

### REAL-WORLD TRENDS IN THE DIAGNOSIS AND ASSESSMENT OF RHEUMATOID ARTHRITIS (RA) AMONG RHEUMATOLOGISTS IN THE UNITED STATES

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**OBJECTIVES:** Diagnosis and management of rheumatoid arthritis (RA) have changed dramatically during the last several years, with the emergence of new guidelines, treatment options, and diagnostic tests. These involve varying degrees of complexity, and place demands on time and resources in routine clinical practice. The aim of this study was to assess current trends in RA diagnosis and assessment practices among US rheumatologists. **METHODS:** A sample of rheumatologists (N = 86) was surveyed online through an actively-managed Internet panel. Physicians were asked which diagnostic and disease severity measures they were aware of, and how often they used those measures—for both diagnosis and disease severity assessment. **RESULTS:** Physicians were mostly male (n = 62, 72.1%) and practiced in suburban areas (n = 44, 51.2%). The mean number of years in practice (post-residency) was 16.3, and the mean number of RA patients seen per month was 136.5. Physicians treated more RA patients with disease-modifying antirheumatic drugs (DMARDs) and biologics than with non-steroidal anti-inflammatory drugs (NSAIDs), COX-2 inhibitors, and corticosteroids. The most common diagnostic measure was anti-cyclic citrullinated peptide (anti-CCP) assays (97.7%). The most common disease assessments were swollen joint count (88.4%), tender joint count (87.2%), erythrocyte sedimentation rate (81.4%), C-reactive protein (77.9%), patient's assessment of physical function (75.6%), and patient's assessment of pain (74.4%). 54 physicians (62.7%) reported employing HRQOL questionnaires to assess patients' well-being, the Health Assessment Questionnaire (HAQ) being the most common (43.4%). **CONCLUSIONS:** Though relatively new, anti-CCP assays were employed by almost all physicians for RA diagnoses. While other serum markers were often used for diagnosis, they were less likely to be used for disease severity assessment versus physicians' and patients' assessments of symptoms and physical function. Although a majority of physicians used HRQOL measures, the opportunity exists for further adoption and standardization of such measures to facilitate better management of RA.

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### TWO YEAR MAINTENANCE INFLIXIMAB DOSING AND ADMINISTRATION PATTERNS IN PATIENTS WITH RHEUMATOID ARTHRITIS

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**OBJECTIVES:** Food and Drug Administration (FDA)-approved prescribing information recommends infliximab (IFX) administration at 0, 2, 6 and every 8 weeks with potential dose increase based on patient response for patients with RA. Minimal real world dosing data are available in this population. This study evaluated IFX dosing patterns in patients with rheumatoid arthritis (RA) treated in the outpatient hospital setting. **METHODS:** A retrospective longitudinal analysis using the Premier Perspective™ Database, a United States-based hospital database, was conducted. Inclusion criteria were an outpatient hospital discharge RA diagnosis (ICD-9 code 714.xx) between July 1, 2000 and December 31, 2008, IFX-naïve, and ≥3 IFX doses within ≤56 days of the index infusion. Exclusion criteria included patients with other selected inflammatory diseases. Treatment duration was defined as the time between the index and last IFX dose. The 4<sup>th</sup> through 15<sup>th</sup> IFX doses were analyzed representing the first 2 years of IFX maintenance treatment. **RESULTS:** A total of 2185 patients with RA receiving IFX were identified. Mean (SD) age was 60.3 (14.0) years; 79.0% were female. Mean (SD) treatment duration was 465 (459) days. Patients received a mean (SD) of 9.9 (8.8) IFX administrations. Mean (SD) index IFX dose was 338.2 (156.8) mg. Mean (SD) maintenance IFX dose was 387.7 (169.5) mg. During the initial two years of IFX administration, mean doses remained between 351 and 402 mg. During the initial two years of maintenance IFX administration, the highest observed mean dose represented a 15% increase compared to the first dose in the maintenance period and a 19% increase compared to index dose. Median time between administrations was 55 days for all maintenance infusions. **CONCLUSIONS:** The observed administration schedule was consistent with FDA-approved prescribing information. These data suggest the IFX dose in patients with RA remained relatively stable and provide stakeholders with an understanding of real world utilization.

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### DOSES AND INFUSION INTERVALS FOR INFLIXIMAB IN ANTI-TNF NAÏVE AND ANTI-TNF EXPERIENCED MANAGED CARE PATIENTS WITH RHEUMATOID ARTHRITIS

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**OBJECTIVES:** To describe infliximab (IFX) doses and infusion intervals in patients with RA who are anti-TNF naïve or anti-TNF experienced. **METHODS:** Medical and pharmacy claims for patients ≥18 years with ≥2 RA diagnosis codes received January 2000-December 2006 were included from a database of commercial health plans. Patients were excluded for selected inflammatory conditions. Anti-TNF naïve patients had no biologic use for 6 months prior to IFX. Anti-TNF experienced patients had adalimumab/etanercept prior to IFX. Infused doses were calculated by dividing the plan's allowed amount for each IFX claim by the acquisition cost for a 100 mg vial.

