OP0162-HPR ESTIMATING HEALTH-RELATED QUALITY OF LIFE FOR GOUT PATIENTS: A POST-HOC ANALYSIS OF UTILITIES FROM THE CLEAR TRIALS

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Background: Prior studies of health-related quality of life (HRQoL) in gout patients have shown significant disutilities associated with flares and tophi or serum uric acid (sUA).^{1,2} However, no prior study has explored the simultaneous impact of all three aspects of gout severity.

Objectives: Estimate the impact of gout flares, tophi, and sUA levels on HRQoL through post-hoc analysis of SF-36 data collected in two randomised, double-blind, placebo-controlled Phase 3 studies of urate lowering therapies in gout patients (CLEAR 1 and CLEAR 2).^{3,4}

Methods: Linear regression analysis was used to estimate the effects of patient and disease characteristics on SF-6D scores at month 6 and month 12. Multiple regression methods and out-of-sample testing were used to select the final model from covariates representing tophus burden, the number of flares during each six-month period, serum urate levels, baseline characteristics, and comorbidities. Predicted mean utility scores were calculated by evaluating the model at the mean values of the covariates (excluding location-specific covariates) in the pooled CLEAR 1 and CLEAR 2 intent-to-treat population.^{3,4}

Results: The final regression model (table 1) includes significant disutilities associated with the presence of tophi at screening (0.0418; SE: 0.0073; $p < 0.001$), the number of gout flares (0.0036 per flare; SE: 0.0005; $p < 0.001$), and median sUA on-treatment (0.0083 per mg/dL in excess of 6 mg/dL; SE: 0.0031; $p = 0.007$). The predicted mean utility scores for patients with zero flares and no tophi are 0.7718 for sUA < 6 mg/dL; 0.7552 for sUA 6 to < 8 mg/dL; 0.7386 for sUA 8 to < 10 mg/dL; and 0.7220 for sUA ≥ 10 mg/dL.

Abstract OP0162HPR – Table 1. Regression model of SF-6D utilities

Coefficient	Mean	SE	p value
Intercept	0.9182	0.0235	< 0.001
Region Europe	–	0.0092	< 0.001
Country New Zealand	0.0641		
Age [†]	0.0523	0.0200	0.009
	–	0.0003	0.003
Female	0.0009		
	–	0.0140	0.084
Black race	0.0242		
	–	0.0098	0.002
Body mass index [†]	0.0307		
	–	0.0005	< 0.001
Diabetes mellitus [†]	0.0020		
	–	0.0080	0.007
Hypertension [†]	0.0215		
	–	0.0067	0.010
Unemployed [†]	0.0172		
	–	0.0103	< 0.001
Disabled or retired due to illness [†]	0.0596		
	–	0.0121	< 0.001
Number of gout flares	0.1125		
	–	0.0005	< 0.001
Tophi present at screening	0.0036		
	–	0.0073	< 0.001
sUA [‡] per mg/dL in excess of 6 mg/dL	0.0418		
	–	0.0031	0.007
	0.0083		

R²: 0.1788; Adjusted R²: 0.1730; Residual standard error: 0.1217 on 1857 degrees of freedom. [†]Baseline characteristics. [‡]Median sUA on-treatment. Abbreviations: SE, standard error; SF-6D, Short form 6D questionnaire; sUA, serum uric acid.

Conclusions: The present analysis is unique in that it explored the simultaneous effects of flares, tophi, and sUA on HRQoL. The results indicate that high sUA levels are associated with significant disutility when controlling for the effects of flares, tophi, and other patient covariates. The clinical rationale is that uncontrolled sUA creates a state of chronic inflammation, contributing to underlying ill health in addition to its effects on flares, tophi, and comorbidities.

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OP0163-HPR DEVELOPMENT OF AN ONLINE SELF-MANAGEMENT PLATFORM FOR PEOPLE WITH RHEUMATIC AND MUSCULOSKELETAL CONDITIONS (MSKHUB.COM)

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Background: Patient information and education have been shown to improve pain and self-efficacy and increase overall quality of life in people with chronic musculoskeletal conditions (MSCs). Informed patients are better able to distinguish and manage symptoms, use treatments effectively, access services needed, manage work and cope better with the psychological impact of their conditions. However, there is a need to improve the access to high quality specialist health information for people with rheumatic and MSCs.

Objectives: This study aimed to test the usability and acceptability of an online self-management platform developed for people with rheumatic and MSCs to facilitate access to (i) valid and reliable health information (ii) evidence-based Patient Reported Outcome Measures (PROMs) (iii) advice on self-help, assistive technologies and rehabilitation (iv) and peer support via an online community.

Methods: Phase 1 involved the MSKHUB community development through service-user and health professionals group formation. People with Rheumatic and MSCs (n=15) and their family/carers (n=5) were purposively identified via social media networks and brought in as collaborators to form the MSKHUB Patient and Public Research Advisory Group (PRAG). A multi-disciplinary group of health professionals (n=7) were also identified through the academic and clinical networks to form the MSKHUB Health Professionals Reference Group (HPRG). A digital-lead specialising in health technologies and social media networks also supported the development of the online content and social networks. The digital lead, PRAG and HPRG had face-to-face and online meetings throughout the Phase 1 to inform the development of the MSKHUB through an iterative process. Following the Phase 1, 25 participants with rheumatic and MSCs used the website on their own devices at home and provided feedback by completing a user-experience survey assessing ease of use, helpfulness, and satisfaction with the MSKHUB.

Results: Participants completed the registration process and all PROMs on the MSKHUB site in an average of 1.5 hours (SD 30 min); some PROMs required more to complete due to their size and complexity but all PROMs were deemed as relevant and important to include. Participants' comments were addressed to improve the user-friendliness and ease of use. Participants reported high levels of usefulness and satisfaction in the user-experience survey (80% rated the usefulness as 9/10% and 92% rated satisfaction as 7/10 [1=not useful/not satisfied at all to 10=extremely useful/satisfied]). All participants indicated they would continue using the MSKHUB and recommend it to their families and/or friends with rheumatic and MSCs.

Conclusions: MSKHUB Development (Phase 1) involved the creation and testing the usability and acceptability of an online self-management platform for people with rheumatic and MSCs, which is an important step in developing appropriate and user-friendly online health education platforms. Our study suggested that community dwelling people with rheumatic and MSCs demonstrated a high degree of acceptance of the MSKHUB and could use it easily. The Phase 2 will involve a wider testing of the MSKHUB for general site activity, use and evaluation through a variety of embedded appraisal methods within the sit is currently underway.