Drugs are one of the most common chronic diseases among the elderly. Approximately 50% of all elderly in the United States suffer from the disease. Drug therapy plays an important role in decreasing morbidity and mortality associated with the disease. The objectives of this study are to evaluate the effect of prescription drug insurance coverage on prescription drug use, and health among the elderly patients with RA. MARKED OBJECTIVES: Estimates are obtained using multivariate regression analysis to assess a fixed-effect (within person) research design that controls for the unmeasured person-specific effects. Analyses were based on the Medicare Current Beneficiary Survey for years 1992–2004. RESULTS: Estimates show that prescription drug coverage is associated with a 2%–15% increase in utilization of prescription drugs depending on the type and generosity of the coverage. In addition, the effect of drug coverage on drug use differed depending on the type of drugs, and other co-morbid conditions. For example, among arthritic patients, drug coverage increased use of diabetic drugs by 20%, whereas it had relatively low impact on use of cold medications (2%). We found no evidence that drug coverage improved hospitalization and general health status. CONCLUSIONS: Drug coverage plays a crucial role on the use of essential medications among elderly patients with arthritis. The results of the analysis also suggest the importance of controlling for selection bias. Our estimates on drug coverage were reduced markedly when we accounted for selection into plans.

PRELIMINARY ANALYSIS OF BIOLOGICS MEDICATION-TAKING BEHAVIOR AMONG RHEUMATOID ARTHRITIS PATIENTS Miller K1, Conner TM2, Payne J3, Wadsley CJ

OBJECTIVES: Tumor necrosis factor blocker (TNFβ) therapy is an expensive alternative for rheumatoid arthritis (RA) sufferers when other treatments have failed. The purpose of this analysis was to compare two products, adalimumab and etanercept, in terms of adherence, persistence, and appropriateness of use. METHODS: Retrospective claims data between October 2005-September 2008 were extracted from an organization with ~30,000 individuals. Inclusion criteria were primary diagnosis of RA, new start of TNFβ therapy defined as one in preceding six months, and continuous enrollment at least 6 months pre- and 12 months post-TNFβ initiation. A refill grace period was defined as 15 days supply for prescriptions <30 days or 1/3 days supply for prescriptions >30 days. RESULTS: A total of 334 individuals met criteria, and of those 57 received study medication; 12 were excluded for receiving both medications during the 12-month period, leaving 43 individuals for analysis (adalimumab n = 24; etanercept n = 19). No statistical differences (p > 0.05) were found in adherence or persistence by drug, age, or gender. Mean medication possession ratio (MPR) over 12 months was 0.61 (± 0.35) and mean annual days supply was 228 (± 116). After the first month, 30% exceeded the refill grace period, and by month 6, this increased to 80%. Thirty-nine (91%) received other prescription RA medication in the 6 months prior to initiating TNFβ therapy. CONCLUSIONS: While preliminary, the results from this analysis indicate that gaps in adalimumab and etanercept therapy occur early in care, thereby impacting adherence and persistence rates. Of the 43 individuals in this analysis, received approximately seven total months of therapy over a year, gaps between refills may impact effectiveness. Efforts to improve adherence and persistence of RA therapy are needed to maximize patient outcomes. Most patients had received alternative therapy before initiating TNFβ treatment, and none received concomitant TNFβ therapy, which aligns with current guidelines.

RETROSPECTIVE ANALYSIS OF INFlixIMAB DOSING AND INFUSION PATTERNS IN PATIENTS WITH RHEUMATOID ARTHRITIS IN A COMMERCIAL INSURANCE POPULATION Carter C1, Jiang F1, Changkulkar A1, McKenzie K1, Pech CT

OBJECTIVES: To determine the mean induction and maintenance infliximab (IFX) dose per infusion and infusion patterns in patients with rheumatoid arthritis (RA) enrolled in commercial health plans. METHODS: Medical/pharmacy claims [January 1, 2000 and December 31, 2006] were obtained from a national commercial benchmark database. Inclusion criteria were patient age >18, <2 RA diagnosis codes, no medical/pharmacy claims of biologic use during 6 months prior to IFX index date, and >12 months of follow-up after index date. Patients were excluded if they had a diagnosis of ankylosing spondylitis, psoriatic arthritis, psoriasis, Crohn’s disease, or ulcerative colitis. Infused doses were calculated by dividing the plan’s allowed amount per IFX claim (HCPCS code J1745) by the acquisition cost for a 100 mg vial during the year of payment. Results were reported for induction (weeks 0–8), maintenance (weeks 9–52), and one-year time periods (weeks 0–52). Infusion patterns included the mean days between each infusion during the first year of treatment. RESULTS: A total of 457 RA patients were identified (mean age = 53 years; 74% female). A total of 625 evaluable patients with no missing infusion data were included in the dosing analysis. The mean IFX dose per infusion was 397, 455, and 437 mg for induction, maintenance, and one-year periods, respectively. A total of 98.5% of IFX-treated patients received 58 infusions during first year. Mean time between IFX infusions was as follows: 1st and 2nd = 19 days; 2nd and 3rd = 29 days; 3rd and 4th = 56 days; 4th and 5th = 57 days; 5th and 6th = 55 days; 6th and 7th = 52 days; 7th and 8th = 53 days. CONCLUSIONS: This observational study reported IFX infusion patterns consistent with prescribing information which is useful for stakeholders’ understanding of real-world IFX utilization.