

A Discrete Choice Experiment to Determine Treatment Attribute Preferences in Treatment-Naïve Overactive Bladder (OAB) Patients in the US - #154

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Introduction

- Treatments for overactive bladder (OAB) vary in terms of routes of administration and have differing efficacy, safety, convenience and tolerability profiles.
- Little is known about how patient treatment preferences change based on OAB severity or clinical/patient characteristics.
- The objective of this study was to identify which pharmacotherapy treatment attributes are considered important by treatment-naïve patients and how these preferences change based on OAB severity or clinical/patient characteristics.

Methods

Study population

- Respondents were sampled from a large online panel of patients designed to be demographically representative of the United States general population.
- Eligible respondents were: ≥18 years of age, had a self-reported physician OAB diagnosis or had self-reported symptoms of OAB, and had never taken pharmacotherapy or received invasive treatments for OAB (i.e. treatment-naïve).

Discrete choice experiment

- The discrete choice experiment (DCE) was conducted between October and November 2017.
- Ten attribute levels were selected; identified through literature review, clinical relevance and input from patients (Figure 1).
- Validated questionnaires were administered to help characterize the respondents, including the:
 - Overactive Bladder Questionnaire Short Form¹* assessing OAB symptom bother; and
 - Work Productivity and Activity Impairment - Specific Health Problem Questionnaire²* assessing work productivity.

Statistical analyses

- Mean relative preference weights were estimated using a hierarchical Bayesian random-effects-only model.
- A mean relative importance score (RI ± standard deviation) of >10 indicates higher importance compared to baseline, where all attributes would have the same importance (i.e., RI of 10).
- Multivariable linear regression models were used to analyze differences in RI scores by demographic characteristics and disease burden-related metrics.

Results

Patient characteristics

- Among the 18,445 individuals invited to participate, 776 met the eligibility criteria and 514 completed the online survey.
- Sixty-six percent of respondents were <65 years of age and 68% were female. Sixty-four percent of respondents reported having moderate/severe OAB symptoms; however, only 36% had a self-reported physician OAB diagnosis.

Characteristic	n	%
Sex		
Male	164	32
Female	350	68
Age (65)		
<65	339	66
≥65	175	34
Severity		
Mild	185	36
Moderate/Severe	329	64
Physician diagnosed OAB		
Yes	184	36
No	330	64

DCE results

- Drug delivery method was the most important attribute, with respondents stating a strong preference for oral and patches over injectable therapies (RI: 18.8 ± 8.5), followed by reduced daytime micturition frequency (RI: 11.9 ± 4.5) and lower out-of-pocket costs (RI: 11.3 ± 7.6) (Figure 2).
- Results of multivariable linear regression analyses indicated:
 - Females respondents considered drug delivery method to be more important compared to males (parameter estimate (PE): 2.57; 95% confidence interval (CI): 0.29-4.86).
 - Respondents with greater symptom bother were less likely to prefer injectables (PE: -0.07; 95% CI: -0.11 - -0.03); symptom control of incontinence was most important to respondents who reported greater work productivity loss (PE: -0.04; 95% CI: -0.07 - -0.01); and out-of-pocket cost was most important to respondents with moderate/severe OAB (PE: 2.38; 95% CI: 0.90-3.85).

Figure 2: Mean relative importance scores, overall

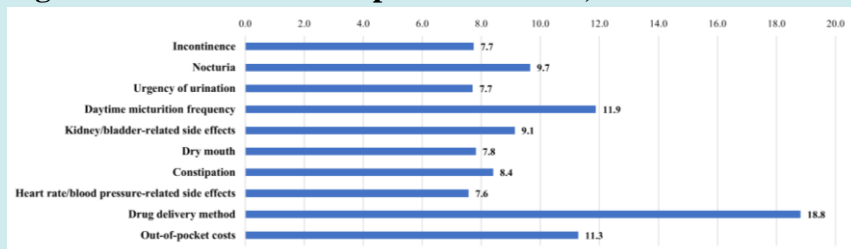


Figure 1: Treatment attribute grid

Attribute	Level 1	Level 2	Level 3
Number of times you may leak urine (Incontinence)	0 times per 24 hours	1-2 times per 24 hours	3 or more times per 24 hours
How often you may get up to urinate during the night (Nocturia)	0 times per night	1 time per night	2 or more times per night
Urgency of urination	Mild urgency of urination	Moderate urgency of urination	Significant urgency of urination
Number of times you may need to urinate during the day (Daytime micturition frequency)	8 times per 24 hours	12 times per 24 hours	16 times per 24 hours
Kidney or bladder-related side effects over a 12-week period	3 out of 100 patients experience urinary tract infection (UTI).	5 out of 100 patients experience UTI.	18 out of 100 patients experience UTI.
	1 out of 100 patients experience dysuria (pain during urination).	2 out of 100 patients experience dysuria (pain during urination).	9 out of 100 patients experience dysuria (pain during urination).
	1 out of 100 patients experience urinary retention (may require a catheter)	3 out of 100 patients experience urinary retention (may require a catheter)	6 out of 100 patients experience urinary retention (may require a catheter)
Occurrence of dry mouth over a 12-week period	5 out of 100 patients experience dry mouth	10 out of 100 patients experience dry mouth	33 out of 100 patients experience dry mouth
Occurrence of constipation over a 12-week period	1 out of 100 patients experience constipation	5 out of 100 patients experience constipation	10 out of 100 patients experience constipation
Heart rate or blood pressure-related side effects over a 12-week period	1 out of 100 patients experience an increased heart rate.	5 out of 100 patients experience an increased heart rate.	10 out of 100 patients experience an increased heart rate.
	1 out of 100 patients experience hypertension (high blood pressure)	5 out of 100 patients experience hypertension (high blood pressure)	10 out of 100 patients experience hypertension (high blood pressure)
How the medication is taken	Oral medication: taken once daily by mouth, with or without food	Patch or Gel: applied once daily to skin on abdomen (stomach), upper arms/shoulders, hips, buttocks, or thighs	Injection given in the bladder muscle: 20 injections given approximately 1 cm apart after local or general anesthesia; can be given every 24 weeks. Must be administered by a healthcare practitioner
	Low (i.e. the lowest amount that your insurance requires you to pay for a prescription medication)	Moderate	High (i.e. the highest amount that your insurance requires you to pay for a prescription medication)

Conclusion

- In a treatment-naïve OAB population, the route of administration was the most important attribute followed by effect on daytime micturition frequency and patient out-of-pocket cost.
- A greater understanding of the relationships between patient pharmacotherapy treatment preferences and patient characteristics may enhance the importance of incorporating patient value in treatment decisions.

(1) Coyne et al. (2015) *NeuroUrol Urodyn.* 34(3):255-263.
 (2) Reilly et al. (1993) *Pharmacoeconomics.* 4(5):353-365.

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