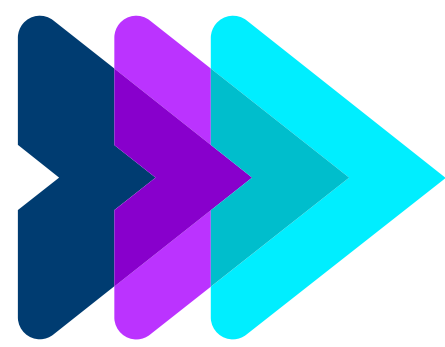




Budget Impact Analysis of Minimally Invasive Surgical Treatments for Benign Prostatic Hyperplasia: Implications for Six Geographical States of the United States

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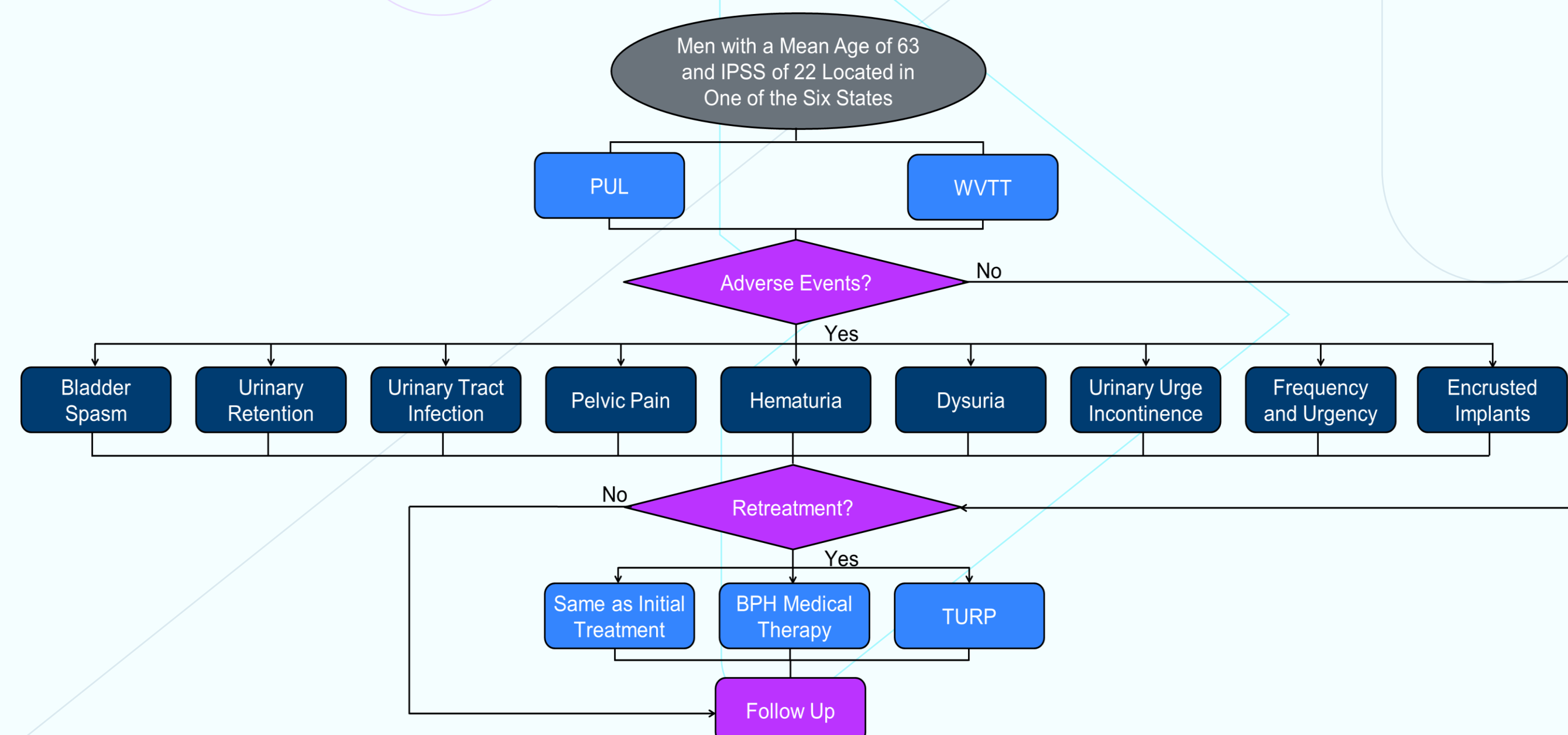
OBJECTIVES

- Two emerging minimally invasive treatment options for benign prostatic hyperplasia (BPH) are prostatic urethral lift (PUL) and convective water vapor thermal therapy (WVTT).
- Given some US private payers provide limited coverage for WVTT, this study examined the budget impact of PUL compared to WVTT for private payers in six states in the United States.

