta-analyses on adults confirmed the superiority of sequential therapy (ST) over standard triple drug therapy (STT) for Helicobacter pylori eradication. The evidence of demonstrating the efficacy of using ST is still lacking. The aim of this study was to do a systematic review and meta-analysis comparing the efficacy of ST versus STT for the treatment of Helicobacter pylori infection in children. METHODS: We used the keywords such as “Helicobacter pylori”, “H pylori”, “infection”, “sequential therapy”, “triple drug therapy” “children” and searched Cochrane library, PubMed and Google Scholar for all the relevant randomized controlled trials (RCTs), comparing the efficacy of two treatments (ST: proton pump inhibitor (PPI) + 1 antibiotic for 5 days followed by PPI + 2 antibiotics for another 5 days), against STT. The search was conducted from 2000 to 2012. No language限制s were included. The included RCTs were independently reviewed by the two reviewers and evaluated based on Cochrane handbooks. RESULTS: Five full text studies were included in the meta-analysis. They were published between 2000 to 2012. Of ADEs experienced were mental disorders (0.10%) and dermatitis (0.24%) with antiangiotes (0.15%) and chemotherapy (0.13%) being the most prevalent associated drug groups. Nearly half (48.8%) of ADEs occurred in ED departments. CONCLUSIONS: Approximately 2% of all persons aged 65 and older experienced at least one ADE. ADEs frequently required ED care underscoring the severity of many ADEs and the need to develop interventions that can reduce ADE occurrences in the elderly.

PIH9 FOLLOW-UP OF PSYCHOACTIVE DRUG USE IN NEWLY DIAGNOSED PATIENTS WITH AUTISM SPECTRUM DISORDER (ASD) IN QUEBEC (CANADA)
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OBJECTIVES: To characterize the temporal course of psychoactive drug utilization in a cohort of newly diagnosed autistic individuals. METHODS: A cohort was built using the provincial public health insurance program (RAMQ) databases. Newly diagnosed autistic individuals (2-26 years) were included with ICD-9 codes: 299.X, excluding 299.2) between January 1998 and December 2010. Cohort entry was the date of first diagnosis confirmed by the absence of ASD diagnosis prior to the date of diagnosis. RESULTS: A total of 2,989 subjects was identified (male: 80.2%; median age 6 years). Prior to ASD diagnosis, 35.8% received at least one psychoactive drug. At 1 year of follow-up, 44.9% of participants were receiving at least 1 psychoactive med.