Growth and Changing Landscape of the Cost-Utility Literature: An Australian Perspective, 1992-2022

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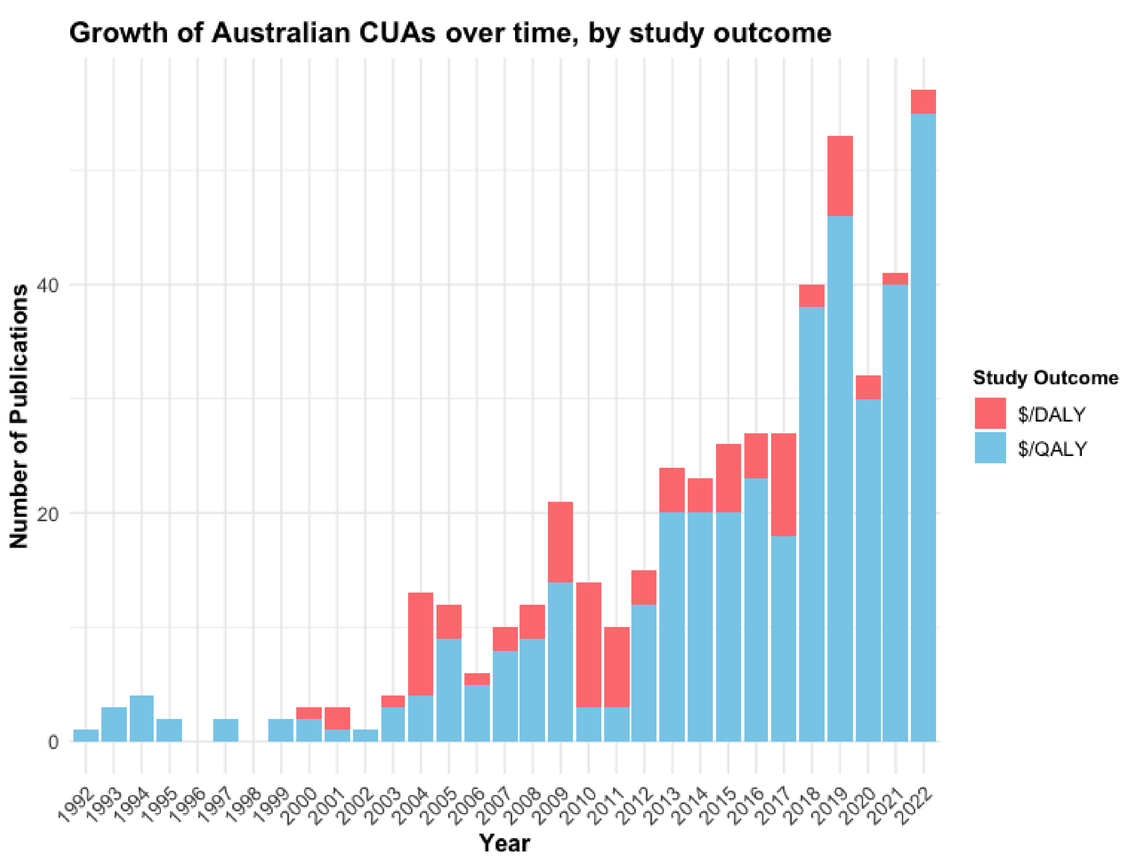
BACKGROUND & AIMS

