

Greening healthcare: bridging environmental sustainability and health economics in scope 3 emissions reduction

“If the healthcare sector were a country, it would be the fifth largest polluter on Earth”

BACKGROUND

Healthcare systems face the dual challenge of dealing with the health impacts of climate change and reducing their emissions (1).

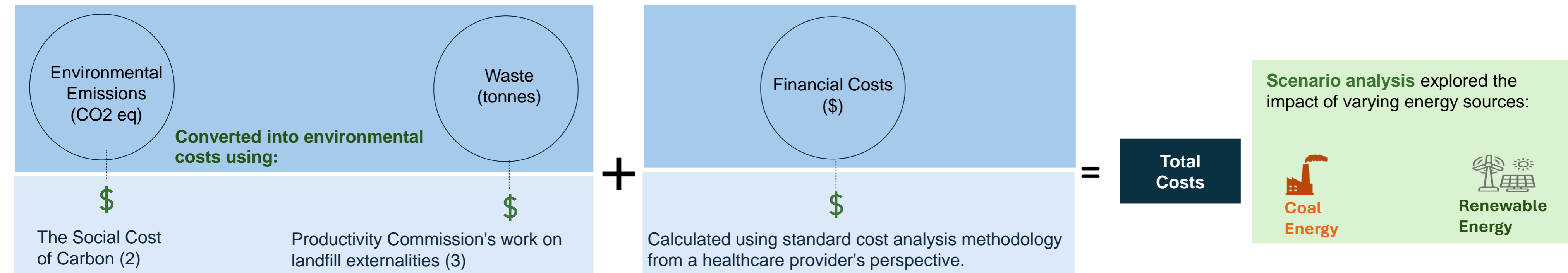
Improving sustainability in health services should focus on reducing Scope 3 emissions from the supply chain and healthcare delivery by actioning on frequently occurring surgical procedures.

AIMS & OBJECTIVES

- Demonstrate an approach to integrate select environmental impacts in a cost-minimization analysis using an example of caesarean instrument packs.
- Revise caesarean pack contents by replacing plastic kidney dishes and bowls with its steel variants.
- Measure the impact of the energy source on the carbon footprint of caesarean instrument packs.

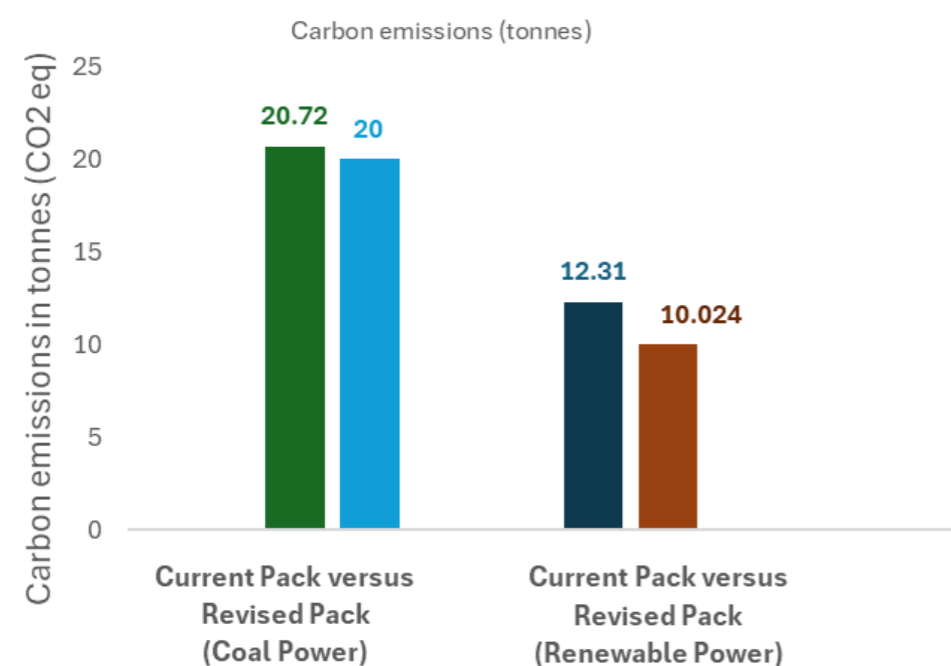
METHODS

The financial and environmental costs of ‘current’ caesarean packs (CP) with ‘revised’ packs (RP) over five years were compared in a cost-minimization analysis.



