**Collection of Anti-Rheumatic Medication Data From Both Patients and Rheumatologists Shows Strong Agreement in a Real World Clinical Cohort: The Ontario Best Practices Research Initiative (OBRI) a Rheumatoid Arthritis Cohort**

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**Background:** Collection of Anti-Rheumatic Medication (ARM) information from both patients and rheumatologists is considered a strength for Rheumatoid Arthritis (RA) registries and cohorts. However, it is important to assess the agreement between these two data sources. We aimed to examine the agreement of ARM use, their administration routes, and start and stop dates between self-reports and rheumatologist reports in the Ontario Best Practices Research Initiative (OBRI).

**Methods**: Adult Patients enrolled in the OBRI who consented to both patient interviews and rheumatologist evaluations were included. Patients in the OBRI are interviewed every six months, while rheumatologist assessments are conducted as per routine care. For this analysis, we included patients who enrolled in OBRI on or after Sep 1st 2010 and compared ARM use reports where rheumatologist visits and interviews occurred within 60 days of each other. ARM included conventional synthetic Disease-Modifying Antirheumatic Drugs (csDMARDs) and biologic DMARDs (bDMARDs). Cohens' Kappa statistics of agreement between the two data sources were calculated. Kappa values 0.61-0.80 were considered to represent good and 0.81-1.00 as very good agreement. To examine factors associated with agreement, a multivariate backward stepwise logistic regression was used to model the odds of agreement for ARM use. The agreement and absolute time gap (days) for starts and stops dates between self-reports and rheumatologist reports were also assessed and presented by median and interquartile range (IQR) in a subset analysis.

**Results:** 2,154 patients (78.7% female) were included with a mean (SD) age at OBRI enrolment of 57.8 (12.6) year. Mean (SD) disease parameters were: disease duration: 8.4 years (9.9); DAS28: 4.2 (1.6); physician global: 4.0 (2.5); and health assessment questionnaire (HAQ) disability Index: 1.1 (0.8). For csDMARDs use, the prevalence was 74.2% based on self-reports and 76.6% based on rheumatologist reports. The prevalence of bDMARDs use was approximately 20.0% based on both reports.

Overall agreement for ARM use between self-reports and rheumatologist reports was good. In the regression model, increased HAQ-pain index (OR: 0.66; 95% CI: 0.60-0.73) and physician global (OR: 0.95; 95% CI: 0.92-0.98) were significantly associated with the lower agreement. By contrast, post-secondary education (OR: 1.20; 95% CI: 1.02-1.40), and seeing an academic rheumatologist (OR: 1.47; 95% CI: 1.25-1.73) were significantly associated with the higher agreement between two data sources.

There was a good and very good agreement for reported administration route of bDMARDs and csDMARDs, respectively. The median absolute time gap (IQR) of start dates and stop dates for ARM use reported by two data sources was 7 days (1-27) and 19 days (5-48), respectively.

**Conclusion:** The results of this analysis suggest that ARM reports from the two data sources have strong agreement in the OBRI. This agreement is even better for patients who have post-secondary education and are being treated by an academic rheumatologist.

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