

Is rTMS cost-effective as add-on therapy to standard care for the treatment of hallucinations in schizophrenia ?

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Background & Research Question

Results

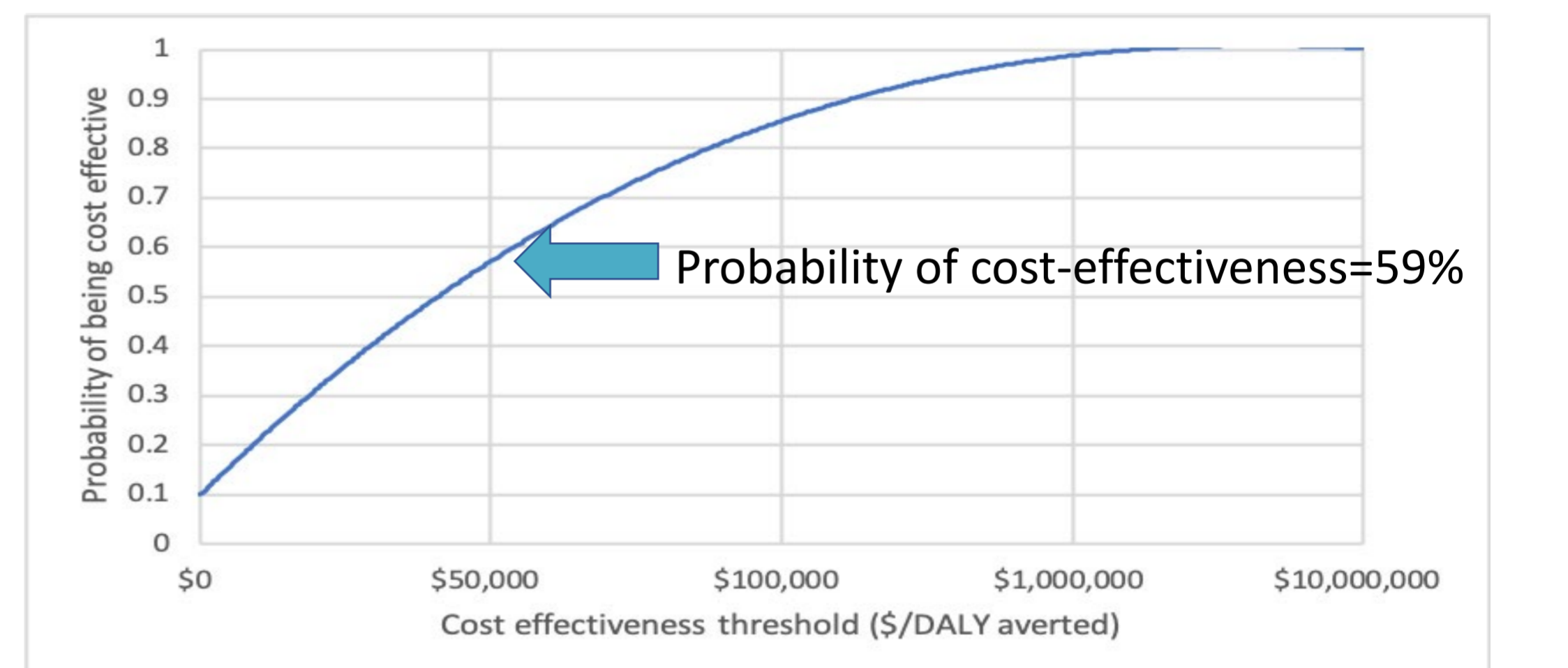
Repetitive transcranial magnetic stimulation (rTMS) is a non-convulsive brain stimulation technique with evidence to support its safety and efficacy for auditory hallucinations in people with schizophrenia.