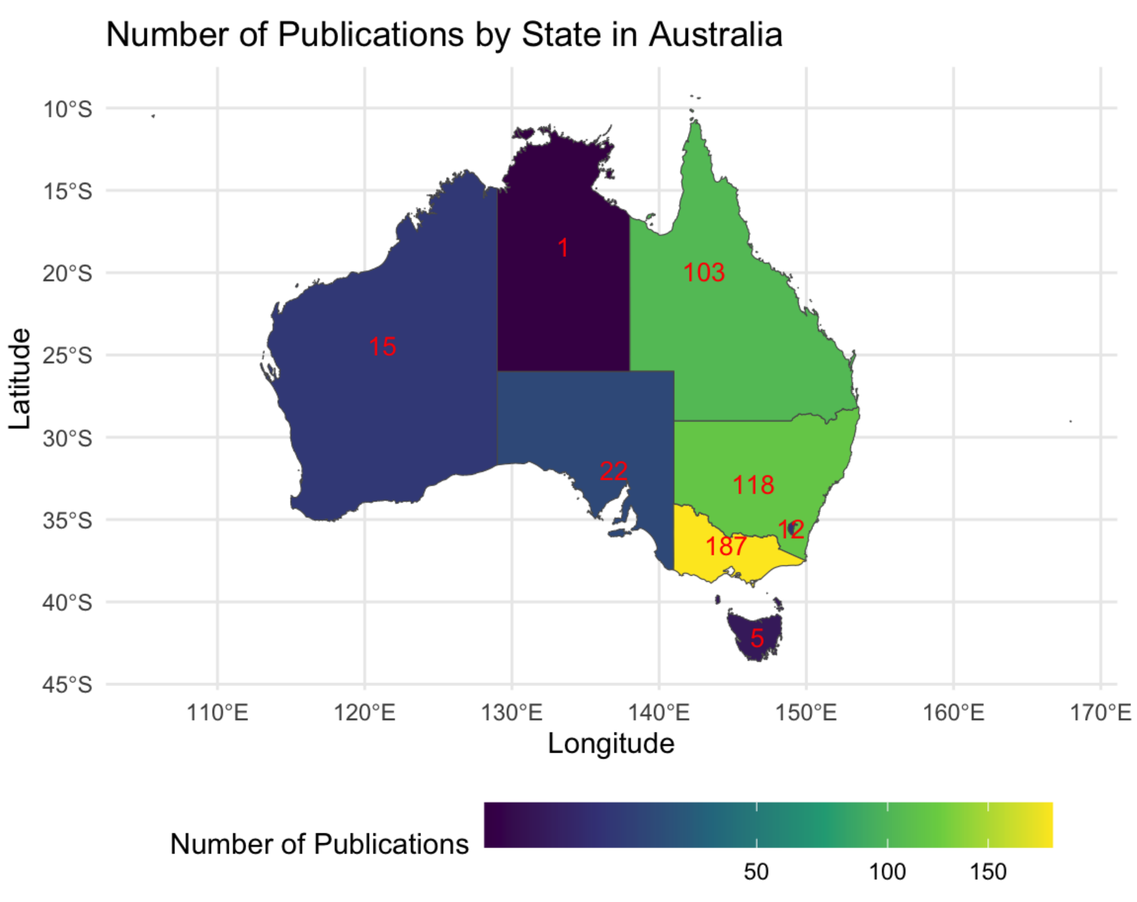
- Cost utility analysis (CUA) measures allows for standardised comparisons across different disease areas and interventions.
- Australia has emerged as a global leader in healthcare economic evaluation, setting widely recognised standards that serve as benchmarks for many countries. Since the introduction of CUA in the 1990s, its methodologies and applications have evolved significantly within the Australian context .
- This paper provides a comprehensive overview of the growth and changing landscape of CUA in Australia over the past three decades.

METHODS

- **Data Source**: the Tufts Medical Center Cost Effectiveness Analysis Registry.
- **Study Selection**: Studies were modelled for Australian populations; Reported outcomes in terms of cost/QALY or cost/DALY; Published from 1992 to 2022.
- **Data Collection**: pre-defined extraction form, including study characteristics, model characteristics, and Incremental Cost-Effectiveness Ratio (ICER) related information.
- **Data analysis:** 1) descriptive summary of study characteristics; 2) Trends over time; 3) Frequencies histograms and other visualisations, including four-dimensional bubble heat maps, to identify changes in the volume and quality of CUAs.

