

Supplementary Material

Title: Cost Savings in Chronic Pain Patients Initiating Peripheral Nerve Stimulation (PNS) with a 60-Day PNS Treatment

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Tables S.1.-S.3. Results from Sub-Analysis of Real-World Outcomes Following 60-Day PNS in Patients ≥ 65 years of age (n=1,763)

Table S.1. Baseline and Treatment Characteristics

Medicare-Eligible Cohort (n=1763)	
Age, mean (SD), years	74.9 (7.2)
Average pain at baseline, mean (SD)	6.7 (1.7)
Worst pain at baseline, mean (SD)	9.0 (1.3)

SD = standard deviation

Table S.2: 60-Day PNS Patient Response Rates (by Body Region)

Primary Pain Region	Number of Responders	Number of Patients	Response Rate	95% CI
Low Back	416	668	62.3%	58.6 - 65.9%
Shoulder	268	341	78.6%	74.2 - 82.9%
Knee	264	343	77.0%	72.5 - 81.4%
Foot/Ankle	79	123	64.2%	55.8 - 72.7%
Other/Unspecified	199	288	69.1%	63.8 - 74.4%
All Regions	1226	1763	69.5%	67.4 - 71.7%

Response is defined as A) > 50% Pain Relief and/or B) clinically significant improvement in QoL (≥ 1 PGIC)

QoL = quality of life; PGIC = patient global impression of change; CI = confidence interval

Table S.3: 60-Day PNS Medical Events

	Number of Patients	Number of Events	Proportion of Patients (n=1763)
Overall	71	82	4.0%
Skin irritation	31	33	1.8%
Infection			
Confirmed	1	1	0.06%

Suspected	18	18	1.0%
Painful or uncomfortable stimulation	13	14	0.7%
Change in sensation/location of stim	2	2	0.1%
Pain at lead exit site	2	2	0.1%
Swelling	2	2	0.1%
All other	10	10	0.6%

Table S. 4. Event Probabilities for Monte Carlo Simulation

Measure	Mean Estimate	Beta Distribution Parameters (n)		Source
		Alpha	Beta	
Probability of Permanent Implant PNS-BT cohort	0.406	1,140	1,671	Medicare FFS
Probability of Permanent Implant 60-Day PNS cohort	0.181	229	1,036	Medicare FFS
Probability of Non-Response 60-Day PNS and No PNS-BT	0.305	537	1226	Real-World Analysis
Probability of Permanent System Explant after 60-Day PNS	0.044	10*	219	Medicare FFS
Probability of Permanent System Explant after PNS-BT	0.068	77	1,063	Medicare FFS

Figure S1:

Estimated Costs, by Initial Treatment Approach

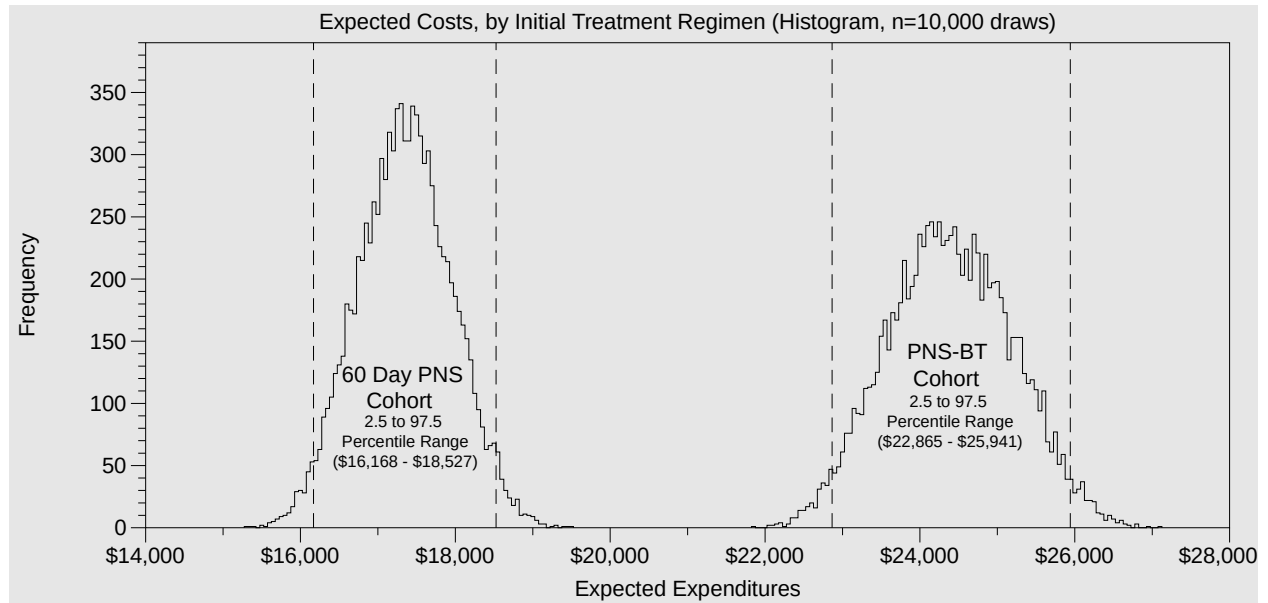


Figure S2:

Estimated Cost Savings with Initiation of 60-Day PNS Treatment versus PNS-BT

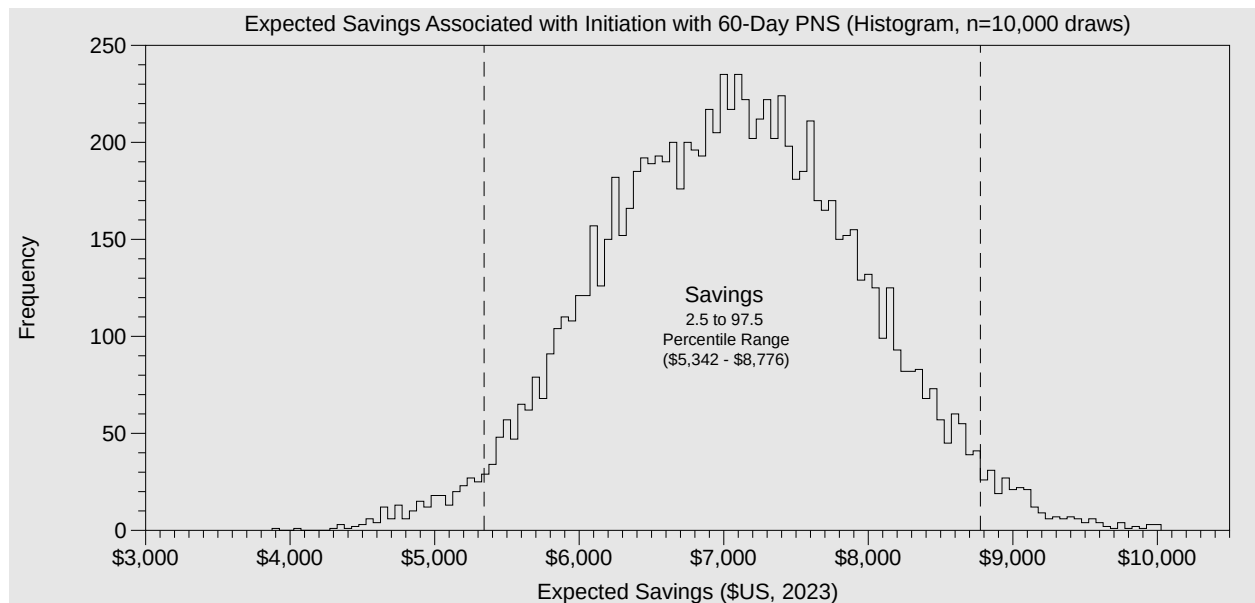


Figure S3:

