fracture risk for any fractures (AF), hip fractures (HF), vertebral fractures (VF), and non-vertebral fractures (NVF) separately, controlling for patient characteristics, insurance type, health care provider type, Charlson comorbidity index score, pre-index bone mineral density test, medication use and fracture history. **RESULTS:** Among the 3587 new TPTD users (mean age = 68.9 years; 91% female), adjusted incidence rates per 1000 patient years by fracture type (for persistence groups 1-6 months, 7-12 months, 13-18 months, 19-24 months) were: AF 103.09, 78.17, 72.68, 59.31; HF 6.87, 6.11, 4.30, 3.76; VF 26.29, 15.62, 11.55, 9.57; and NVF 70.90, 60.29, 60.24, 48.60. Fracture risk was significantly higher for persistence ≤6 months versus 19-24 months in all fracture models (OR=1.75 [AF], 2.67 [VF], and 1.41 [NVF]), except for HF (OR=1.95, p=0.078). Other significant risk factors included: older age (HF (OR=1.06, p=0.001) and VF (OR=1.04, p<0.001); previous anticonvulsant use (VF (OR=2.20, p<0.001), VF (OR=1.79, p<0.001)); previous immunosuppressant use (NVF (OR=1.54, p=0.013)); and pre-index fracture (AF (OR=1.37, p=0.005); NVF (OR=1.71, p<0.001)). **CONCLUSIONS:** Among US teriparatide patients, fracture incidence rates and fracture risk decreased as persistence increased for any clinical, vertebral, and non-vertebral fractures.

PMS5
PERSISTENCE WITH BISPHOSPHONATE THERAPY AND RISK OF HIP FRACTURE

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OBJECTIVES: to investigate the association between persistence with bisphosphonates therapy and the risk of hip fracture in a large cohort of adult women. **METHODS:** A retrospective cohort study using the database of Maccabi Healthcare Services, a 2-million member health maintenance organization in Israel. Persistence with bisphosphonates therapy was assessed by calculating the proportion of days covered (PDC). Patients included women aged 60 years or above initiating an oral bisphosphonates for osteoporosis between 2002 and 207. **RESULTS:** The incidence density rate of hip fractures during study follow-up period was 4 per 1000 person-years among the 8741 patients meeting study eligibility criteria. We found an inverse relation between persistence with bisphosphonates and hip fracture rate. Women covered with bisphosphonates for at least 75% of the time, had a hazard ration of 0.65 (95% confidence interval: 0.05-2.3) for hip fracture, compared to women covered with bisphosphonates for less than 25% of the time.. **CONCLUSIONS:** We found a suggestive negative relation between persistence with osteoporosis treatment and long term risk of hip fracture.

PMS6
THE PREVALENCE OF BONE FRACTURES IN OSTEOPOROSIS PATIENTS USING PROTON PUMP INHIBITORS

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OBJECTIVES: To estimate the prevalence and risk factors associated with fracture events in osteoporosis patients using proton pump inhibitor (PPI) therapy. **METHODS:** This analysis utilized data from the 2001-2008 Medical Expenditure Panel Surveys. Patients were identified if they were ≥50 years old, reported having osteoporosis (ICD-9-CM code of 733 or clinical classification of 206). The identified patients were classified into two groups depending on use of PPI. Medications considered were osteoporosis medications (e.g., bisphosphanates, hormone therapy, and raloxifene) and corticosteroids (excluding topical formulations). Fractures were identified based on ICD-9-CM codes of 804-829. Prevalence of fractures was compared between two groups. Factors influencing risk of fracture were identified through multivariable logistic regression after adjusting for patient characteristics, use of medications, and comorbidities such as heart disease, hypertension, nephropathy, depression, arthritis, epilepsy, diabetes, stroke, and cancer. **RESULTS:** We identified 4,979 patients with osteoporosis, of which 970 were using PPIs and 4,009 patients were not. The majority of the study patients were composed of females (91.4%) and non-smokers (89.6%). Corticosteroids were used in 20.7% of the patients and osteoporosis medications in 61.8% of patients. Bisphosphonates were the most commonly used agent in 49.2% of patients. Fractures were more prevalent in patients with PPI compared to patients without (11.3% vs. 7.5%; p=.003). Patients with PPI had a higher likelihood of having a fracture than patients without PPI (OR=1.53; p=.009). Other factors increasing risk of fractures were increasing age, heart disease, hypertension, and stroke. **CONCLUSIONS:** PPI use in osteoporosis patients increased the prevalence and risk of fractures. The results add to the growing body of evidence supporting increased risk of fractures in osteoporosis patients treated with a PPI. Additional research is recommended to investigate incidence of fracture caused by use of PPI in osteoporosis patients.

