that (i.e., retreatment); 3) Annualized resource use stratified by retreatment status. RESULTS: Of the 45 patients who met study inclusion criteria, mean age was 61.8 and 62.2% were male. 46.7% of patients (n = 21) had medication use >1 month after the recommended treatment regimen. 73.3% (n = 33) had a gap in treatment, and of these, 24.2% (n = 8) were retreated after the gap. Annualized resource utilization (mean (SD)) for not retreated vs. retreated patients respectively was: Physician visits: 2.0 (2.0) vs. 4.2 (3.9), p = 0.16; Specialist visits: 1.2 (2.1) vs. 2.7 (2.9), p = 0.16; SAP tests: 0.3 (0.8) vs. 0.8 (2.8), p = 0.32; and Bisphosphonate prescriptions: 1.7 (2.3) vs. 4.2 (3.9), p = 0.12.

CONCLUSIONS: This analysis of real-world treatment patterns and resource use in risedronate-treated patients suggests a large extent of risedronate use beyond approved label recommendations and high retreatment rates, as well as higher resource use in those retreated. Larger studies are warranted to further understand treatment patterns and associated resource utilization in Paget’s disease patients.

THE USE OF INDIVIDUAL RISKS RATHER THAN POPULATION AVERAGES IN COST-EFFECTIVENESS MODELING

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OBJECTIVES: Cost-effectiveness analyses are routinely based on data from group averages, restricting its generalizability to those with below- or above-average risk. A pharmaco-economic model was developed that used individualised risks, taking as example bisphosphonates and prevention of fractures. METHODS: Data were obtained from a research database of general practitioners, comprising a sample of the UK general population of women >50 years (N = 330,000). Individual mortality and hip, vertebral, and other osteoporotic fracture risks were estimated by age, sex, body mass index, smoking and other clinical risk factors. Estimates on costs, EQ5D utilities and treatment efficacy were obtained from a research database of general practitioners, restricting its generalizability to those included in the study. RESULTS: There was a large variability in the cost-effectiveness with clinical risk factors. At age 60–69, the cost per QALY gained was ≤36k in women with low fracture risk but ≥36k with high fracture risk (data for women without fracture history). Patients with low body mass index (<20) had considerable better cost-effectiveness than patients with high BMI (≥26) ≤23k versus ≤71k at age 60–79 in women without fracture history. The same was found for different diseases such as rheumatoid arthritis or inflammatory bowel disease. Using a cost-acceptability ratio of ≤30k per QALY gained, bisphosphonates became cost-effective for patients with a five-year risk of 9.3% (95% CI 8.0–10.5%) for osteoporotic fractures and of 2.1% (95% CI 1.5–2.7%) for hip fractures. Including bone mineral density in the risk assessment, the cost per QALY gained was ≤35k in women at age 60 with a fracture history and a T-score of ≤2.5 (at age 50, this was ≤3k). CONCLUSIONS: A pharmaco-economic model based on individual long-term risks (as derived from a health care database) can improve the targeting in a cost-effective manner of therapy to patients.

OSTEOPOROSIS—Patient Reported Outcomes

**POS12**

PATIENT ADHERENCE WITH BISPHOSPHONATES AT 6 MONTHS: A RETROSPECTIVE COHORT STUDY

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OBJECTIVES: To assess patient adherence with bisphosphonates at 6 months of therapy utilizing an integrated administrative, medical and pharmacy claims database. METHODS: A retrospective cohort study was conducted among 128,362 women, 45 years of age and older, with a new (index) prescription for risedronate (35 mg/week) or alendronate (35 mg/week or 70 mg/week) between May 1, 2002, and December 31, 2003. All eligible patients were required to be continuously enrolled for the six months preceding and the 12 months following the index date and to have filled at least 2 continuous bisphosphonate prescriptions, as defined below. The six-month history was used to assess baseline characteristics, including fracture history, gastrointestinal conditions, hospitalizations, and glucocorticoid use. Adherence with therapy was then assessed for the first 6 months of bisphosphonate treatment. Patient adherence was defined as continuous re-filling of the weekly bisphosphonate treatment with no gaps exceeding 90 days during the follow-up period. RESULTS: The average bisphosphonate user in this study was aged 64 years; 78% initiated with alendronate and 22% with risedronate. Almost 4% had a history of fragility fractures (vertebral and/or non-vertebral) and 18% used oral glucocorticoids during the study period. At 6 months, 71% of bisphosphonate patients were adherent with therapy. An additional 22% discontinued, and subsequently resumed treatment after a mean treatment gap of 164 days. The following patient characteristics were correlated with a higher likelihood of therapy discontinuation: younger age, GI event after the index date, oral glucocorticoid use, and history of GI events, hospitalization, or fracture. CONCLUSIONS: This study demonstrates that seven in ten new bisphosphonate users remained on therapy at six months after treatment initiation. An additional two in ten patients resumed therapy after a mean treatment gap of five months. Overall, the majority of patients who initiated bisphosphonates were adherent after the first six months of treatment.

COMPLIANCE, DISCONTINUATION, AND SWITCHING OF OSTEOPOROSIS TREATMENT IN LOUISIANA MEDICAID POST-MENOPAUSAL WOMEN

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OBJECTIVES: To determine the rates of compliance; discontinuation; and switching of treatment with bisphosphonates, calcitonin, estrogens, parathyroid hormones, and raloxifene in Louisiana Medicaid post-menopausal women with diagnosis of osteoporosis and/or fracture. METHODS: Medical and pharmacy administrative claims data obtained from the Louisiana Department of Health and Hospitals were used for the study. The data contain paid claims for all Louisiana Medicaid recipients. Women age 50 and older diagnosed with osteoporosis and/or a fracture between July 1, 2002 and June 30, 2003 and continuously eligible 12 months prior through 24 months after their initial diagnosis were included in the study. Women with Medicare eligibility and those who received a prescription for osteoporosis and/or fracture 12 months prior were excluded. There were 1772 women who met the inclusion criteria. Claims data on these women were studied for two years from the date of their initial diagnosis. Women were considered compliant if the difference between their fill dates did not exceed 45 days. Women were considered discontinuers if they filled prescriptions only once in the two-year study period. Recipients were considered switchers if they switched from one drug to another, single to combination therapy, or combination to single therapy. RESULTS: Of the 1772 in the study group, 28% (500) received treatment, and of those, 57% were on a single drug, 22% on multiple drugs, and 21% discontinued treatment. The compli-