

CHARACTERIZING REAL WORLD ELDERLY PATIENTS WITH OVERACTIVE BLADDER IN THE UNITED STATES

Aims of study

The objective of this study was to describe the real-world demographic characteristics, functional impairment, comorbid conditions, and concomitant medication use among elderly patients with overactive bladder (OAB) in the United States, and to compare those characteristics with elderly patients without OAB.

Study design, materials and methods

We used the Medicare Current Beneficiary Surveys (MCBS) from 2006 to 2011 plus linked Medicare claims to identify patients with OAB based on ICD9 diagnosis codes (596.51, 596.59, 788.31, 788.33, 788.4, 788.41, or 788.4) or pharmacy claims for OAB medications (tolterodine, oxybutynin, trospium, solifenacin, darifenacin, or fesoterodine). Index dates for patients with OAB were defined as the date of the first OAB diagnosis code or medication occurring in Jan. 1, 2007 to June 30, 2011; index dates for the non-OAB cohort were randomly selected from dates 12 months after starting MCBS participation to 6 months prior to ending MCBS participation. We measured functional impairment using: (1) the activities of daily living (ADL) scale for difficulty bathing or showering dressing, eating, getting in or out of bed or chairs, walking, and using the toilet; (2) the instrumental activity of daily living (IADL) scale for difficulty using the telephone, doing light housework, doing heavy housework, preparing one's own meals, shopping for personal items, and managing money; (3) physical functioning limitations (PFL) scale for difficulty stooping, crouching or kneeling, lifting or carrying objects as heavy as 10 pounds, reaching or extending arms above shoulder level, writing or handling and grasping small objects, and walking a quarter of a mile; and (4) the Vulnerable Elders Survey (VES)-13 scale, for identifying community-dwelling elders at high risk of health deterioration and increased vulnerability. MCBS participants with scores ≥ 3 on these measures were considered impaired or vulnerable. Medical history was measured using the number of conditions according to the Medical Dictionary for Regulatory Activities (MedDRA) list of Preferred Terms (PT), overall comorbidity burden was measured using the Charlson Comorbidity Index (CCI), and concomitant medications use was measured using the MedDRA Anatomical Therapeutic Chemical Classification (ATC2) system. Conditions and medications were measured during the 12-month pre-index period.

The mean and standard error (SE) of each continuous variable and the proportion of each categorical variable were calculated. Groups were compared using the two-sample t-test and the chi-square test for continuous and categorical variables, respectively; differences were deemed statistically significant if two-tailed p-values were ≤ 0.05 . Survey procedures were used to adjust for the multi-stage stratified and clustered sampling design of the MCBS.

Results

We identified 415 OAB and 6,868 non-OAB patients from the MCBS, representing 1,019,946 Medicare beneficiaries with OAB and 17,768,956 Medicare beneficiaries without OAB in the US. The table presents results for age, sex, impairment measures, comorbid conditions, and concomitant medications.

Interpretation of results

This study provides a comprehensive assessment of the demographic and clinical characteristics of real-world elderly patients. Consistent with previous published data we found that elderly patients with OAB were older on average, more likely to be older than 75 years, more likely to be female, had more functional impairments, use more concomitant medications (e.g., hypertension drugs), and experienced a significant and higher burden of comorbid conditions than elderly patients without OAB [1–3]. With their high comorbidity burden and the likelihood of polypharmacy, it is important to select appropriate treatments for elderly patients with OAB. Key limitations include potential misclassification due to coding errors, overestimation of medical conditions because symptoms and related conditions were recorded in the MCBS in addition to the underlying condition, reduced generalizability due to selection criteria.

Demographic Characteristics, Functional Impairment, Comorbid Conditions, and Concomitant Medication Use, MCBS Respondents, by OAB Status			
	OAB (N=415)	Non-OAB (N=6,868)	P-Value
Age, years	78.5 (0.4)	76.9 (0.1)	< 0.01
Age ≥ 75 years	65.4	53.9	< 0.01
Female, %	71.2	61.7	< 0.01
ADL ≥ 3 items, %	22.6	13.4	< 0.01
IADL ≥ 3 items, %	18.2	12.8	< 0.01
PFL ≥ 3 items, %	57.5	40.2	< 0.01
VES13 score	5.9 (0.149)	4.7 (0.046)	< 0.01
VES-13 score ≥ 3	77.3	62.6	< 0.01
CCI	2.1 (0.1)	1.4 (0.0)	< 0.01
≥ 4 CCI conditions, %	23.7	14.7	< 0.01
No. of medical conditions	18.4 (0.8)	11.0 (0.2)	< 0.01
Five most common conditions, %			
Essential hypertension	57.9	43.5	< 0.01
Hyperlipidaemia	32.2	27.2	0.03

Demographic Characteristics, Functional Impairment, Comorbid Conditions, and Concomitant Medication Use, MCBS Respondents, by OAB Status			
	OAB (N=415)	Non-OAB (N=6,868)	P-Value
Osteoarthritis	28.4	17.0	< 0.01
Diabetes mellitus	23.5	18.6	0.02
Hypercholesterolaemia	22.6	15.7	0.01
No. of concomitant medications	11.2 (0.2)	7.7 (0.1)	< 0.01
Five most common medication classes*, %			
Lipid modifying agents	54.0	50.4	0.17
Renin, angiotensin system agents	52.7	48.3	0.11
Ophthalmologicals	49.7	34.1	< 0.01
Beta blocking agents	43.2	38.2	0.06
Diuretics	38.2	37.6	0.81

Weighted means and proportions reported. SE presented in parenthesis. *Except urologicals.

Concluding message

Our findings about the distribution of age, sex, comorbid conditions, and concomitant medication use have implications for the management of elderly patients with OAB. Such patients are more complex than elderly patients without OAB and may require particular attention to their management. Furthermore, these findings have implications for designing future clinical studies among elderly patients with OAB.

References

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2. Coyne KS, Sexton CC, Vats V, Thompson C, Kopp ZS, Milsom I. National community prevalence of overactive bladder in the United States stratified by sex and age. *Urology.* May 2011;77(5):1081-1087.
3. Sexton CC, Coyne KS, Thompson C, Bavendam T, Chen CI, Markland A. Prevalence and effect on health-related quality of life of overactive bladder in older americans: results from the epidemiology of lower urinary tract symptoms study. *J Am Geriatr Soc.* Aug 2011;59(8):1465-1470.

Disclosures

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