

nursing homes. As this study was not representative, it cannot be used to draw reliable conclusions. Therefore, the aim of the current study was to quantify the number of drug administration errors in German nursing homes. The focus was on checking the administration of regularly scheduled solid oral medication. **METHODS:** The prospective study was carried out in three nursing homes during a period of eight weeks. The drug administration errors were divided into seven categories: wrong time of administration, wrong dosage, wrong drug, missing drug, surplus drug, incorrect pill division and damaged drug. **RESULTS:** The study included 196 residents. In total, 8798 daily doses were screened. This equals a total number of 48,512 inspected single medications. On average, every nursing home resident received 5.4 solid oral drugs per day. In 53% of the nursing home residents one or more drug administration errors were detected. Based on the 8798 screened daily doses the error rate was 7.3%. The majority of all drug supply errors (50%) occurred in the category incorrect pill division. This is followed by the category missing drug with 22%, surplus drug with 10%, wrong time of administration with 8%, damaged drug with 6%, wrong dosage with 4% and wrong drug with 0%. **CONCLUSION:** The findings of the study show that there is still a need for action with regard to drug administration in German nursing homes.

## PIH30

**PRIVATE HEALTH INSURANCE VS. MEDICAID COVERAGE: DISPARITIES IN PROCESS OF CARE MEASURES**

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**OBJECTIVE:** The opponents of the socialization of health care hypothesize that socialization of health care could lead to decrease quality of care. The aim of our study was to compare the quality of care delivered to a privately insured population compared to those covered by government subsidized Medicaid plan in the same region. **METHODS:** Administrative claims data from July 2004 through June 2005 were used from a private health plan and the Medicaid plan within the same state in the Southeastern US. Two quality indicators from the Health Plan Employer Data and Information Set (HEDIS) were adapted and used to compare compliance rates between the privately insured and Medicaid populations (Table 1). Based on the specifications of each indicator, children who met relevant criteria were identified as the denominator. Of those, children that received the indicated intervention were identified as the numerator. Population-level rates were calculated for each quality indicator for both plans. **RESULTS:** Children in the private health plan received the indicated quality care much more frequently than the Medicaid population, with nearly 3-fold differences in compliance rates. Varicella zoster virus (VZV) vaccines and measles, mumps and rubella (MMR) vaccines were included in the analysis for 2 year old children. The private plan had a denominator of 4222 children and the Medicaid plan had 15,653 children for both measures. Eighty-two percent of private plan children received a VZV vaccine compared to 29% of Medicaid children. Eighty-four percent of private plan children received an MMR vaccine compared to 29% of Medicaid children. **CONCLUSION:** Children covered by Medicaid plans are significantly less likely to receive quality health care than compared to those who have private insurance coverage. Further studies are needed to investigate to what degree this wide disparity is driven by socioeconomic factors and the socialization of health care.

**MUSCULAR-SKELETAL DISORDERS—  
Clinical Outcomes Studies**

## PMSI

**EFFECT OF BISPHOSPHONATES ON FRACTURES IN POSTMEOPAUSAL WOMEN: A SYSTEMATIC LITERATURE REVIEW**

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**OBJECTIVE:** While bisphosphonates have been available for many years, new drugs in this class have recently become available. We sought to understand whether differences exist on fracture risk and adverse events among oral (i.e., alendronate, risedronate, ibandronate) and intravenous (i.e., ibandronate, pamidronate, and zoledronic acid) bisphosphonates available in the United States in postmenopausal women. **METHODS:** A search of the English-language literature in Medline and Cochrane databases was conducted from 1997 to 2007 using combinations of these search terms: bisphosphonates, alendronate, risedronate, zoledronic acid, pamidronate, ibandronate, fracture, adverse events, and osteoporosis. Articles were included if they were meta-analyses or randomized controlled trials (RCT) and provided information on fracture risk and adverse events. **RESULTS:** In the most recent meta-analysis, alendronate (n = 12,099 patients; 11 trials) and risedronate (n = 13,795 patients; 6 trials) reduced the risk of vertebral fractures (RR:0.55, 95%CI 0.45–0.67; RR:0.61, 95%CI 0.50–0.76) and non-vertebral fractures (RR:0.84, 95%CI 0.74–0.94; RR:0.80, 95%CI 0.72–0.90), including hip fractures (RR:0.61, 95%CI 0.40–0.92; RR:0.74, 95%CI 0.59–0.94). Similarly, in a RCT among 7765 women, the incidence of vertebral fractures, non-vertebral, and hip fractures was significantly reduced with zoledronic acid (RR:0.30, 95%CI 0.24–0.38; RR:0.75, 95%CI 0.64–0.87; RR:0.59, 95%CI 0.42–0.83). In contrast, oral ibandronate (n = 1952) lowered the risk of vertebral fractures (RR:0.62, 95%CI 0.41–0.75) but not nonvertebral fractures. Data on fracture risk with pamidronate were not identified. Adverse events were similar between bisphosphonates and placebo in all included studies, except with zoledronic acid where serious atrial fibrillation (1.3% vs. 0.5%; p < 0.001), an increase in Scr >0.5 mg/dL (1.2% vs. 0.4%; p = 0.001), and urinary protein >2+ (0.5% vs. 0.2%; p = 0.06) were higher with treatment compared to placebo. **CONCLUSION:** This evidenced-based literature review shows that clinical differences among bisphosphonates exist. This suggests that selection of bisphosphonates needs to be individualized to maximize the desired effect and minimize risks.

## PMS2

**COMPARATIVE EFFICACY OF BIOLOGICAL TREATMENTS IN PATIENTS WITH PSORIATIC ARTHRITIS; SYSTEMATIC LITERATURE REVIEW AND META-ANALYSIS**

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**OBJECTIVE:** Three biological agents (adalimumab, etanercept and infliximab) are registered for psoriatic arthritis (PsA) by the EMEA or the FDA. Our objectives were to compare the efficacy of the available biologicals in PsA and to compare their effect sizes by standardized improvement criteria of signs and symp-