Estimated Costs Per Successful Outcome

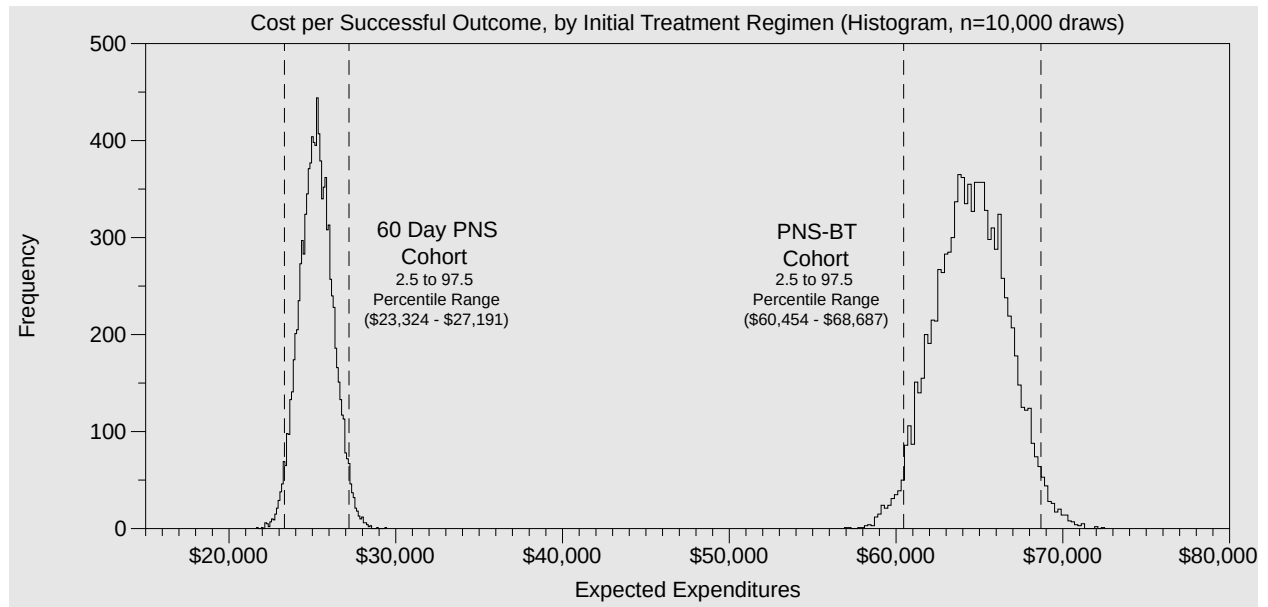


Figure S4

Estimated Cost Savings Per Successful Outcome with Initiation of 60-Day PNS versus PNS-BT

