

# Stochastic league tables: communicating cost-effectiveness results to decision-makers

Raymond C.W. Hutubessy , Rob M.P.M. Baltussen, David B. Evans, Jan J. Barendregt, Christopher J.L. Murray

First published: 16 July 2001

<https://doi.org/10.1002/hecl.614>

Citations: 27

## Abstract

The presentation of the results of uncertainty analysis in cost-effectiveness analysis (CEA) in the literature has been relatively academic with little attention paid to the question of how decision-makers should interpret the information particularly when confidence intervals overlap. This question is especially relevant to sectoral CEA providing information on the costs and effects of a wide range of interventions.

This paper introduces stochastic league tables to inform decision-makers about the probability that a specific intervention would be included in the optimal mix of interventions for various levels of resource availability, taking into account the uncertainty surrounding costs and effectiveness. This information helps decision-makers decide on the relative attractiveness of different intervention mixes, and also on the implications for trading gains in efficiency for gains in other goals such as reducing health inequalities and increasing health system responsiveness. Copyright © 2001 John Wiley & Sons, Ltd.

## References

1 Briggs AH, Wonderling DE, Mooney CZ. Pulling cost-effectiveness analysis up by its bootstraps: a non-parametric approach to confidence interval estimation. *Health Econ* 1997; **6**: 327–340.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

2 Briggs A, Fenn P. Confidence intervals or surfaces? Uncertainty on the cost-effectiveness plane. *Health Econ* 1998; **7**: 723–740.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

3 Willan AR, O'Brien BJ. Confidence intervals for cost-effectiveness ratios: an application of Fieller's theorem. *Health Econ* 1996; **5**: 297–305.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

4 Lord J, Asante MA. Estimating uncertainty ranges for costs by the bootstrap procedure combined with probabilistic sensitivity analysis. *Health Econ* 1999; **8**: 323-333.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

5 Stinnett AA, Mullahy J. Net health benefits: a new framework for the analysis of uncertainty in cost-effectiveness analysis. *Med Decis Making* 1998; **18**(Suppl): S68-S80.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

6 Birch S, Gafni A. Cost-effectiveness ratios: in a league of their own. *Health Policy* 1994; **28**: 133-141.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

7 Drummond M, Torrance G, Mason J. Cost-effectiveness league tables: more harm than good? *Soc Sc Med* 1993; **37**: 33-40.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

8 Murray CJ, Evans DB, Acharya A *et al*. Development of WHO guidelines on generalized cost-effectiveness analysis. *Health Econ* 2000; **9**: 235-251.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

9 Murray CJ, Frenk J. A framework for assessing the performance of health systems. *Bull World Health Organ* 2000; **78**: 717-731.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

10 O'Brien BJ, Sculpher MJ. Building uncertainty into cost-effectiveness rankings: portfolio risk-return tradeoffs and implications for decision rules. *Med Care* 2000; **38**: 460-468.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

## Citing Literature



### Citation Statements beta

Supporting  
 0

Mentioning  
 41

Contrasting  
 0

Explore this article's citation statements on [scite.ai](#)

powered by **scite\_**

## **ABOUT WILEY ONLINE LIBRARY**

[Privacy Policy](#)

[Terms of Use](#)

[About Cookies](#)

[Manage Cookies](#)

[Accessibility](#)

[Wiley Research DE&I Statement and Publishing Policies](#)

[Developing World Access](#)

## **HELP & SUPPORT**

[Contact Us](#)

[Training and Support](#)

[DMCA & Reporting Piracy](#)

## **OPPORTUNITIES**

[Subscription Agents](#)

[Advertisers & Corporate Partners](#)

## **CONNECT WITH WILEY**

[The Wiley Network](#)

[Wiley Press Room](#)

Copyright © 1999-2025 John Wiley & Sons, Inc or related companies. All rights reserved, including rights for text and data mining and training of artificial intelligence technologies or similar technologies.

**WILEY**