WORK PRODUCTIVITY AND PRODUCTIVITY COSTS OF PATIENTS WITH ANKYLOSING SPONDYLITIS IN THE CZECH REPUBLIC

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OBJECTIVE
To assess the impact of ankylosing spondylitis (AS) on work productivity, to determine factors influencing work productivity and to estimate productivity costs incurred by AS in the Czech Republic.

METHODS
A questionnaire including Work Productivity and Activity Impairment Questionnaire (WPAI:AS), Health Assessment Questionnaire (HAQ), Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) was filled in by 230 patients with AS in productive age. The authors Reilly MC1 and Maksymowych WP2 in their studies proved that, the WPAI:AS questionnaire is a reliable, responsive, valid tool for assessing work productivity and calculating productivity costs. The interdependence among HAQ, BASDAI, disease duration, age and WPAI:AS scores were described by Spearman’s rank correlation coefficient. We have analyzed differences between work-active and all patients (work-active + work-disabled) groups, effect of biological treatment and education level on work productivity. In the Czech Republic, there are three levels of disability defined by law, 1st, 2nd and 3rd grades, these are described by productivity loss of at least 35%, 50% and 70%, respectively. Since work-inactive patients do not provide WPAI, we used mean values of percentage disability (disability coefficients) defined by law for those patients. Productivity costs were calculated by friction cost approach (FCA) using friction period of 130 work-days and an average monthly gross income as denominator, per one working day, it was €42.85. Overall WPAI score (or percentage production deterioration defined by law for work-inactive patients) was used as a multiplier reflecting productivity loss (resource used). In particular, we used this equation: total WPAI (or disability coefficient) × 42.85 × 130 = FCAp.

RESULTS
Ages of patients varied from 22 to 61, average WPAI:AS score was 4.06 (SD 2.13) and disease duration 18.01 years (95% CI 14.78-21.24). The biological treatment (yes vs no) and education level (primary vs secondary vs university) did not significantly influence work productivity. There were significant differences in disease duration (27.37 ± 10.74 years and 17.59 ± 9.51 years respectively, P < 0.001), age (50.00 ± 9.76 years and 49.31 ± 8.65 years respectively, P = 0.299), disease severity (HAQ 1.00 ± 0.59 and 1.00 ± 0.59 respectively, P > 0.05), and WPAI:AS scores (working and inactive patients). Table 1. Patients' characteristics (demographic, clinical and PRO parameters).

CONCLUSIONS
HAQ, BASDAI and age significantly influence patients’ productivity. The biological treatment slightly improved work productivity and reduced daily activities impairment. The level of the highest education is a protective factor in the loss of productivity. Reported results are in accordance with previously described findings.2,3 Average annual productivity costs per one patient were €2,923 (€0–6,127) in all patients group.

References