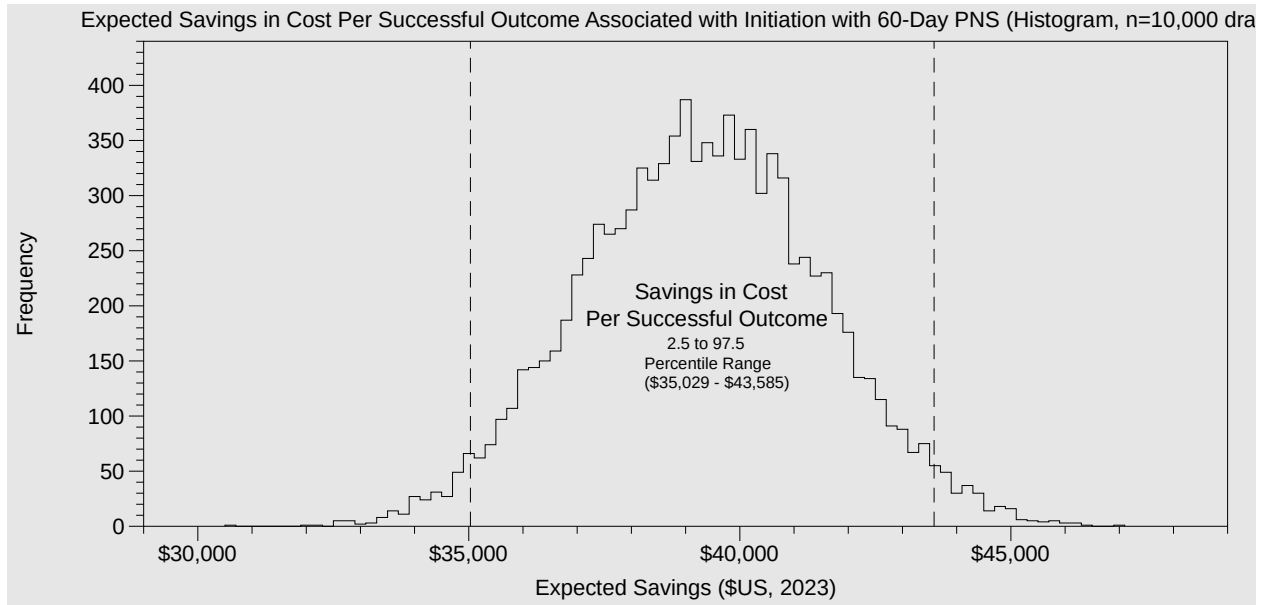
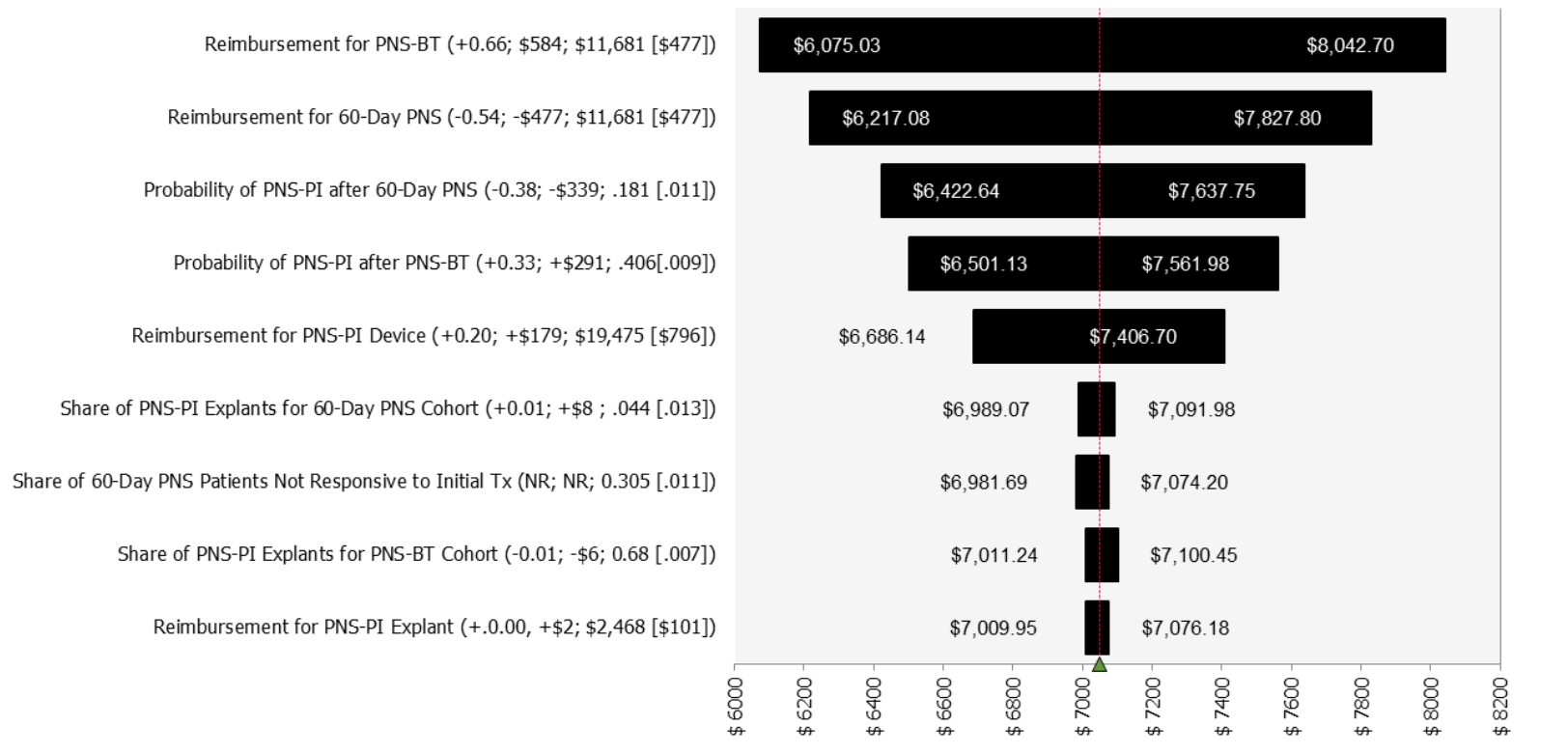


Figure S5

Simulation Sensitivity Analysis: Savings

Reimbursement Savings (60-Day PNS vs. PNS-BT)