Table 1. Base case cost-utility results rTMS plus standard care compared to standard care alone

	Mean	95% CI
Incremental costs	\$18,800	-\$8,790 - \$52,886
DALYs averted	0.45	0.21 – 0.67
incremental cost utility ratio	\$59,517	Dominant - \$240,130

Our study question: *Is rTMS cost-effective as an add on to standard care compared to standard care alone for the treatment of persistent auditory hallucinations in Australian patients with schizophrenia?*

Figure 2. Base case acceptability curve



Methods

Study Design

- Cost - utility analysis: Cost/Disability Adjusted Life Year (DALY) averted
- Disability weights from Global Burden of Disease
- Population based economic model
- Health sector perspective (only medical costs)
- Base case uses a 1 year time horizon
- Sensitivity analysis varies time horizon (3 months-5 years), rTMS administration cost (\$150-\$90) and hospitalisation cost (\$25,407-\$12, 703)

Figure 3. Summary of one-way sensitivity analyses

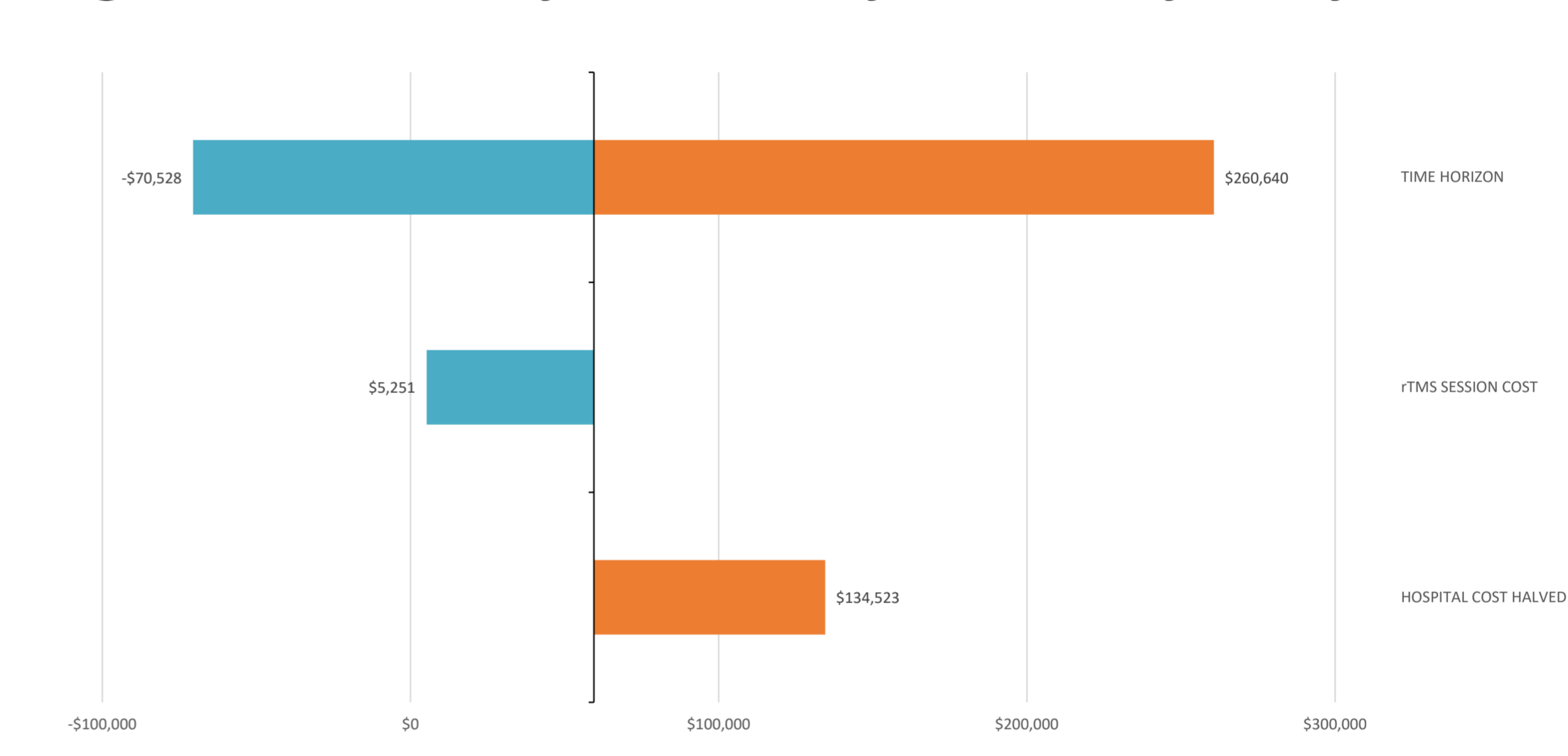
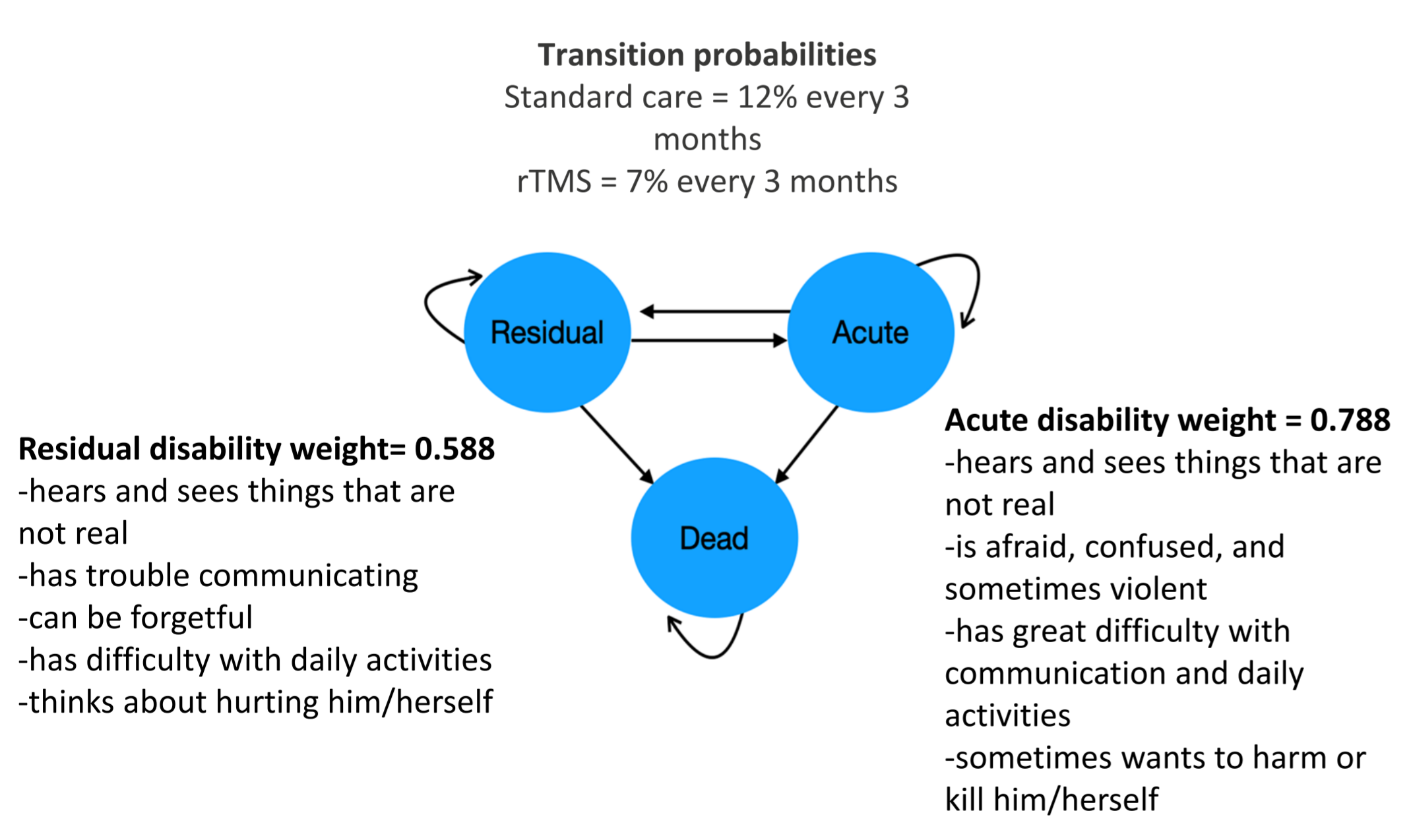


Figure 1. Model structure and parameters



Assumptions

- rTMS administered once daily for 10 days, followed by once weekly for 6 months then once fortnightly
- Medication costs accrue over the total time period
- 100% in acute state would have a hospital admission and receive case management

Key findings

- ✓ Estimated mean cost-utility ratio for rTMS above willingness to pay threshold in Australia (\$50,000/DALY)
- ✓ Considerable uncertainty in results
- ✓ Lowering cost/session and extending model time horizon brings cost-utility ratio below threshold
- ✓ More data is needed to confirm effectiveness and reduce uncertainty