

claim. Patients were then followed for 30 and 60 days post initiation of COX-2 therapy to evaluate rate of concurrent PPI use.

RESULTS: During 2000, 19,318 COX-2 users were identified (1.0% of total membership). Average (median) number of COX-2 prescriptions filled was 3.4 (2) prescriptions per COX-2 patient per year (pppy). Average (median) quantity consumed pppy was 151 (80) capsules for celecoxib and 91 (60) tablets for rofecoxib. Average (median) length of therapy was 148 (86) days pppy. During the study period, 16.7% of patients switched from celecoxib to rofecoxib and 11.9% switched from rofecoxib to celecoxib. Of the 966 previous PPI users identified, 62.3% and 56.8% continued on PPI therapy at 30 and 60 days, respectively, post initiation of COX-2 therapy.

CONCLUSIONS: Length of COX-2 therapy for this population was relatively short and the majority of patients who were utilizing a PPI prior to a COX-2 inhibitor continued on PPI therapy.

PA020**TRENDS OF ANTIRESORPTIVE THERAPIES USE AMONG WOMEN WITH PREVIOUS OSTEOPOROTIC FRACTURE**

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Evidence for the efficacy of antiresorptive therapies (ART) is convincing for the most part in terms of risk reduction of osteoporotic fractures among high-risk postmenopausal women. Very little information has been published on the frequency of use of ART.

OBJECTIVE: To evaluate the probability (P) over time of ART use in women aged 70 years and older who had at least one diagnosed osteoporotic fracture to those without a fracture.

METHODS: A cohort design was used, and a random sample of women was collected from RAMQ database. Women were classified in four cohorts, of which two status were defined: those with a fracture and those without fracture in the 5 years prior to cohort entry. The cohort entry was defined as January 95, 96, 98 and 2000. These women were followed up for a year after cohort entry. Several exclusion criteria applied in the 5 years prior cohort entry were used. We stopped to follow women at their 85th birth date. The P of filling at least one prescription of ART during the year following cohort entry was determined using a logistic regression adjusting for age.

RESULTS: Mean age and CDS were 78 years old and 3.3. Prior use of ART ranged from 8.9% to 31.2%, and 8.7% to 17.2 for women with and without fracture, respectively. The P of filling at least one prescription of ART excluding HRT from 1995 to 2001 ranged from 1.6% to 28.3% and from 0.5% to 11.3% among women with and

without fracture, respectively. The P of filling at least one prescription of HRT ranged from 7.2% to 9.3% for women with and without fracture.

CONCLUSION: Our results show an increase of ART use excluding HRT overtime. But, there is still an under-use of ART among women with fracture.

PA021**MISSED OPPORTUNITIES IN PHARMACEUTICAL TREATMENT OF OSTEOPOROSIS IN POST-FRACTURE WOMEN**

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OBJECTIVE: An estimated 9.4 million people in the United States have osteoporosis. The prevalence of vertebral fractures is estimated at between 10% and 25% in women aged 50 and over, with recent longitudinal studies stating that bone loss accelerates with age. The risk for a fracture is highly predictable by an initial fracture (OR = 2.1), leading to great opportunity for prevention of secondary fracture with pharmacotherapy. The purpose of this study is to assess the prevalence of failing to treat women, post-fracture, with pharmaceuticals.

METHODS: This is a retrospective database review of a Southeastern Michigan managed care organization's medical claims data from January 1, 1996, and pharmacy claims data from January 1, 1997, through March 21, 2001. Data include women > 45 years of age before January 1, 2001, with diagnosis of non-traumatic fracture via CPT and ICD-9 codes. Treatment is defined with pharmacy claims data of estrogens, bisphosphonates, raloxifene, or salmon calcitonin.

RESULTS: We identified 188 women (mean age at event = 68.0 years) with fracture eligible for treatment, 89 (47%) did not receive treatment before fracture, and 74 (39%) following fracture. The decrease from 89 patients pre-fracture to 74 patients post-fracture failing to receive treatment is the net effect of 6 patients stopping treatment and 21 patients beginning treatment.

CONCLUSIONS: The occurrence of a fracture represents an opportunity to prevent further osteoporotic fractures. There is an opportunity to increase patient outcomes to prevent secondary fracture in women 45 years and older. More than one-third of potentially eligible women were not being treated with available medications.

PA022**REFILL ADHERENCE IN OSTEOPOROTIC WOMEN WITH PRIMARY AND SECONDARY FRACTURE PREVENTION**

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OBJECTIVE: The US national cost of osteoporosis was estimated at \$6.1 billion in 1984 and \$20 billion in 1998.

