



# ASAS Health Index

## Users Manual

### **Description of the ASAS Health Index:**

The ASAS Health Index has been developed under the auspices of the Assessment of SpondyloArthritis international Society (ASAS) to assess health in patients with all forms of spondyloarthritis (SpA) (specifically radiographic and non-radiographic axial SpA as well as peripheral SpA). The self-reprt questionnaire measures functioning and health across 17 aspects of health and 9 environmental factors (EF) in patients with SpA [1]. The items measure the concept of 'functioning, disability and health' – a concept which is conceptualized in the International Classification of Functioning, Disability and Health (ICF). The ICF, a model to systematically classify and describe functioning, disability and health in human beings, has been used by ASAS as a basis to define a core set of items that are typical and relevant for patients with ankylosing spondylitis (AS) [2]. Based on this ICF core set for AS an item pool has been developed containing various items which are linked to specific ICF categories. The performance of the item pool has been tested and analyzed with Rasch Analysis. The best performing items have been included in the final measure. The ASAS HI contains items addressing categories of pain, emotional functions, sleep, sexual function, mobility, self care, and community life. The EF Item Set contains items addressing categories of support/relationships, attitudes and health services. Validation was done in patients with radiographic and non-radiographic axial SpA as well as peripheral SpA.

### **Scoring:**

The ASAS HI is a linear composite measure with a dichotomous response option: "I agree" and "I do not agree". Each statement on the ASAS HI is given a score of 1 = I agree or 0 = I do not agree. The total sum of the ASAS HI ranges from 0-17, with a lower score indicating a better health status. Please note, that items No 7 and 8 are not applicable to all patients. For those patients who ticked the response "not applicable", the sum score is analysed based on n=16 or n=15, respectively (see also section "missing items"). The EF Item Set contains 9 dichotomous items with identical response option but without a sum score because of its multidimensional nature.

### **Missing data:**

A total score can be analysed if no more than 20% of the data (i.e. 3 items) are missing. The total score is calculated as follows for respondents with one to a maximum of three missing responses:

$$\text{sumscore} = \frac{x}{17 - m} \times 17$$

x = Item summation score

m = Number of missing items

Cases with more than three missing responses cannot be allocated a total score.

### **Translations and cross-cultural adaptations**

The ASAS HI and the EF Item Set has been translated into several languages (see ASAS homepage) [3]. Field testing with cognitive debriefing showed high face and content validity. Reliability and responsiveness has been shown in an international validation study worldwide. The ASAS HI can be used in clinical trials as a new composite index that captures relevant information on the health status of patients with SpA.

### **References:**

1. Kiltz, U., et al., Development of a health index in patients with ankylosing spondylitis (ASAS HI): final result of a global initiative based on the ICF guided by ASAS. *Ann Rheum Dis*, 2015;74:830-5.
2. Boonen, A., et al., ASAS/WHO ICF Core Sets for ankylosing spondylitis (AS): how to classify the impact of AS on functioning and health. *Ann Rheum Dis*, 2010;69:102-7.
3. Kiltz, U., et al., Measuring impairments of functioning and health in patients with axial spondyloarthritis by using the ASAS Health Index and the Environmental Item Set: translation and cross-cultural adaptation into 15 languages. *RMD Open* 2016;2:e000311.