Healthcare Resource Utilization and Costs Among Overactive Bladder Patients With and Without Urinary Incontinence: A U.S. Claims-Based Analysis

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Background

- Overactive bladder (OAB) is a chronic condition characterized by urinary urgency, frequency, and nocturia, and is frequently complicated by urinary incontinence (UI), including urgency (UUI), stress (SUI), and mixed (MUI) subtypes.
- Beyond its impact on daily functioning and quality of life, urinary incontinence is associated with considerable personal suffering and a substantial economic burden on healthcare systems.
- The annual cost of urinary incontinence in the United States and Sweden has been estimated to account for approximately 2% of total healthcare expenditures.[1,2]
- Despite this burden, real-world evidence quantifying the incremental healthcare resource utilization and costs associated with UI among patients with OAB remains limited.

Objective

- Patients with overactive bladder who develop urinary incontinence experience significantly higher ambulatory and office-based healthcare utilization and costs over 24 months compared with patients with OAB alone, despite lower inpatient utilization. These findings highlight the substantial economic burden associated with UI among patients with OAB and underscore the need for early identification and targeted management strategies to reduce long-term healthcare costs.

Methodology

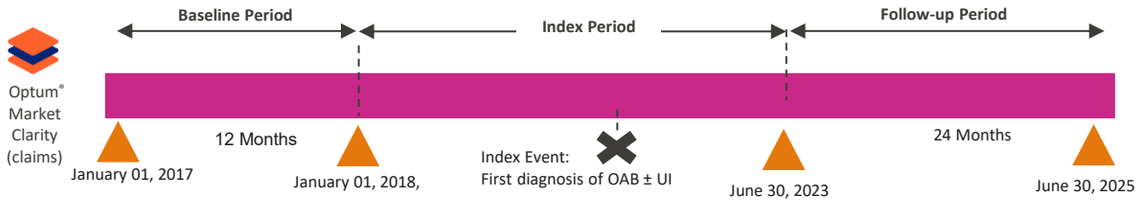

Figure 1. Study Design and Timeline

- A retrospective cohort study was conducted using Optum® Market Clarity administrative claims data, including longitudinal medical and pharmacy claims for U.S. commercially insured and Medicare Advantage members from January 1, 2017 to June 30, 2025.
- For cases, the index date was the first UI diagnosis; for controls, the index date was the first OAB diagnosis. A 12-month baseline period and a 24-month follow-up period were required. Continuous medical and pharmacy enrollment was mandatory.
- Patients were excluded for pregnancy-related UI, neuropathic bladder, benign prostatic hyperplasia, prostate cancer,
- Diuretic use, or prior OAB/UI during baseline. Index dates between July 1, 2023 and June 30, 2024 were excluded.
- Healthcare resource utilization and costs were measured over the 24-month follow-up. Propensity score matching (1:1) balanced cohorts by demographics and Charlson Comorbidity Index (CCI).

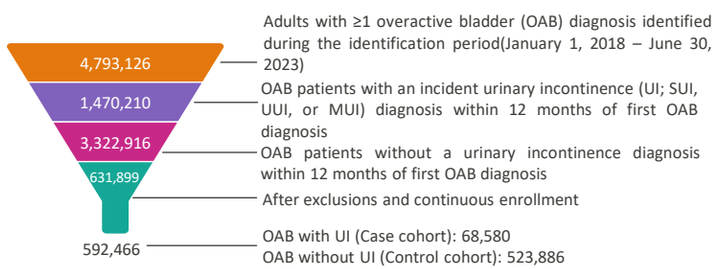

Figure 2. Patient Selection and Attrition

References: [1]. Ekelund P, et.al., Urinary incontinence. Social and financial costs high. BMJ 1993;306:1344. [2]. Hu TW. Impact of urinary incontinence on health-care costs. J Am Geriatr Soc 1990;38:292–5.