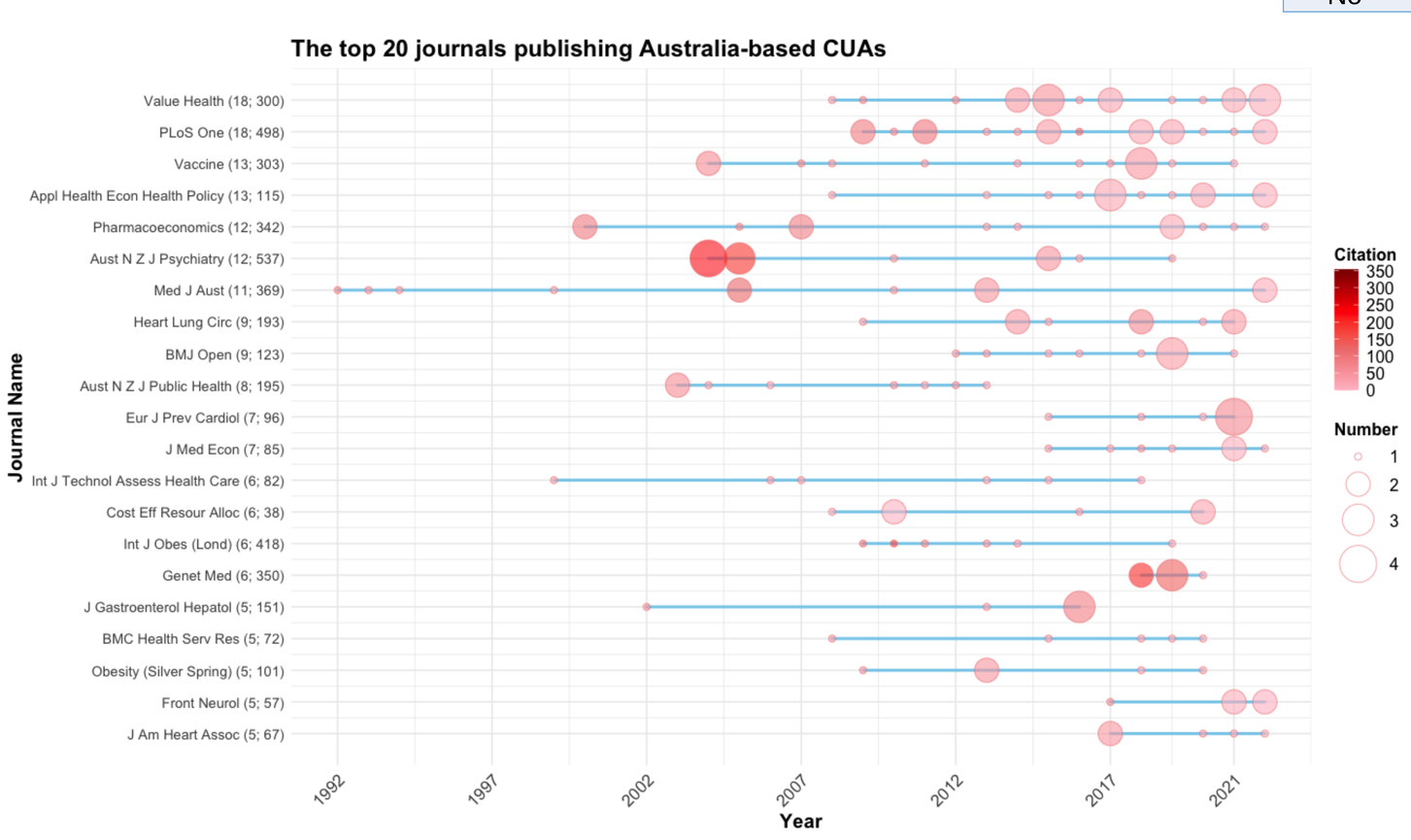
RESULTS





Characteristics of included cost utility analyses

Variable	Count (N=484)	Percentage
Study outcome		
Cost-per-QALY	395	81.6%
Cost-per-DALY	86	17.8%
Both	3	0.6%
Most frequent condition types		
Diseases of the circulatory system	90	18.6%
Neoplasms	67	13.8%
Endocrine, nutritional and metabolic diseases	57	11.8%
Mental and behavioural disorders	50	10.3%
Certain infectious and parasitic diseases	47	9.7%
Most frequent intervention types*		
Pharmaceutical	147	21.5%
Health Education/Behaviour	122	18.0%
Care Delivery	113	16.6%
Screening	68	10.1%
Medical Procedure	45	6.7%
Perspective		
Healthcare payer/sector	353	72.9%
Societal/limited societal	65	13.4%
Both	27	5.6%
Other	23	4.8%
Time horizon, years		
≤1	95	19.7%
(1, 5]	76	15.6%
(5, 10]	61	12.5%
>10	57	11.7%
Lifetime	180	36.9%
Discount rate (costs | outcomes)		
3%	122 | 117	25.2% | 24.2%
3.5%	10 | 8	2.2% | 1.7%
5%	212 | 214	43.8% | 44.2%
>5%	3 | 3	0.6% | 0.6%
Not applicable	106 | 105	21.7% | 21.5%
Willingness to pay threshold, AUD		
≤$28,000	31	6.4%
($28,000, $50,000]	292	59.8%
($50,001, $100,000]	60	11.7%
> $100,000	6	1.2%
Other	25	5.1%
Sponsorship type		
Funding without industry involved	298	61.6%
No study-specific funding	115	23.8%
Pharmaceutical/Medical device industry	71	14.7%
Adherence to CHEERS checklist #		
Yes	73	22.7%
No	249	77.3%



CONCLUSION

This study provides a Registry review of the growth and changing landscape of CUAs in Australia over the past three decades.

The increased volume and quality of CUAs, coupled with the diverse range of health conditions and interventions studied, demonstrate the vital role of economic evaluations in healthcare decision-making.

However, challenges such as the need for standardised reporting, inclusion of non-health impacts, and greater focus on First Nations populations must be addressed. Reevaluating discount rates and WTP thresholds is essential for aligning with international standards and optimising healthcare resource allocation.

This study provides a benchmark for future research and policy development, guiding the next steps in advancing health economic evaluations in Australia.

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