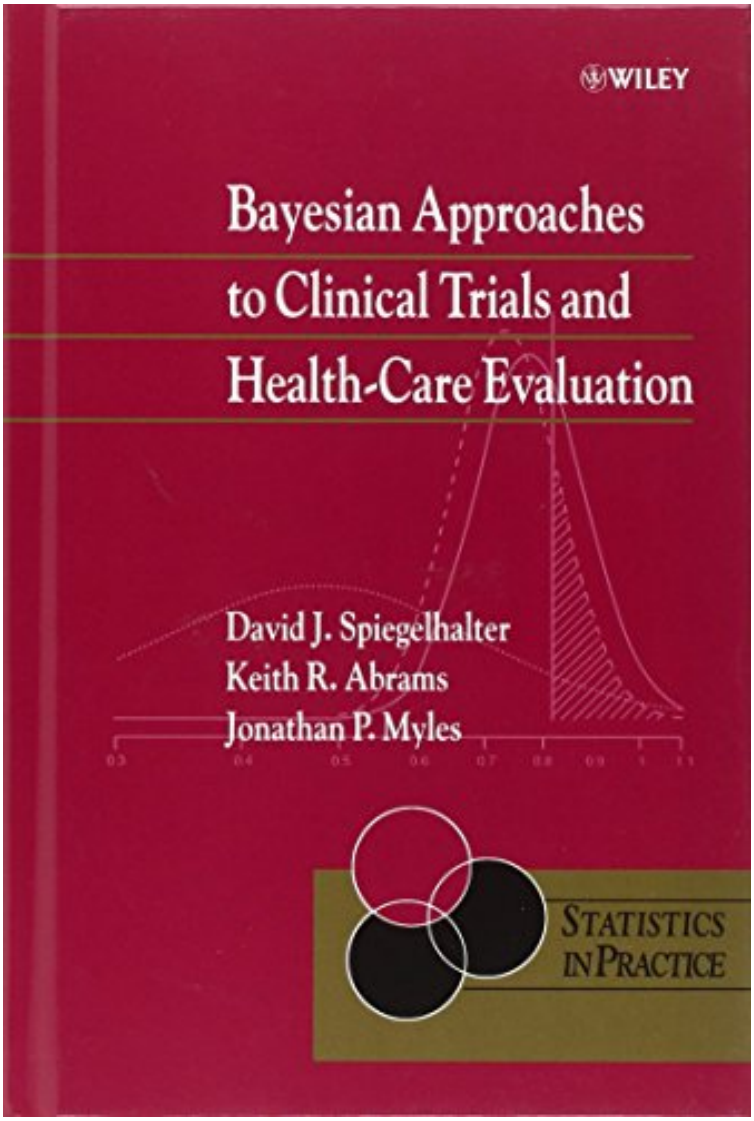
# Bayesian Approaches to Clinical Trials and Health-Care Evaluation

*David J. Spiegelhalter, Keith R. Abrams, Jonathan P. Myles*
*ePub | *DOC | audiobook | ebooks | Download PDF*






#1054315 in Books 2004-01-16Original language:EnglishPDF # 1 9.37 x 1.10 x 6.24l, 1.70 #File Name: 0471499757408 pages | File size: 52.Mb

**David J. Spiegelhalter, Keith R. Abrams, Jonathan P. Myles : Bayesian Approaches to Clinical Trials and Health-Care Evaluation** before purchasing it in order to gage whether or not it would be worth my time, and all praised Bayesian Approaches to Clinical Trials and Health-Care Evaluation:

38 of 38 people found the following review helpful. a welcome new book on an important topicBy Michael R. ChernickClinical research in the US is heavily regulated by the FDA to insure that safe and effective products including drugs vaccines and medical devices come to market and that the clinical trials expose products that either are unsafe, ineffective or both. In recent years with the advent of Bayesian hierarchical models that have posterior

distributions of the model parameters determined by Markov Chain Monte Carlo methods, the FDA has accepted the use of Bayesian approaches in medical devices and there seems to be some progress in the area of pharmaceuticals as well.This book is a welcome addition to the literature on applied Bayesian methods. The authors provide a clear description of the methods and how they can be applied to clinical trials and health economic studies. It is very timely to have such a great reference since industrial statisticians are in need of learning and applying the techniques.9 of 9 people found the following review helpful. Bayes for Health Technology AssessmentBy BCThis is an excellent introduction to Bayesian methods for anyone conducting health technology assessment, meta-analysis, and health economic analysis. Even if you're not a Bayesian, it adds depth and perspective to universal concepts such as statistical power, generalizability, and hypothesis testing. The chapters on cost-effectiveness and evidence-synthesis will be invaluable to anyone conducting pharmacoeconomics models or health technology assessments of pharmaceuticals or medical devices.

