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BENEFITS OF DIAGNOSIS AND TREATMENT OF ELDERLY WITH OVERACTIVE BLADDER SYMPTOMS

Hypothesis / aims of study
Research assessing the health burden of overactive bladder (OAB) among the elderly is limited. This study aimed to examine the potential impact of diagnosing and treating elderly patients with OAB symptoms.

Study design, materials and methods
This study used data (N=2,750) from the OAB Re-Contact Study survey, a cross-sectional, self-reported internet survey. Respondents were identified via the 2009 U.S. National Health and Wellness Survey. Elderly respondents (65+years old) with OAB were identified according to their current medication uses to control OAB symptoms or by scores >14 (for men) or >16 (for women) on the OAB Awareness Tool, a patient-administered screening tool to identify patients with bothersome OAB symptoms. Treated patients reported currently using prescription medication to treat OAB. Never treated patients reported never using prescription medication for OAB, but OAB symptoms interfered with their life and were likely serious enough to require medication. Outcome measures include health-related quality of life on the Short Form-12 (SF-12v2) and activity impairment (Work Productivity and Activity Impairment Questionnaire). Generalized linear models (GLM) predicted health outcomes as a function of diagnosis and treatment, adjusting for covariates (e.g., sociodemographics, years experiencing bladder control symptoms, and comorbid status).

Results
Among 423 elderly respondents with OAB symptoms, 211 were diagnosed with OAB, 212 not diagnosed, 140 treated, and 74 never treated for OAB. Power analyses for comparing pairs of means, with 80% power to detect the following effect size differences as significant at two-tailed $p<0.05$, revealed a minimal detectable effect size of Cohen's d=0.27 in the case of diagnosed vs. not diagnosed respondents, and Cohen's d=0.40 in the case of treated vs. never treated respondents. Based on GLM (adjusting for covariates), diagnosed had significantly higher mental component (MCS) of SF-12 (adjusted mean scores=50.0 vs. 46.4, p=0.001), higher SF-6D health utilities (0.710 vs. 0.671, p=0.027), and less activity impairment (25.0% vs. 33.3%, p=0.004) vs. non-diagnosed. Treated had significantly higher MCS (50.6 vs. 41.9, $p<0.001$), higher SF-6D (0.703 vs. 0.615, p <0.001), and less activity impairment (21.6% vs. 53.4%, $p<0.001$). Further analysis stratified by age group (45-64 vs. 65+) revealed significantly greater treatment- and diagnosis-related improvements among the elderly on activity impairment (elderly vs. middle-aged had 1.24 and 1.37 times as much improvement with diagnosis and treatment, respectively) and MCS (2.93 and 4.49 points greater improvement with diagnosis and treatment).

Interpretation of results
Findings from this study demonstrated that being diagnosed or treated were associated with better health outcomes including better mental functioning (i.e., MCS), better overall health status (i.e., SF-6D) and less activity impairment among elderly with symptoms of OAB. Differences on MCS and SF-6D met or exceeded the minimally important differences (MIDs) of 3 and 0.03, respectively, suggesting a meaningful level of improvement on those measures. Moreover, the improvements in health outcomes associated with being diagnosed or treated were greater among elderly than among middle-aged respondents with symptoms of OAB, suggesting that diagnosis or treatment was particularly beneficial for elderly OAB sufferers.

Concluding message
Diagnosis and treatment were associated with lower health burden among elderly with OAB symptoms. Diagnosis and treatment in alleviating OAB symptoms and their impact on health outcomes are thus important.