OBJECTIVE: Cost-effectiveness, -utility and -benefit analyses have made a substantial impact on health care. Current approaches are methodologically coherent and provide a basis for improved resource allocation. As has been noted before, they are based on expected (average) outcome and do not take into account patients’ risk preferences, which are important aspects of clinical decision-making. From a patient’s perspective, a treatment associated with a lower level of expected clinical benefit may be preferred if it has better worst-case scenario than a treatment with higher expected (average) benefit. We analyze decision-scientific methodology in order to incorporate risk preferences into the framework of outcome and utility studies.

METHODS: Concepts of risk preferences in decision-making from economics and management science are described, and their applicability to a clinical context is tested using a decision tree model. Methods analyzed include the Bayes-Principle of expected value (m-principle), the m-s-principle, risk restriction with given outcome and the Bernoulli-Principle. The absence of risk preferences in the QALY (quality adjusted life years) and HYE (healthy years equivalent) concepts is shown mathematically.

RESULTS: Current methodological concepts used in outcomes research do not adequately incorporate patients’ risk preferences. On the basis of a modified standard gamble approach a method of obtaining risk preferences for given treatment outcome is developed. It leads to the determination of relative marginal utilities and may be used in choosing health-care interventions by considering relative marginal costs.

CONCLUSION: Patients’ risk preferences should be taken into account in outcome and utility analyses involving substantial risks. The approach proposed here may improve the empirical estimation of patients’ preferences and the quality of resource allocation in health care.

PSYCHOMETRIC PERFORMANCE OF THE MEDICAL OUTCOMES STUDY SLEEP SCALE IN THE US GENERAL POPULATION
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OBJECTIVE: Support for the reliability and validity of the Medical Outcomes Study (MOS) Sleep Scale was provided in the MOS sample of 3445 individuals with chronic illness. We sought to extend this work by evaluating the psychometric properties of the MOS-Sleep Scale in the US general population.

METHODS: The MOS-Sleep Scale is a 12-item, self-reported survey that yields six subscales: sleep disturbance, snoring, awaken short of breath or with headache, quantity of sleep, sleep adequacy, and somnolence as well as a nine-item sleep problem index. The subscales and problem index are scored on a 0 to 100 range, with higher scores indicating more of the domain being measured. We administered the MOS measure by telephone to a nationally representative sample of 1011 US adults aged 18 and older in January 2001.

RESULTS: The average age of the sample was 46; 51% were female and 74% were white. Internal consistency reliability estimates for the MOS-Sleep scales tended to be adequate: sleep disturbance (4 items, alpha = 0.80); sleep adequacy (2 items, alpha = 0.82); sleep somnolence (3 items, alpha = 0.63); and nine-item sleep problems index II (alpha = 0.83). Adjusting for age and gender, MOS patients reported significantly more quantity of sleep (t = 3.27, P < .002), but significantly worse sleep disturbance (t = 5.08, P < .001), snoring (t = 2.16, P < .05), shortness of breath (t = 4.59, P < .001), sleep adequacy (t = −2.39, P < .05), somnolence (t = 5.10, P < .001), and sleep problems (t = 3.27, P < .002) than the general US population.

CONCLUSIONS: The MOS-Sleep Scale was found to have good internal consistency reliability and to discriminate between patients with chronic illness and the US general population. Further work is needed to compare the MOS-Sleep Scale results with objective measures of sleep such as polysomnography.

SESSION IV

MENTAL HEALTH II

SLEEP DISORDERS AND HEALTH RELATED QUALITY OF LIFE—AN EPIDEMIOLOGICAL SURVEY
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OBJECTIVE: To analyze health-related quality of life among people with sleeping problems from an epidemiological perspective.

METHOD: A cross-sectional survey on a sample aged between 20 and 84 years in the county of Uppland, Sweden yielded a response in 5404 patients (68%). A recall period of two weeks was used for sleeping problems and use of sleeping medication. The SF-36, used to measure HRQoL, covers eight domains of health: physical function (PF); role limitation because of physical health (RP); bodily pain (BP); general health perception (GH); vitality (VT); social functioning (SF); role limitation because of emotional health problem (RE), and mental health (MH). Linear regression analysis was employed for the multivariate analyses.

RESULTS: In all, 20.3% of the population reported sleeping problems. Sixteen percent had experienced sleeping problems but had not used sleeping medication while 4.3% had used medication. The prevalence of sleeping problems was of the same magnitude between the ages of 20 to 74 years (around 20%) but higher among those aged 75 to 84 years (29.5%). Sleeping problems were more prevalent among women (23.8%) than men (16.1%). The use of sleeping medication increased by age. Among