PMS46
STATISTICAL DATA ANALYSIS OF DIAGNOSIS RELATED GROUP 244: BONE DISEASES AND SPECIFIC ARTHROPATHIES WITH COMPLICATIONS
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OBJECTIVES: To examine data for patients with DRG code 244 and compare that data to a control group of patients in order to identify statistically significant variations amongst the groups. METHODS: A data set was obtained from the 2006 Healthcare Cost and Utilization Project (HCUP) Kids' Inpatient Database (KID) consisting of 362 patient DRG code 244 patients with DRG code 244 and an additional 281 patients for the control group which was made up of patients with orthopaedie, mental health, and substance abuse DRG codes other than 244. These data were analyzed using SAS Enterprise Guide. RESULTS: Analysis of frequency counts discovered a significantly lower percentage of complications in the study group (p < 0.0001) when compared with the control group’s 66%. African Americans in particular showed the greatest increase in patients for the study group with 36% of the study group consisting of African Americans in comparison to just 13% of the control group. Additionally, females represented a lower percentage in the study group. These observations were verified to be statistically significant via logistic regression. Additionally, linear regression models showed patients in the highest income quartile had significantly higher total charges than patients in lower income ranges. The wide range of ICD-9 diagnosis codes indicated that DRG 244 consists of a broad group of loosely related conditions. CONCLUSIONS: The statistical analysis verified that many bone related diseases are much more prevalent in patients with darker skin tone, and more melanin in their skin. This supports current knowledge that melanin blocks UV radiation and reduces the body’s ability to make Vitamin D. The findings related to total charges warrant further research to determine if patients are receiving the proper care for their illness and also not receiving unnecessary tests and procedures.

PMS47
UNDERLYING BONE MEASUREMENTS AND PHOSPHONATE TREATMENT IN WOMAN OVER AGE 50 WITH OSTEOPOROSIS IN A NATIONALREPRESENTATIVE EMR DATABASE
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OBJECTIVES: To assess the extent of reporting of bone mineral density (BMD) measurements and pharmacologic treatment among women over age 50 with osteoporosis in a nationally representative Electronic Medical Record (EMR) database. The diagnosis of osteoporosis is based on a history of a prior fragility fracture or a low BMD, defined as a T-score ≤−2.5 on a dual energy x-ray absorptiometry (DEXA) test. DEXA is the standard measurement for bone density, which is usually calculated as the number of standard deviations below (or above) the mean for young healthy women. Bisphosphonates are first-line pharmacologic therapy for both women and men with T-scores diagnostic of osteoporosis. METHODS: The EMR database reviewed was the Medical Quality Improvement Consortium (MQIC) database from GE. This database contains EMR data collected from over 11,000 ambulatory providers in the United States and includes over 12 million patients as of April, 2009. Records were reviewed for all women over age 50 for the presence of a BMD test result and bisphosphonate prescriptions. RESULTS: Of 2,382,357 women over age 50, only 16,550 had a BMD test documented in their medical records. Among the women with a T-score diagnostic of osteoporosis, only 38% had a bisphosphonate prescription on record. Furthermore, nearly 100% of women with no BMD result on record were also prescribed bisphosphonates. CONCLUSIONS: The extent of under-reporting of BMD results in the outpatient records of these patients is difficult to assess. Of those patients with a BMD test result available indicating osteoporosis, surprisingly few (38%) are receiving first-line therapy with bisphosphonates. The possibility of underuse of BMD testing, and under treatment of osteoporosis, requires further investigation. In addition, the available data suggest many providers may be prescribing bisphosphonates in the absence of a documented BMD measurement.

PMS48
HYALURONIC ACID MANAGEMENT OF KNEE OSTEOARTHRITIS: IMPACT ON PAIN
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OBJECTIVES: To observe, under actual conditions of use, the pain effect obtained, in the context of management of knee osteoarthritis, using hyaluronic acid (injectable route). METHODS: Pragmatic, longitudinal and prospective follow up by rheumatologists in the context of their daily professional activities; the investigator does not change the prescription or management habits. RESULTS: A total of 191 patients were treated with hyaluronic acid. The average age was 64.72 years (± 7.34). Average pain scores of daily living (ADL) was measured by means of an analogue visual scale (VAS). It is 50.12 ± 19.32 at inclusion. At 6 months, this same average pain measured under the same conditions is 36.95. At 6 months, this same average pain measured under the same conditions is 36.95 ± 25.10. A third measurement at 12 months situates it at 38.10 ± 23.19. Pain during ADL is significantly reduced between inclusion and month 6 (p = 0.0023) and between inclusion and month 12 (p = 0.0012). With regard to pain measured at rest, it was also measured at inclusion, at 6 and 12 months, by means of VAS. There is a significant reduction in pain at rest between inclusion and 6 months (p = 0.0004) and the reduction between inclusion and month 12 is also significant (p = 0.0007). At inclusion, 6 and 12 months, the average pain observed is 33.48 ± 22.45, 19.90 ± 19.88 and 21.64 ± 22.94, respectively. CONCLUSIONS: Our study, which assesses the effect on pain obtained in the context of management of subjects with knee osteoarthritis, using hyaluronic acid, showed a reduction in pain during ADL. This reduction in pain, which is significant at 6 months, then perpetuated at 12 months, shows the relevance of the treatment.

