information for patients over age 65 with at least one diagnosis for Crohn's disease. Patients who initiated therapy with tumor necrosis factor (TNF) and non-TNF agents were identified. We examined the treatment patterns such as switching to another TNF, switching to a non-TNF, and discontinuation for two years after the initiation of TNF biologics. We created a data visualization tool help visualize how patients change their treatment patterns after first and second switches. **RESULTS:** A total of 3287 Crohn's disease patients initiated therapy with a TNF medication. 4.23% of these patients switched to another TNF, 1.00% switched to a non-TNF, 60.42% discontinued therapy and 34.35% continued their initial therapy. Among patients who switched to another TNF, 48.20% continued the switched therapy, 41.01% discontinued, 10.07% switched to another TNF, and 0.72% switched to a non-TNF. A total of 2,140 Crohn's disease patients initiated their therapy with a non-TNF, of which 0.89% switched to an anti-TNF, 0.37% switched to a TNF, 97.38% discontinued therapy, and 1.36% continued their initial therapy. **CONCLUSIONS:** When analyzing subsequent years and switches, treatment patterns can be difficult to capture. Data visualization tools can help present these complicated flows effectively for a diverse health outcomes research audience.

PGI7

FACTORS ASSOCIATED WITH BREAKTHROUGH SYMPTOMS AND OTC USE AMONG GERD PATIENTS IN A REAL-WORLD SETTING

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OBJECTIVES: Some patients on prescription proton pump inhibitors (PPIs) continue to experience breakthrough gastroesophageal reflux disease (GERD) symptoms and use supplemental over the counter (OTC) medications. This study aimed to identify factors associated with experience of breakthrough symptoms and OTC use among prescription PPI users. **METHODS:** A patient/physician survey and chart review was conducted in GERD patients currently taking a prescription PPI. Patient [age, gender, race, body mass index (BMI)], GERD (current severity, years since diagnosis), and PPI (directions to take 30-60 minutes prior to eating, daily dose, dosing frequency) characteristics in addition to self-reported patient behaviors [actually taking PPIs 30-60 minutes prior to eating; count of missed doses, and doses taken, but not taken according to directions out of last 10) were considered for model selection for OTC use and breakthrough symptoms. **RESULTS:** A total of 501 patients with mean age 51 years, 37% male, 81% Caucasian, 38% with college degree, and 16% erosive versus 56% nonerosive GERD (28% undocumented) were enrolled in the study. Overall, 40% of patients reported taking an OTC medication in addition to their PPI. While experiencing breakthrough symptoms was the only significant predictor of OTC use (OR 5.53, $p<0.001$), nonadherence to directions was associated with a 14% increase in likelihood of OTC use ($p=0.07$). Seventy-three percent of patients reported experiencing ≥1 breakthrough symptom. Overweight (OR/CI: 0.50/0.29-0.86) and obese (OR/CI: 0.57/ 0.34-0.96) patients were less likely to report breakthrough symptoms compared to normal/underweight patients, while a 1 unit increase in missed doses was associated with a 41% increased likelihood of breakthrough symptoms. Nonadherence to directions and time since diagnosis were significant predictors in bivariate comparisons, but lost significance in logistic models. **CONCLUSIONS:** This study suggests real-world patient-reported medication adherence may be associated with fewer breakthrough symptoms. This highlights the importance and the impact of medication-taking behavior on patient outcomes.

PGI8

PREVALENCE OF GASTROPROTECTIVE AGENT USE AMONG ADULTS WITH ARTHRITIS TAKING NSAIDS

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OBJECTIVES: Published evidence on the prevalence of non-steroidal anti-inflammatory drug (NSAID) and gastroprotective agent (GPA) use in the United States (US) is lacking. We examined the prevalence of GPA use among arthritis patients using NSAIDs. **METHODS:** A web-based community panel of men and women age ≥40 in the United States with self-reported arthritis was invited via e-mail to participate in a web-based survey. Panelists interested in participating provided consent and completed the survey. Only participants who reported using an NSAID in the last 30 days were eligible. Questions regarding NSAID and GPA use (medication/dosage/frequency/duration of use) were asked, as were comorbid conditions, gastrointestinal history, and other risk factors. **RESULTS:** Two thousand met the inclusion criteria and completed the survey (54% response rate). The majority of participants had osteoarthritis (n=1525, 76%), 354 (18%) had rheumatoid arthritis, and 121 (6%) had both. Mean age was 62.0 years; 64% were female; 83% were Caucasian; 25% worked full-time and 39% were retired. The majority (92%) had health insurance, with half covered by Medicare/Medicaid. Mean time with arthritis was 13.0 years; 47% and 19% experienced arthritis symptoms "daily" and "almost always", respectively. The most frequently-used NSAIDs were ibuprofen (54%), aspirin (35%) and naproxen (33%). Nearly 43% reported using a GPA with 86% (n=731) reporting use more often than three times per month. The most frequently-used GPAs were omeprazole (48%), ranitidine (17%) and esomeprazole (17%). Of daily NSAID users, 42% reported taking a GPA. Of non-GPA users, 12% reported a history of gastroesophageal reflux disease, 9% reported a history of ulcers, and 3% reported a history of gastrointestinal bleeding. **CONCLUSIONS:** This is the first study in the United States to document NSAID and GPA use. Importantly, only 42% of daily NSAID users take GPAs on a routine basis, leaving the majority of NSAID users at risk for gastrointestinal complications.

