

# Bayesian Methods in Health Economics

## Author/Affiliation

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Health economics is concerned with the study of the cost-effectiveness of health care interventions. This book provides an overview of Bayesian methods for the analysis of health economic data. After an introduction to the basic economic concepts and methods of evaluation, it presents Bayesian statistics using accessible mathematics. The next chapters describe the theory and practice of cost-effectiveness analysis from a statistical viewpoint, and Bayesian computation, notably MCMC. The final chapter presents three detailed case studies covering cost-effectiveness analyses using individual data from clinical trials, evidence synthesis and hierarchical models and Markov models. The text uses WinBUGS and JAGS with datasets and code available online.

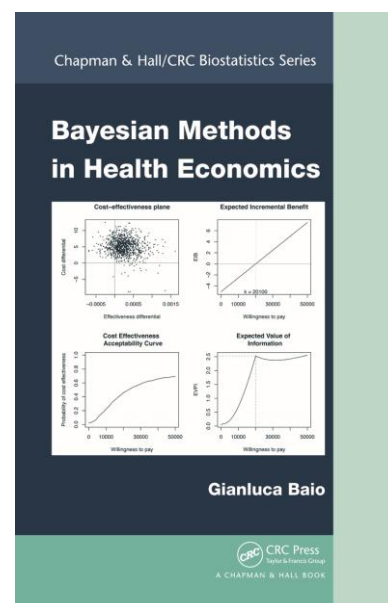
## Key Features

- Provides an overview of Bayesian methods for cost-effectiveness analysis, and includes all necessary background on economics and Bayesian statistics
- Presents three detailed case studies of the cost-effectiveness analysis of health care interventions
- Includes several worked examples to guide through the process of health economic evaluation
- Contains extensive coverage of the practice of making Bayesian analysis integrating software such as JAGS and R, specifically for the application of health economic analysis
- Systematically describes the methodological issues related to the application of Bayesian inference and decision process in health economics
- Designed as a reference for students and practitioners working in the field of health economic evaluations and medical statistics

The book is linked to [code](#) with which to replicate the examples, and an associated R package ([BCEA](#)) can be used in real applications to produce systematic health economic evaluations of Bayesian models.

## Selected Contents

Introduction to Health Economic Evaluation. Introduction to Bayesian Inference. Statistical Cost-Effectiveness Analysis. Bayesian Analysis in Practice. Health Economic Evaluation in Practice.



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