

## INTERNATIONAL BURDEN OF INCONTINENCE STUDY: ASSOCIATION BETWEEN INCONTINENCE SEVERITY AND HEALTHCARE UTILIZATION.

### Hypothesis / aims of study

The objectives of this study were to describe the treatment seeking behavior and assess the association between incontinence severity and healthcare utilization among patients with idiopathic overactive bladder (OAB) in 8 countries.

### Study design, materials and methods

An cross-sectional online survey was completed by overactive bladder patients residing in the United States, Canada, United Kingdom, Germany, Spain, Italy, France, and Australia between December 2012 and March 2013. Participants who were 18 years or older and had at least one incontinence episode in the past 12 months at the time of screening were included in the study. Those who reported predominantly stress incontinence were excluded. Male, younger aged (18-39 years old), and recent dry participants were oversampled to ensure representation in the sample. Patient self-reported the number of incontinence episodes in the past 3 days and treatment seeking in the past 6 months (ever discussed their urinary symptoms with a healthcare provider; ever been diagnosed with OAB). Healthcare resource utilization was measured by the total number of diagnostic tests (urinalysis, blood test, residual urine volume test, urodynamic testing, bladder ultrasound, cystoscopy), healthcare provider visits (primary care doctor, specialty doctor, home nurse, psychologist, physical therapist), and healthcare facility visits (outpatient and inpatient facilities) over the past 6 months. Daily incontinence episodes were categorized into 0, 1 or >1. Descriptive analyses were conducted using SAS v9.2.

### Results

A total of 1,341 individuals (US 356; UK 184; Canada 150; Australia 254; France 100; German 98; Italy 99; Spain 100) completed the survey. Overall, 65.0% participants had discussed their urinary symptoms with their healthcare provider, with notable country variations (highest in Canada, 92.7%; lowest in Italy, 38.9%) (Table 1). Less than half of the sample (47.0%) had ever been diagnosed with OAB, with a smaller proportion of OAB diagnoses reported by the sample in Italy (17.2%) and Spain (27%). Over 50% of the global sample had visited at least one healthcare provider in the past 6 months (range 34.6% in Australia to 74% in Italy). The overall mean incontinence episodes per day (SD) was 2.3 (2.7), with 271 (20.2%) dry individuals, 347 (25.9%) individuals with 1 urinary incontinence (UI) episode per day, and 723 (53.9%) with >1 UI episode per day (Table 2). The mean number (SD) of diagnostic tests and healthcare provider visits over the past 6 months was 3.8 (7.3) and 2.9 (7.3) per person, respectively. Mean utilization rates of healthcare resources increased across levels of incontinence severity. The mean number (SD) of diagnostic testing procedures conducted over the past 6 months was 2.3 (3.7) for dry patients, 3.4 (7.2) for individuals with 1 UI episode per day, and 5.3 (10.4) for individuals with >1 UI episodes per day. The mean number (SD) of healthcare provider visits in the past 6 months was 1.7 (3.9) for dry patients, 2.1 (5.0) for individuals with 1 UI episode per day, and 3.8 (8.9) for individuals with >1 UI episodes per day. A positive association between incontinence severity and healthcare resource utilization was observed and this association was consistent across all types of diagnostic testing, health providers visits, and healthcare facilities usage.

### Interpretation of results

Results show that there increasing incontinence severity is associated with increased utilization of healthcare resources. Recruitment through internet rather than site of care quantifies the treatment gap that exists for those individuals who have never spoken to a healthcare provider regarding their urinary symptoms (35.0%) and those who are not aware of the overactive bladder diagnosis (53.0%).

### Concluding message

A significant proportion of OAB patients is neither aware of their OAB diagnosis nor seeking treatment for their OAB problem. Treatment seeking patterns vary across countries which might be a reflection of different healthcare systems. Positive association between incontinence severity and utilization of healthcare resources was observed. Future research may focus on understanding factors that are associated with healthcare resource utilization.

**Table 1: Treatment seeking behavior across countries**

Treatment Seeking Behavior	Global N=1341	US N=356	UK N= 184	Canada N=150	Australia N=254	France N=100	Germany N=98	Italy N=99	Spain N=100
Have ever talked to healthcare provider for their urinary symptoms	872 (65.0%)	283 (79.5%)	117 (63.6%)	139 (92.7%)	101 (39.8%)	68 (68%)	72 (73.5%)	38 (38.9%)	54 (54%)
Have ever been diagnosed with OAB	630 (47.0%)	232 (65.2%)	83 (45.1%)	125 (83.3%)	68 (26.8%)	25 (25%)	53 (54.1%)	17 (17.2%)	27 (27)%

**Table 2: Association between incontinence episodes and healthcare resource utilizations**

Healthcare Resource Utilization	Incontinence episodes per day							
	0 (N=271)		1 (N=347)		>1 (N=723)		Total Sample (N=1341)	
	Mean (SD)	% of group that used this resource	Mean (SD)	% of group that used this resource	Mean (SD)	% of group that used this resource	Mean (SD)	% of group that used this resource
<b>Diagnostic Tests</b>	2.3 (3.8)	54.6%	2.9 (5.4)	60.2%	4.7 (8.9)	63.5%	3.8 (7.3)	60.9%
<b>Healthcare Provider Visits</b>	1.7 (3.9)	45.8%	2.1 (5.0)	52.7%	3.8 (8.9)	55.9%	2.9 (7.3)	53.0%
<b>Outpatient Visits</b>	0.2 (1.1)	4.8%	0.4 (1.7)	8.4%	0.8 (3.1)	13.6%	0.6 (2.5)	10.4%
<b>Inpatient Stay Duration (Days)</b>	0.10 (4.3)	1.9%	0.2 (1.2)	4.9%	0.9 (5.1)	9.3%	0.6 (3.8)	6.6%

Disclosures

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