GASTROINTESTINAL DISORDERS – Cost Studies

PGI9

IMPACT OF SWITCHING PATIENTS FROM TWICE DAILY PROTON PUMP INHIBITORS TO ONCE DAILY DEXLANSOPRAZOLE

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OBJECTIVES: Dexlansoprazole, a once-daily proton pump inhibitor (PPI) in a Dual Delayed Release formulation has demonstrated efficacy in a phase 3b study in maintaining symptom control among gastroesophageal reflux disease (GERD) patients previously controlled on twice daily (BID) PPIs. A pharmacy budget impact model (BIM) from a US payer perspective was developed to assess the impact of switching GERD patients from BID PPIs to QD dexlansoprazole over a three-year period. **METHODS:** An excel-based BIM on a hypothetical plan of 1 million members was developed. Based on published literature, 28% of members had GERD, among which 57% were prescribed PPI therapy. Among these, 74%, 23% and 3% of patients were on QD, BID and as needed PPI therapy, respectively. The proportion of patients switching from BID PPI to QD dexlansoprazole and efficacy of dexlansoprazole in achieving symptom control among those patients was assumed to range from 84%-88% based on the results of the phase 3b trial. Market share of PPIs and drug costs were derived using internally available data. The market share of dexlansoprazole in year 1 was 4.23% and 8.44% pre- and post-switching, respectively. Model outcomes for years 1, 2 and 3 included: net total and per member per month (PMPM) pharmacy savings. **RESULTS:** The net pharmacy saving from switching to QD dexlansoprazole was estimated to be $7.9, $6.4 & $5.9 million for years 1, 2, & 3, respectively. PMPM pharmacy cost savings ranged from $0.66 in year 1 to $0.50 in year 3. The model results were most sensitive to cost of esomeprazole, proportion of GERD patients on PPI, prevalence of the disease, and proportion of patients switching from BID esomeprazole to QD dexlansoprazole. **CONCLUSIONS:** Based on the economic model, switching GERD patients from twice daily PPIs to QD dexlansoprazole may generate cost savings for US health plans.

PGI10

BUDGET IMPACT MODEL OF INFLIXIMAB FOR THE TREATMENT OF STEROID-DEPENDENT, STEROID-REFRACTORY AND ACUTE ULCERATIVE COLITIS IN THE REPUBLIC OF CROATIA

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OBJECTIVES: Highly effective biologic therapies offer new treatment options for patients suffering from moderate to severe ulcerative colitis (UC) who fail with conventional therapies. A budget impact model was constructed to estimate the costs of infliximab therapy for steroid-dependent, steroid-refractory and acute UC patients in the perspective of Croatia. **METHODS:** Using epidemiology data and medical treatment guidelines, a budget impact model was constructed to calculate the annual cost of infliximab according to the Croatian Guidelines for Treatment of UC. Moderate to severe UC patients that were diagnosed steroid-dependent, and acute or steroid-refractory patients that were non-responsive to IV corticosteroids were considered eligible for infliximab. Clinical trial data was applied to the guidelines to determine infliximab eligible patients. Sensitivity analysis was conducted to describe the ranges of costs by varying incidence, and dosing, considering drug wastage. **RESULTS:** According to the epidemiology data, 17.8% (411 patients) of all UC patients fall into these 3 categories of patients and should be treated with infliximab. Total costs of treating these patients according to drafted guidelines would be 33,822,366 kn (0.01% of GDP, 0.13% of total healthcare costs or 0.50% of total pharmaceutical sales for 2010), 19,329,407 kn (57.15%) of which is attributed to steroid-dependent patients, 7,893,089 kn (23.34%) to steroid-refractory and 6,599,870 kn (19.51%) to acute patients. New patients who require 8 infusions within the first year account for 11% of the cost, whereas maintenance therapy patients receiving 6 infusions explain the rest. Adjusting the dosage from 400mg/kg to 350mg/kg decreases the total cost by 12.50% (4,227,796 kn). A decreasing incidence of UC patients from 5.9 to 3.9 per 100,000 reduces the cost by 4.69% (1,586,046 kn). **CONCLUSIONS:** Given the significant improvement in quality of life of those with UC, infliximab should be considered where the budget allows it. Steroid-refractory UC patients accounted for majority of the costs.

PGI11

ECONOMIC EVALUATION OF THE USE OF PEG-INTERFERON ALFA 2A IN THE TREATMENT OF PATIENTS WITH CHRONIC HEPATITIS C PUBLIC MEXICAN PERSPECTIVE

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OBJECTIVES: To evaluate the costs associated with the treatment of Hepatitis C Virus (HCV) treated with Peg-interferon Alpha-2a versus Peg-Interferon Alpha 2b. **METHODS:** For an initial distribution of patients it was used as an assumption that 60% of patients had chronic hepatitis and the other had compensated hepatitis. With this information was developed a Markov model with probabilities of disease evolution. The stages for this model from this were: liver cancer, ascites, refractory ascites, gastrointestinal bleeding, hepatic encephalopathy, liver transplantation and death. Costs are expressed in US dollars. **RESULTS:** The highest response rates were found with Peg-Interferon Alpha-2a for genotypes 1, 2 and 3 with a difference up to 15% compared to Peg-Interferon Alpha-2b. Due to a higher sustained virological response rate with Peg-Interferon Alpha-2a, the percentage of patients using this treatment had a lower probability of falling and developing chronic complications of the disease. Therefore, the cost of the disease treatment decreases. Also