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# HAQ-based utilities using EuroQol, Brazier's Short Form-6D, and VAS-QOL have different values and may not all discriminate across disease severity among a Portuguese cohort of rheumatoid arthritis patients

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### **Objectivos (Objectives):**

Decision making in Rheumatoid arthritis (RA) is often based on disease non-specific outcome measures such as improvement of Health-Related Quality of Life (HRQoL). It is therefore crucial that HRQoL should discriminate across RA severity. Several utility measures have been employed and validated, either direct (i.e. standard gamble) or indirect (i.e. EuroQol (EQ-5D), Brazier's Short Form-6D (SF-6D), and the VAS-QoL). These utility values are commonly mapped to the Health Assessment Questionnaire HAQ), as a means to discriminate across different RA disease states, but information on their performance has been limited. We evaluated whether the EuroQoL-5D (EQ-5D), Brazier's Short Form-6D (SF-6D), and the VAS-QOL would lead to similar utility values and would discriminate across disease severity among a Portuguese sample of RA patients.

#### Metodologia (Methodology):

A total of 713 patients from an ongoing biannual cohort of Portuguese RA patients since 2003, NDB-Portugal, were included in this study. Utility measures were assigned to each level of HAQ defined by previously determined cut off points, with a range of 0.50. Mean and standard deviation utility measures were calculated using the last observation per patient. Minimally important differences (using the distribution-based approach) of EQ-5F and SF-6D were considered.

#### **Resultados (Results):**

Patients had mean age of 58 years and mean disease duration of 15.6 years. 81% were female, and 61% had an educational level up to 4th grade. The mean utility as measured by the EuroQOL-5D was 0.51 (0-1, 0 is worst QoL), by SF-6D was 0.59 (0.3-1, 0.3 is worst), and by the VAS-QOL was 0.59 (0-1, 0 is worst). The average HAQ was 1.4 (0-3, 3 is worst disability). Table 1 shows the results of the utility measures per level of HAQ (by 0.50 interval ranges). Overall, utilities decreased as HAQ scores worsened.. For comparison purposes scores on the SF-6D (0.3-1.0) were converted to correspond with ratings on a 0-1 scale. The utilities per HAQ group using the converted SF-6D (0-1) did not differentiate across the different severity groups (HAQ 0-0.5 = 0.36 while HAQ 2.5-3 = 0.53) while EQ-5D



did differentiate more across groups (HAQ 0-0.5 = 0.83 while HAQ 2.5-3 = 0.08). VAS-Qol discriminated marginally (HAQ 0-0.5 = 0.74 while HAQ 2.5-3 = 0.45). This is also noted by looking at the differences in mean utility scores by HAQ categories, when compared to the reference MID for each scale (0.05 for EuroQoL and 0.03 for SD-6D)

## **Conclusões (Conclusions):**

In a cohort of Portuguese RA patients, utility scores using different validated methods varied significantly and not all utility measures seem to discriminate across disease severity. Decision making based only on HRQoL outcome measures may be subject to the utility measured used in the analysis.