Negative impact of reduced first undisturbed sleep period on utility, productivity and health-related quality of life: results of a real world survey of patients in Europe and USA

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Introduction and objectives

- Fragmentation of sleep, particularly disruption of restorative slow wave sleep in the first four hours, is a serious consequence of nocturia.1
- It is hypothesised that a negative correlation exists between nocturia severity (measured by duration of first undisturbed sleep period - FUSP) and utility, productivity, sleep quality and health-related quality of life (HRQL).
- The aim of this analysis was to investigate this association in practice settings.

Materials and methods

- Data were drawn from the Adelphi Lower Urinary Tract Symptoms (LUTS) Disease Specific Programme® (DSP), a cross-sectional survey of physicians and their consulting patients conducted in Q1 2013.
- Primary care physicians (PCPs) and urology specialists (urologists/gynaecologists) in France, Germany, Spain, UK and USA, actively managing urinary patients, were asked to complete patient record forms prospectively for the next 14 days.
- The same patients were asked to fill in a self-completion questionnaire (PSC) including duration of FUSP, how refreshed they feel the next day (using a 1-10 scale where 1 = poor and 10 = excellent) and how many times per day, on average, they take a nap (of 5 minutes or longer).
- The PSC also included measures of utility, HRQL and impact on work/activities - EuroQol 5-D (EQ-5D),2 Overactive Bladder Questionnaire (OAB-q),2 Nocturia Impact (NI) Diary,4 and Work Productivity and Activity Index (WPAI).5
- The methodology, including limitations, has been outlined previously.6
- A Kruskal-Wallis test was used to test for significant differences between the patients for reported outcome (PRO) instrument developed in close dialog with the FDA. Value Health 2013; 16:A183.
- Holm-Larsen T et al. The Nocturia impact diary - a new patient reported outcome (PRO) instrument developed in close dialog with the FDA. Value Health 2013; 16(3):A41
- Reilly MC et al. The validity and reproducibility of a work productivity and activity impairment instrument. Pharmacoeconomics 1993; 4(5):353-65

Results

- A total of 635 physicians (264 PCPs and 371 specialists) completed records on 8738 patients, of whom 5335 filled out a PSC.
- For all measures, deterioration in putative outcome was linearly dependent on reduced duration of first undisturbed sleep period (FUSP).
- EQ-5D 5L state rose significantly when FUSP lasted beyond 2 hours – Figure 1.
- EQ Visual Analogue Scale (VAS) score and OAB-q total HRQL score both also rose significantly beyond two hours FUSP and again beyond three and four hours of undisturbed sleep.

Conclusions

- Reduced duration of first undisturbed sleep period (before waking to urinate) has strong negative associations with HRQL, utility, work productivity, activities, feeling refreshed and naps taken during a day.
- These findings demonstrate that the sleep problems associated with nocturia should be taken seriously and the condition treated accordingly.

References

4. Holm-Larsen T et al. The Nocturia impact diary - a new patient reported outcome (PRO) instrument developed in close dialog with the FDA. Value Health 2013; 16(3):A41