Results

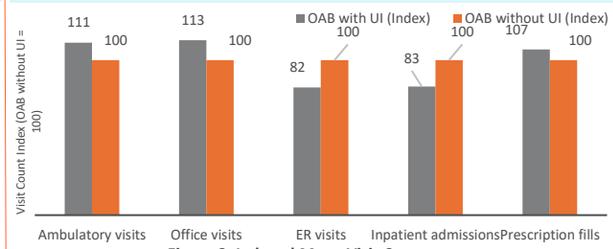

Figure 3. Indexed Mean Visit Counts

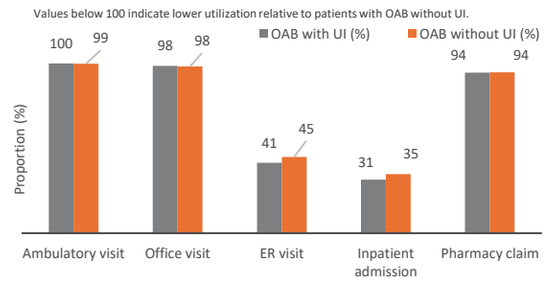

Figure 4. Proportion of Patients With ≥1 Visit (%)

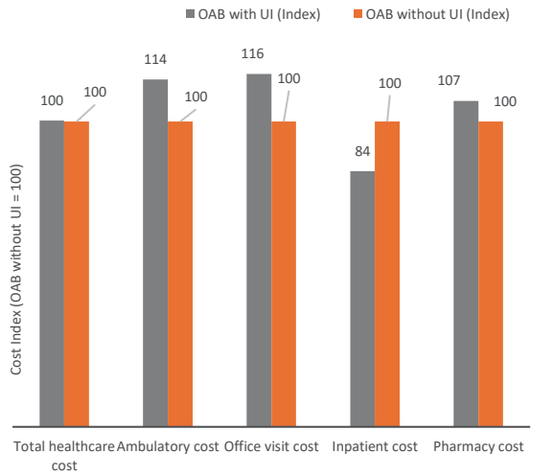

Figure 5. Indexed Mean Healthcare Costs

Values below 100 indicate lower cost relative to patients with OAB without UI.

- After 1:1 propensity score matching, 68,580 patients were included in each cohort. Mean age was 61.94 (14.57) years among patients with overactive bladder (OAB) and urinary incontinence (UI) and 61.86 (14.73) years among patients with OAB without UI; demographic characteristics and comorbidity burden were well balanced between cohorts.
- Patients with OAB and UI demonstrated significantly higher outpatient utilization over 24 months, including greater mean numbers of ambulatory visits (39.75 vs 35.71) and office visits (29.41 vs 26.04), corresponding to indexed values of approximately 111–113 versus 100 among patients without UI (all p<0.0001). Mean prescription fills were also higher among patients with UI (100.20 vs 93.71; indexed ~107 vs 100; p<0.0001) (Figure 3).
- In contrast, acute care utilization was lower among patients with UI. Mean ER visits (1.02 vs 1.24) and inpatient admissions (1.17 vs 1.41) were lower in the UI cohort, corresponding to indexed values of approximately 82–83 versus 100 (all p<0.0001). Consistent findings were observed for utilization rates, with a smaller proportion of patients with UI experiencing at least one ER visit (41.24% vs 44.72%) or inpatient admission (31.46% vs 34.71%) during follow-up (both p<0.0001) (Figures 3–4).
- Despite higher outpatient visit counts and prescription volume, the proportion of patients with at least one pharmacy claim did not differ significantly between cohorts (94.19% vs 94.39%; p=0.1008) (Figure 4).
- Mean total all-cause healthcare costs over 24 months were similar between cohorts ($76,641.74 vs $76,432.35), reflected by nearly identical indexed values (~100 vs 100; p=0.7769). However, significant differences were observed by care setting, with higher ambulatory ($25,875.97 vs $22,745.90; indexed ~114 vs 100), office visit ($7,812.30 vs $6,759.21; indexed ~116 vs 100), and pharmacy costs ($24,812.47 vs $23,238.00; indexed ~107 vs 100) among patients with UI, and lower inpatient costs ($18,811.93 vs $22,451.44; indexed ~84 vs 100) compared with patients without UI (all p<0.0001) (Figure 5).

Conclusions

- Patients with overactive bladder who develop urinary incontinence experience significantly higher ambulatory and office-based healthcare utilization and costs over 24 months compared with patients with OAB alone, despite lower inpatient utilization.
- These findings highlight the substantial economic burden associated with UI among patients with OAB and underscore the need for early identification and targeted management strategies to reduce long-term healthcare costs.

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