Current literature suggests that prescribing of secondary preventive therapy has not been maximized which would reduce the occurrence and cost of secondary fracture. Additionally, patient acceptance of treatment alternatives has not been maximized due to the administration complexity and potential side effects of bisphosphonates. Alternative agents with osteoporotic benefits may be used in some women to increase patient adherence. Additionally, patient acceptance and adherence may increase after an osteoporotic incident (fracture or vertebral collapse). The purpose of this study was to assess compliance rates through refill adherence with bisphosphonates vs. alternative osteoporotic treatments (estrogen replacement therapy, salmon calcitonin, or raloxifene) in primary and secondary prevention among women.

METHODS: Members of a Southeastern Michigan managed care organization were retrospectively identified with pharmacy claims by those receiving bisphosphonates, estrogen replacement therapy, salmon calcitonin or raloxifene. Women >45 years of age as of January 1, 2001 were cross-referenced with medical claims for a diagnosis of non-traumatic fracture by CPT and ICD-9 codes between January 1, 1996 to April 30, 2001. Women with a history of fracture with treatment were classified as having secondary treatment prevention; women without a history were classified as primary treatment prevention. **RESULTS:** Mean adherence rates were 76.32% (± 39.12) in the primary prevention population ($n = 653$) and 84.91% (± 31.08) in the secondary prevention population ($n = 114$). The bisphosphonate treatment group's ($n = 78$) mean adherence rate was 77.69% (± 33.92); the alternative treatment group's ($n = 689$) rate was 83.86% (± 38.62).

CONCLUSIONS: Treatment associated with secondary prevention and involving alternative treatments had the highest adherence rates. Patient adherence and acceptance should be considered in determining osteoporosis treatment guidelines to ensure those most likely to benefit receive proper treatment.

ASTHMA & RESPIRATORY DISEASES/ DISORDERS—Clinical Outcomes Presentations

PAR I

ANALYSIS OF NASAL STEROID DOSING PATTERNS IN A LARGE SAMPLE FROM A PRESCRIPTION DATABASE

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High potency nasal steroids are generally considered to be those that can be administered once daily. Most clinicians prefer an agent that can be given once daily, increasing the likelihood of treatment adherence. We weighted this provider preference highly when we sought to select one or two nasal steroids for preferred formulary status in our large health system. We analyzed direc-

tions for use of prescriptions for nasal steroid products to determine the products that appeared to be prescribed once daily to greater than 90% of patients.

OBJECTIVE: This paper describes the results of a database analysis of nasal corticosteroid dosing patterns in a large health system.

METHODS: We extracted prescription records from the Uniformed Services Prescription Database (USPD) for all nasal corticosteroid inhaler products dispensed between October 1, 2000 and May 31, 2001. There were 659,000 prescriptions for 260,971 unique patients in the dataset. We developed and validated a text parsing algorithm to analyze directions for use (sigs) associated with each prescription. Number of prescribed administration times per day and number of puffs per administration were tabulated for each patient by product.

RESULTS: Of the eleven available formulations, three were used once a day in over 90% of patients: Mometasone aqueous (94.1%), fluticasone (94.6%), and beclomethasone DS aqueous (91.9%). Three products (triamcinolone aqueous, triamcinolone aerosol, and beclomethasone DS aerosol) were used once a day in 80%–90% of patients. Once daily use of the remaining products ranged from 10% to 62.7%.

CONCLUSION: Three products (mometasone, fluticasone and beclomethasone DS aqueous) appeared to be prescribed once daily to greater than 90% of patients, meeting our criteria for preferred formulary status.

ASTHMA & RESPIRATORY DISEASES/ DISORDERS—Economic Outcomes Presentations

PAR 2

PREVALENCE AND CORRELATES OF REDUCED PRODUCTIVITY ASSOCIATED WITH ALLERGIC RHINITIS IN THE WORKPLACE

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OBJECTIVES: To quantify the magnitude of reduced productivity in the workplace related to allergic rhinitis and to identify its significant correlates.

METHODS: A diverse population of 14,000 employees affiliated with 10 western U.S. employers were asked to participate in a study of allergic rhinitis. The anonymous, cross-sectional, self-administered questionnaire was distributed at the worksite and returned to a third party to ensure confidentiality. The instrument included items assessing allergy severity/symptomatology, medication use, health service utilization, knowledge and practices, sociodemographics and reduced productivity (due to full and partial missed days and presenteeism). The response rate was 38%, with 2,493 reporting that they currently had eye or nose allergies.