containing longitudinal health data for over 10000 patients with Rheumatoid Arthritis (RA) in Western Australia (WA). Accuracy of coding for RA is essential to validity of the datasets.

Objectives: Investigate the diagnostic accuracy of International Classification of Diseases (ICD) based discharge codes for RA at WA's largest tertiary hospital.

Methods: Medical records for RA patients randomly selected from the hospital discharge database with ICD 10 codes (M05.00–M06.99) from 2008–2020 were retrospectively reviewed. Rheumatologist reported diagnosis and ACR/EULAR classification were used as gold standards to determine positive predictive value (PPV) with 95% Confidence Interval (CI) for RA primary diagnostic codes.

Results: Medical chart review was completed for 87 patients (mean age 64.7 years, 67% female). Total of 80 (92%) patients had specialist confirmed RA diagnoses, while seven patients (8%) had alternate clinical diagnoses providing a PPV of 93.5% (95%CI: 89.9 to 95.86). Overall, 69 out of 87 patients (79.3%) fulfilled ACR/EULAR classification criteria based on RA primary diagnostic codes with a PPV of 80.5% (95%CI: 76.81 to 83.7). A combination of a diagnostic RA code with biological infusion codes in two or more codes increased the PPV to 97.9%.

Conclusion: Hospital discharge diagnostic codes in WA identify RA patients with a high degree of accuracy. Combining a primary diagnostic code for RA with biological infusion codes can further increase the PPV.

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Table 1. Accuracy measures of different algorithms for random sample of rheumatoid arthritis (RA) patients with one or more RA codes.

	Rheumatologist-reported diagnosis				ACR/EULAR classification criteria			
	SN	SP	PPV	NPV	SN	SP	PPV	NPV
Administrative data								
One or more RA primary codes	90%	28.5%	93.5%	7.6%	89.8%	16.6%	80.5%	30%
One or more RA biological infusion codes	25%	71.4%	90.9%	7.7%	20.3%	55.5%	63.6%	15.3%
Two or more RA codes including biological codes	60%	85.7%	97.9%	15.8%	56.5%	44.4%	79.6%	21%

RA=Rheumatoid Arthritis, SN=Sensitivity, SP=Specificity, PPV= Positive predictive value, NPV= Negative predictive value.

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AB0104

CONCORDANCE BETWEEN THE PHYSICIAN'S AND THE PATIENT'S ASSESSMENT OF DISEASE ACTIVITY IN RHEUMATOID ARTHRITIS: RESULTS OF THE AUTODAS-MEAC STUDY AT ONE YEAR

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Background: Involving the patients with rheumatoid arthritis (RA) in the assessment of their disease may increase their adherence to treatment, improve the

disease outcomes and facilitate the application of telehealth. We previously reported an excellent concordance between the Disease Activity Score (DAS-28) performed by physicians and patients at the baseline visit of this prospective study (1).

Objectives: To evaluate the persistence of the concordance between the physician and the patient's assessment of disease activity in RA using DAS-28 after one year.

Methods: At the baseline visit, patients with RA from 7 Middle Eastern Arab Countries (MEAC) were briefed about DAS-28 by their rheumatologist during a routine consultation and given smartphone access to a video in Arabic language explaining the performance of DAS-28. At 3, 6 and 12 months ($\pm$ 3 months), the patients were asked to self-report DAS-28, blinded to the physician's assessment. Concordance between the continuous DAS-28 at each visit was calculated using paired t-test numerically and the Bland-Altman method graphically. Agreement between physician- and patient-DAS categories (remission, low-, moderate- and high disease activity) was calculated at each visit using weighted kappa for category comparison. Weighted kappa of the different agreements were compared over time using their respective confidence intervals (CIs). Predictive factors of positive concordance between physician and patient-DAS were identified using binary logistic regression.

Results: The study included 428 patients over a period of three years (2018 to 2020). The mean age of participants was 49.8 years, 82.5% were females, 44.3% had a university degree and the mean disease duration was 11.4 years.

At baseline, the average patient-DAS was higher (4.06 ($\pm$ 1.52)) than the physician-DAS (3.97 ($\pm$ 1.52)). The mean difference was -0.09 [95%CI -0.14; -0.04] and most of the pairs were within the limit of agreement in the Bland-Altman graph, indicating a good concordance, particularly in cases of remission.

During the study follow-up, 299 patients consulted for visit 2 (69.9% of the total population), 232 for visit 3 (54.2%) and 199 for visit 4 (46.5%). The weighted kappa was 0.80 [95%CI 0.76;0.85] at visit 1 and 0.79 [95%CI 0.72;0.88] at visit 4 (Figure 1 showing kappa for DAS-28, CDAI and SDAI as well). A minor numerical decrease in kappa was observed over time; however, the CIs were overlapping over the four visits and the agreement was considered stable, remaining in the excellent range. At visit 4, a positive concordance between the physician- and the patient-DAS was associated with the profession (lower in blue collar, $p=0.001$), the educational level (higher in high school and university, $p=0.034$) and the baseline physician's DAS (higher in high disease activity, $p=0.46$).

Conclusion: The agreement between the DAS-28 performed by the physician and by the patient was excellent at baseline and remained stable over one year. A positive concordance was associated with the profession, the educational level and the level of disease activity. The present study can help the rheumatologist make informed decisions about the patients who may be suitable for a remote evaluation of their disease activity, that can be of particular interest in the context of the COVID-19 pandemic.

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Figure 1. Agreement between physicians and patients in disease activity scoring over time

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