METHODS

- An Excel-based Markov model (**Figure 1**) was constructed to compare the budget impact of PUL versus WVTT for men with lower urinary tract symptoms (LUTS) secondary to BPH over a 5-year time horizon.
- Private payers in the following six states were included: Alabama (AL), New Jersey (NJ), New York (NY), Oregon (OR), Pennsylvania (PA), and Washington (WA).
- The model was populated with a cohort of men with a mean age of 63 years and an International Prostate Symptom Score of 22.
- Clinical inputs were taken from randomized controlled trials of PUL^{1,2} and WVTT.^{3,4}
- The weighted average of 2021 Medicare reimbursement was used as a proxy for procedural and adverse event (AE) costs for each state.
- PUL and WVTT procedures were assumed to occur in the office setting.

Figure 1. Model Patient Flow



RESULTS

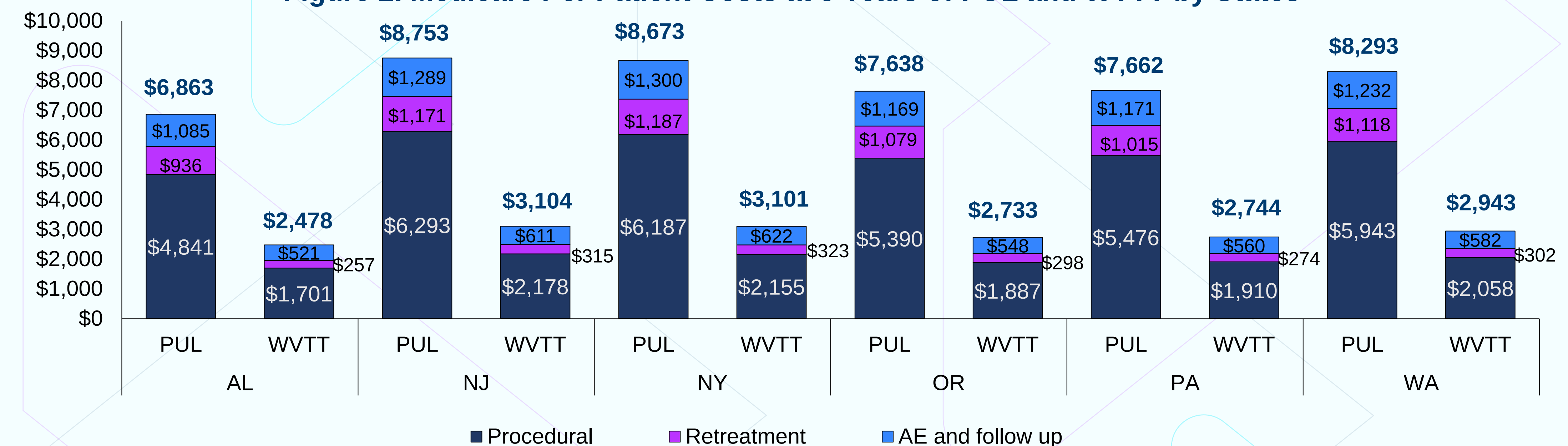
Total Cost Difference at 1 Year

- Total 1-year costs of PUL were three times higher than those of WVTT in all six states.
 - PUL costs ranged from \$5,690 (AL) to \$7,324 (NJ).
 - WVTT costs ranged from \$1,829 (AL) to \$2,330 (NJ).
- The cost difference between the two treatments continued to diverge in years 2-5.

Total Cost Difference at 5 Years

- Through year 5, the per-patient medical costs of PUL ranged from \$6,863 in Alabama to \$8,753 in New Jersey, while per-patient medical costs of WVTT ranged from \$2,478 in Alabama to \$3,104 in New Jersey (**Figure 2**).

Figure 2. Medicare Per Patient Costs at 5 Years of PUL and WVTT by States



CONCLUSIONS

WVTT provided short-term and long-term cost-savings for private payers in these 6 states when compared to PUL. These results should be considered in BPH surgical treatment coverage decisions.

DISCLOSURES

This study was supported by Boston Scientific. Sirikan Rojanasart, Julie Baxter, and Emi Suzuki are full-time employees of Boston Scientific. James Bresee is a board certified urologist at Northwest Urology. Bilal Chughtai is an Associate Professor of Urology at Weill Cornell Medicine. Drs Bresee and Chughtai were not compensated for their participation in this study.

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