PMS49
TRENDS IN THE PRESCRIBING OF CONVENTIONAL ANTI-RHEUMATIC THERAPY AMONG CANADIANS WITH RHEUMATOID ARTHRITIS: A RETROSPECTIVE COHORT STUDY
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OBJECTIVES: To assess trends in the prescribing of conventional treatments in the pre-biologics era among Canadians with rheumatoid arthritis (RA). METHODS: Two retrospective cohort studies were conducted using the Quebec provincial hospital discharge, and hospitalization databases (RA cohort #1) from January 1, 1980 to December 31, 1999. All patients with RA (ICD 9, code 714) who received at least one of the following drugs: methotrexate, hydroxychloroquine, chloroquine, sulphalazine, azathioprine, cyclophosphamide, cyclosporine, gold compounds; NSAIDs and/or corticosteroids were recorded. Cohort entry was defined as the date of the first anti-rheumatic prescription or a RA diagnosis. Study population was divided into each quinquennium. Patients with systemic lupus erythematosus were excluded. RESULTS: Of 16,392 patients with RA diagnosis, 82.6% were receiving a first DMARD prescription, 85.1% were receiving NSAIDs and 91.5% had corticosteroids during the study period. Most patients were adults (mean age 47.5 ± 15.6) and women (71%), DMARD users were older (59.5 ± 15.4 vs. 42.5 ± 15.4, p < 0.05) and more DMARD users had severe disease. From 1980 to 1989, the most prescribed DMARDs were gold compounds and minocycline. From 1990 to 1999 these were hydroxychloroquine and methotrexate. There was an increased frequency of DMARD use over time, from 12% in 1980 to 35.4% in 1999, and the time to DMARD initiation decreased from a mean of 1 year from presumed diagnosis in cohort 1 to 6 months in cohort 4. Most patients received DMARD as monotherapy. The use of DMARD combination was higher in cohort 4. Age, number of physician visits, heart failure and respiratory disease were associated with initiation of DMARD. CONCLUSIONS: During the two decades prior to the widespread use of biologic therapy, pharmacological management of adult rheumatoid arthritis in Canada had become more aggressive over time, with DMARDs being initiated earlier, and used increasingly in combination.

PMS50
EXAMINATION OF PATIENT CHARACTERISTICS, COMORBIDITIES AND CONCOMITANT MEDICATION USE IN TWO DISTINCT PATIENT POPULATIONS WITH RHEUMATOID ARTHRITIS (RA) USING A VALIDATED DATA ANALYSIS TOOL
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OBJECTIVES: To validate Rheumatoid Arthritis Outcomes Analyzer, a data analysis tool with a user-friendly interface incorporating pharmacy, medical claims, and member eligibility information, by using data from two distinct commercially insured patient populations. METHODS: The framework for the Rheumatoid Arthritis Outcomes Analyzer was developed based on published treatment guidelines and evidence-based literature. The analyzer facilitates identification of claims and eligibility files and to perform outcomes analyses. Analysis of patients ≥18 years of age who received at least one traditional (non-biologic) or biologic DMARD medication between January 2005 and December 2007 was conducted using HealthCore's Integrated Research Database (Cohort #1) and a comparator commercial dataset (Cohort #2). All patients had at least two RA diagnoses (ICD 9-CM 714.xx) more than two months apart. RESULTS: A total of 25856 vs. 14383 RA patients, 19331 (74.8%) vs. 10869 female (75.6%), were identified in Cohorts #1 vs. #2 with a mean age of 56 and 53 years respectively. The mean Charlson Comorbidity Index was 2.00 (SD = 1.63) vs. 2.06 (SD = 1.68). Prescription-level analyses revealed a total of 492195 vs. 243294 prescriptions for DMARDs with 348074 (70.7%) vs. 183639 (69.7%) traditional, 132448 (26.5%) vs. 77291 (29.4%) anti-TNF biologics and 11673 (2.4%) vs. 2364 (0.9%) non anti-TNF biologics. Concomitant corticosteroid use was identified in 1566 (0.6%) vs. 1091 (0.4%). No statistical differences were observed in terms of sex, age, race, or severity. CONCLUSIONS: This study demonstrates that the Rheumatoid Arthritis Outcomes Analyzer will allow payers and policy makers to better understand utilization and treatment patterns easily and quickly. Replication and validation of outputs from these tools are important to establish the precision of results.