READ ALL ABOUT IT! David Spiegelhalter has recently joined the ranks of Isaac Newton, Charles Darwin and Stephen Hawking by becoming a fellow of the Royal Society. Originating from the Medical Research Councils biostatistics unit, David has played a leading role in the Bristol heart surgery and Harold Shipman inquiries. Order a copy of this authors comprehensive text TODAY! The Bayesian approach involves synthesising data and judgement in order to reach conclusions about unknown quantities and make predictions. Bayesian methods have become increasingly popular in recent years, notably in medical research, and although there are a number of books on Bayesian analysis, few cover clinical trials and biostatistical applications in any detail. Bayesian Approaches to Clinical Trials and Health-Care Evaluation provides a valuable overview of this rapidly evolving field, including basic Bayesian ideas, prior distributions, clinical trials, observational studies, evidence synthesis and cost-effectiveness analysis. Covers a broad array of essential topics, building from the basics to more advanced techniques. Illustrated throughout by detailed case studies and worked examples

"This is a terrific book and should be on the shelf of every professional that works in clinical trials or health-care evaluation. It gives a thorough pragmatic introduction to Bayesian methods for health-care interventions, provides many example along with data and software to reproduce the analyses, guides readers to areas where Bayesian methods are particularly valuable, and includes an excellent set of exercises." (Journal of the American Statistical Association, June 2009) "Bayesian Approaches to Clinical Trials and Health-Care Evaluation' is a clear and comprehensive text for biostatisticians who want to understand and apply Bayesian statistical methods to clinical research." (Journal of Clinical Best Practices, Nov 2008) "an indispensable resource for all students and investigators who plan to incorporate Bayesian methods into their research." (The Annals of Pharmacotherapy, January 2005) "...a valuable resource for libraries, and those who are involved in quantitative health care evaluation..." (Royal Statistical Society, Vol.168, No.1, January 2005) "...The technical material is presented in an accessible style, and the examples given clearly illustrate the principles under discussion..." (Short Book s, Vol.24, No.3, December 2004) "...Bayesian analysis seems set to reach a wider audience with the publication of [this] introductory level text..." (Financial Times, 16 April 2004) "...very well laid-out and easy to follow...a very good resource for teaching students..." (Statistical Methods in Medical Research, Vol 14, 2005) "I would use with pleasure and interest this book as a textbook..." (Metron Journal, Vol.63, No.2, 2005) "...I can pay the authors no higher tribute than to say that I would be proud to have written this book. It is elegant and it is destined to becoming a classic in the field." (Statistics in Medicine, 15th July 2005) "...a generous supply of exercises...I recommend it very highly..." (Clinical Trials, No.1 2004) "...Bayesian analysis seems set to reach a wider audience with the publication of [this] introductory level text..." (Financial Times, 16 April 2004) "...a generous supply of exercises...I recommend it very highly..." (Clinical Trials, No.1 2004)From the Back CoverThe Bayesian approach involves synthesising data and judgement in order to reach conclusions about unknown quantities and make predictions. Bayesian methods have become increasingly popular in recent years, notably in medical research, and although there are a number of books on Bayesian analysis, few cover clinical trials and biostatistical applications in any detail. Bayesian Approaches to Clinical Trials and Health-Care Evaluation provides a valuable overview of this rapidly evolving field, including basic Bayesian ideas, prior distributions, clinical trials, observational studies, evidence synthesis and cost-effectiveness analysis. Covers a broad array of essential topics, building from the basics to more advanced techniques. Illustrated throughout by detailed case studies and worked examples. Includes exercises in all chapters. Accessible to anyone with a basic knowledge of statistics. Authors are at the forefront of research into Bayesian methods in medical research. Accompanied by a Web site featuring data sets and worked examples using Excel and WinBUGS - the most widely used Bayesian modelling package. Bayesian Approaches to Clinical Trials and Health-Care Evaluation is suitable for students and researchers in medical statistics, statisticians in the pharmaceutical industry, and anyone involved in conducting clinical trials and assessment of health-care technology.