RESULTS

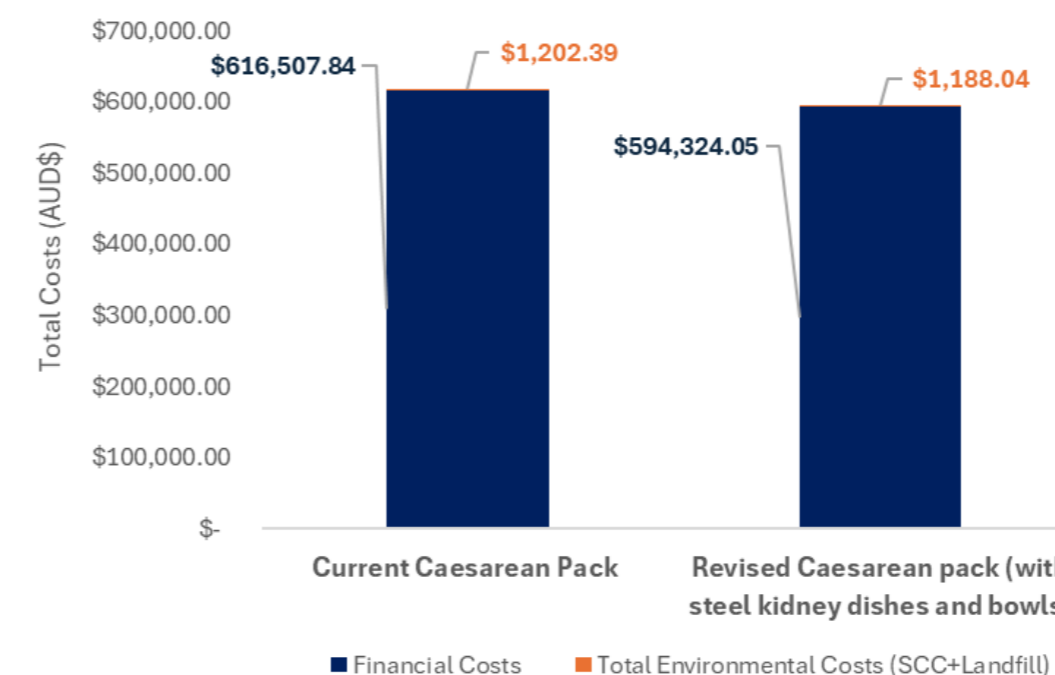
Carbon emissions over 5 years (tonnes of CO₂ eq)



The environmental emissions for RP were **1% lower** compared to the CP.

RP in conjunction with renewable energy for sterilisation, resulted in a **52% reduction** in emissions compared to the CP with coal power.

Cost minimisation analysis over 5 years in AUD \$



Total costs (including both financial and environmental costs) for the RP were found to be **4% lower** than that of the current caesarean packs. The monetised environmental emissions represented a fraction of the total costs.

CONCLUSION

A comprehensive decision-making framework that effectively ranks emissions and costs in the context of cost-minimization analysis for healthcare decision-making is the crucial next step.

REFERENCES

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2. Stiglitz, J., & Nicholas, S. (2017). Report of the High-Level Commission on Carbon Prices. <https://www.connect4climate.org/sites/default/files/files/publications/CarbonPricingReportFinal.pdf>
3. Productivity Commission. (2006). Waste Management. Australian Government Productivity Commission. https://www.pc.gov.au/_data/assets/pdf_file/0014/21614/waste.pdf