

**Key Points from the  
Sleep Health Foundation Report  
by Deloitte Access Economics**

# Cost effectiveness of continuous positive airway pressure for obstructive sleep apnoea

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- Deloitte Access Economics, the respected national economics analysts, have just completed a study into the cost effectiveness of continuous positive airway pressure (CPAP) therapy for obstructive sleep apnoea (OSA).
- The report was commissioned by the Sleep Health Foundation, Australia's leading advocate for healthy sleep.
- The study assesses the cost effectiveness of CPAP – or value for money – compared to no care from two perspectives: (a) costs to the health care system including costs of the treatment intervention and those of OSA-related health care utilisation and their changes with treatment; and (b) overall costs to society, which include health care system costs together with other financial costs, including those related to productivity, non-health related accident costs and informal care, and their changes with treatment.
- Careful allowances have been made to account for individual adherence to the therapy. The assumptions used in the modelling were conservative (e.g. overall compliance with CPAP at 5 years ≈56.7%; relatively high average device cost (\$1,745), generous follow up arrangements with suitably trained health professionals).
- The results are startling. From the societal perspective CPAP therapy was estimated to save \$470 per person per year compared to no treatment. In other words, it costs Australian society NOT to treat this problem. Moreover, CPAP therapy improves wellbeing for people with OSA compared to no treatment.
- This is a powerful message which needs to resonate in the minds of health planners and professionals. They have a collective responsibility to find and treat this problem.

Steps that inhibit reasonable diagnostic and treatment efforts are not just unhelpful from the health point of view, they are financially reckless.

**In further detail:**

- The incremental cost-effectiveness ratio, or ICER, is a widely used metric of cost effectiveness in health economics that allows the value-for-money of various treatments to be compared. It relates net costs – the costs of intervention offset by the financial gain from the intervention – to overall changes in health outcomes from treatment, expressed as dollars per disability adjusted life year (DALY) averted.
- The net cost of CPAP therapy from the perspective of the health care system was estimated to be \$550 per person per year. From the perspective of society (which includes other financial costs avoided) the intervention was estimated to save \$470 per person per year.
- It was estimated that CPAP therapy would avoid 0.0305 DALYs per person per year, yielding an ICER from the perspective of the health care system of \$18,043 per DALY averted. This is highly cost effective from the health care system perspective where it has been suggested the Australian “willingness to pay threshold” is more than double this, at \$40,000 per DALY averted (Edney et al, 2018).
- Moreover, when the societal perspective is considered (which includes benefits for productivity, safety and well-being) the ICER was estimated to be dominant – meaning the intervention both saves money and improves wellbeing. In other words, it costs NOT to treat this problem.