PMS7
THE IMPACT OF RHEUMATOID ARTHRITIS ON CARDIOVASCULAR MORBIDITY IN A HIGH RISK MEDICAID POPULATION

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OBJECTIVES: Patients with Rheumatoid Arthritis (RA) experience excess cardiovascular (CVD) morbidity and mortality. RA puts patients at twice the risk for myocardial infarction (MI) and stroke, younger patients being at higher risk. We investigate the impact of RA on CVD morbidity in a high risk Medicaid managed care population, largely female, African American, young adults, with baseline risk factors of hypertension and diabetes. **METHODS:** Maryland Medicaid claims data for patients with diabetes and/or hypertension, from January 2001-June 2006 were analyzed. Using exploratory analysis, we assessed the prevalence of RA and of CVD, as well as the prevalence of CVD within the RA population. Logistic regression analysis was used to explore the joint impact of RA, demographics, hypertension and diabetes on the likelihood of having a CVD event. **RESULTS:** The prevalence RA was 2.2% among patients at high-risk for CVD. Patients with RA were significantly older (mean age 49 vs. 34, p<0.0001), largely females (80% vs. 64%, p<0.0001) and non-African American (55% vs. 59%, p<0.0001) than those without RA. CVD prevalence was significantly higher in the RA population among compared to the general population (37% vs. 17%). After adjusting for demographics (age, gender, race) and risk factors (hypertension, diabetes), RA significantly increased the likelihood of CVD events (OR: 1.539, 95% CI: 1.416-1.674). In the adjusted model, hypertension (OR: 3.227) and diabetes (OR: 2.035) also independently increased the likelihood of CVD events. **CONCLUSIONS:** We found that RA independently increased cardiovascular risk by 1.5 times, in a Medicaid population with high baseline risk.

Muscular-Skeletal Disorders – Cost Studies

PMS8
THE BUDGET IMPACT OF LOWER GPA ADHERENCE IN PATIENTS WITH CHRONIC NON-STEROIDAL AND COX-2 INHIBITOR USE

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OBJECTIVES: To evaluate the budget impact of adherence to concomitant gastroprotective (GPA) therapy among patients using non-selective non-steroidals (ns-NSAIDs) or COX-2 inhibitors (COXIBs) at high risk for NSAID-induced upper gastrointestinal (UGI) complications. Clinical guidelines recommend that patients at high risk for UGI complications using ns-NSAIDs or COXIBs for arthritis pain management should concomitantly take GPA; however, GPA use and adherence are often low and associated with an increase in UGI events. **METHODS:** The impact of GPA adherence was assessed using a budget impact model with a one-year time horizon. UGI risk is a function of patient (age, previous ulcer history, concomitant low dose aspirin use) and treatment (ns-NSAID or COXIB, concomitant GPA use and adherence) characteristics. A mean GPA adherence rate of 51% was derived from the MarketScan Research Databases, using a sample of patients ≥50 years old with at least 2 prescriptions for ns-NSAIDs or COXIBs from 2001 through 2007 (N=738,248). Treatment-specific UGI event rates and costs were taken from the literature for dyspepsia, symptomatic ulcers and UGI bleeding. Sensitivity analysis was performed around the model inputs. **RESULTS:** In the base case analysis, NSAID-induced UGI events are responsible for $9,328,857 in direct medical costs annually in a hypothetical health plan with 100,000 members, where 21.6% of patients are on chronic ns-NSAID or COXIB therapy for arthritis and 82% of these patients are at increased risk of a UGI event due to age, previous ulcer history, or both. Increasing GPA adherence to 75% decreases NSAID-induced UGI event costs by $547,074, or -$0.45 per-member-per-month (PMPM) in a 100,000-member health plan; reducing GPA adherence to 25% increases these costs by $737,834 ($0.62 PMPM). **CONCLUSIONS:** GPA adherence has a strong impact on the cost associated with NSAID-induced UGI events. This finding was consistent throughout sensitivity analyses varying risk factors and costs of UGI events.

PMS9
COST CONSEQUENCE OF COLCHICINE APPROVAL IN THE MEDICAID PROGRAMS IN THE UNITED STATES

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OBJECTIVES: In 2009, the price of colchicine, an anti-gout agent that is also used to treat familial Mediterranean fever, skyrocketed, surprising physicians, patients, and payers. Objectives are to (1) determine the cost consequence to the U.S. Medicaid programs of this price rise and (2) explain why it occurred. **METHODS:** Medicaid drug utilization data were used to identify all colchicine products from 2000 quarter 1 through 2010 quarter 1. The first five digits of each product's NDC code were used to identify the manufacturer. A retrospective, descriptive analysis was conducted to determine the trends of colchicine utilization (prescriptions and tablets), spending (in 2009 US$), and reimbursement per tablet as a proxy for price. **RESULTS:** Colchicine utilization by Medicaid enrollees increased from 2000 to 2005, reaching 417,000 prescriptions (18 million tablets, $4.5 million). Following Medicare Part D and the movement of dual eligibles from Medicaid to Medicare, Medicaid colchicine utilization dropped 72% in terms of number of prescriptions. The average spending for colchicine not marketed by URL Pharma increased from $0.27 per tablet in 2000–2009 to $0.35 in the first quarter of 2010 (30% increase), while the Colcrys® price (URL's branded drug) rose from $0.29 in 2000–2008 to $3.79 in 2009–2010 (12-fold increase). It is estimated that an additional $21 million could be added to Medicaid spending if all patients on single-ingredient colchicine treatment switched to Colcrys®. **CONCLUSIONS:** The rise in price is an unintended consequence of a drug-safety initiative launched in June 2006 by the U.S. Food and Drug Administration (FDA) to phase out unapproved drugs, including single-ingredient oral colchicines. Meanwhile, the FDA granted approval to URL Pharma in July 2009, inadvertently creating a monopoly in the anti-gout market. If additional drugs are not approved to stimulate competition, a substantial financial burden will be placed on patients and taxpayers.

PMS11
APPLYING THE STRATIFIED PROPENSITY SCORE MATCHING METHOD WHEN ESTIMATING HEALTH CARE COSTS OF RHEUMATOID ARTHRITIS PATIENTS

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OBJECTIVES: To apply the stratified propensity score matching technique to estimate the healthcare costs of rheumatoid arthritis (RA) patients. **METHODS:** Con-