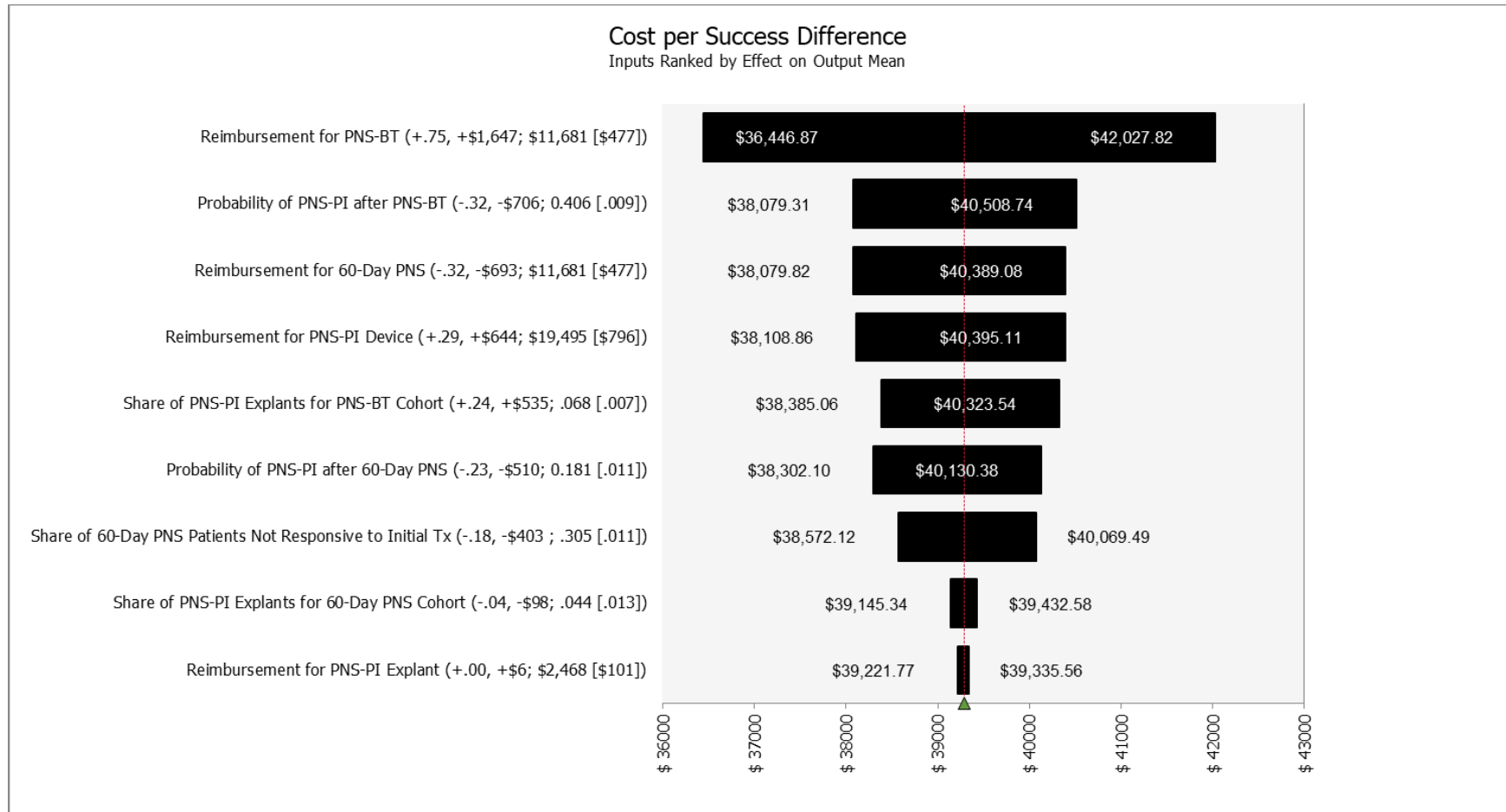
Inputs Ranked by Effect on Output Mean



The range shown in the figure is the outcome for the lowest and highest decile of each input. Those inputs with the largest ranges are the most influential in determining output. The parentheses to the right of each input have the following format: (standardized regression coefficient, estimated increase in reimbursement savings for a 1 standard deviation increase in the input; mean estimate for the input [standard deviation for the input])

Figure S6

Simulation Sensitivity Analysis: Difference in Cost Per Successfully Treated Patient



The range shown in the figure is the outcome for the lowest and highest decile of each input. Those inputs with the largest ranges are the most influential in determining output. The parentheses to the right of each input have the following format: (standardized regression coefficient, estimated increase in reimbursement savings for a 1 standard deviation increase in the input; mean estimate for the input [standard deviation for the input])