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Results were reported for induction (weeks 0–8), maintenance (weeks 9–52), and one-year (weeks 0–52) periods. Infusion intervals included mean time (days) between infusions during the first year of treatment. **RESULTS:** A total of 425 naïve (mean age = 53 years; 74% female) and 467 experienced (mean age = 49 years; 78% female) patients were evaluated. The mean IFX dose per infusion for naïve patients was lower during the induction vs. maintenance period (397 mg vs. 455 mg). The mean IFX dose per infusion for one year was 437 mg. Nearly all naïve patients (98.5%) received no more than 8 infusions in the first year. The mean times between IFX infusions for naïve patients were 19, 29, 56, 57, 55, 52, and 53 days. The mean IFX dose per infusion for experienced patients was lower during the induction vs. maintenance period (428 mg vs. 527 mg). The mean times between IFX infusions for experienced patients were 18, 28, 52, 50, 49, 48, and 41 days. **CONCLUSIONS:** This observational study reveals IFX utilization differences between anti-TNF naïve and experienced patients. Both naïve and experienced patients had infusion intervals within the recommended labeling.

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### DISPARITIES IN DISEASE MODIFYING ANTI-RHEUMATOID TREATMENT IN RHEUMATOID ARTHRITIS

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**OBJECTIVES:** The study objective was to quantify disparities in treatment choice of disease modifying anti-rheumatoid drugs (DMARD) used in Rheumatoid Arthritis. **METHODS:** Retrospective cohorts were constructed from California Medicaid paid insurance claims between January 1, 1998 to December 31, 2005. Non-overlapping monthly episodes were created from pharmacy claims for biologic (adalimumab and etanercept) and standard (methotrexate, leflunomide, hydroxychloroquine and sulfasalazine) DMARDs. Final sample included 59,788 observations on 7,025 patients. Relative risk ratios (RRR) of factors associated with DMARD treatment choice were assessed by a multinomial logit model with baseline as methotrexate treatment. Covariates included age, gender, race, location of beneficiary's county in either Northern or Southern California, population density in beneficiary's county, exclusive fee-for-service reimbursement used in beneficiary's county, Medicare and Medicaid dual eligibility, Elixhauser comorbidities index excluding Rheumatoid arthritis, and expenditures associated with pharmacy, out-patient, inpatient, inpatient-MD, LTC, and ER visits in the three months prior to treatment. Hypothesis testing was based on cluster robust standard errors to control intra-individual correlations. **RESULTS:** The mean age was 58.6 (± 14.5) years with a majority of females (84.0%) and Caucasians (37.6%). All the covariates were unbalanced between the six treatment groups. Statistically significant association was observed between choice of DMARD treatment and all the covariates. Females were less likely to use sulfasalazine (RRR = 0.64, p < 0.001), but more likely to use hydroxychloroquine (RRR = 1.45, p = 0.001). The elderly patients were less likely to receive biologics as compared to methotrexate. Patients residing in high population density locations were more likely to receive biologic DMARDs. Hispanics were the only race more likely to receive adalimumab (RRR = 1.92, p = 0.001), as compared to Caucasians. **CONCLUSIONS:** Results signify marked evidence of socio-demographic disparity in DMARD treatment for RA, and also highlights the variation in DMARD utilization based on geography, and type of reimbursement.

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### CONCORDANCE OF NONSTEROIDAL ANTI-INFLAMMATORY DRUG PRESCRIPTIONS WITH RECENT CLINICAL PRACTICE GUIDELINES IN QUEBEC, CANADA

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**OBJECTIVES:** Canadian guidelines for adequate nonsteroidal anti-inflammatory drug (NSAID) utilisation in patients with gastrointestinal (GI), cardiovascular (CV), congestive heart failure (CHF) and renal risk factors have been recently published. The objective is to describe concordance of NSAID utilisation with current clinical practice guidelines during two time-periods: April 1, 2005 to March 31, 2007 (post-rofecoxib withdrawal period) and April 1, 2002 to March 31, 2004 (pre-rofecoxib withdrawal period) in Quebec, Canada. **METHODS:** Data were obtained from the physician and medication claims databases of the Quebec Health Insurance Agency. All prescriptions for celecoxib or traditional NSAIDs (tNSAIDs) dispensed to patients 50 years of age or older were evaluated for concordance with the guidelines. Prescriptions were stratified by patient GI, CV, CHF and renal risk factors and four risk categories (low, moderate, high, and very high) were considered in each condition (GI, CV, CHF and renal). **RESULTS:** Of celecoxib prescriptions, 87.2% were adequate in the post-period and 86.5% in the pre-period; while adequate prescriptions for tNSAIDs were 72.6% in the post-period and 70.1% in the pre-period. Inadequate prescriptions for celecoxib in the post-period were those prescribed to the low GI risk group (10.1%) and to either the very high renal risk group (1.3%) or very high CHF risk group (1.7%). In the post-period, 4,457 (0.5%) prescriptions of celecoxib in the low or moderate GI risk groups received a gastroprotective agent (GPA) co-prescription that was not apparently adequate. Among celecoxib prescriptions requiring a GPA co-prescription as per recent guidelines, only 30.0% had one that was adequate. Similarly, only 30.0% of the tNSAID prescriptions dispensed to those with GI risks received a GPA co-prescription. **CONCLUSIONS:** About 87% of celecoxib and 70% of tNSAID pre-