

RESOURCE CORNER

Hunink M, Glasziou P. **Decision Making in Health and Medicine. Integrating Evidence and Values.** Cambridge: Cambridge University Press; 2001.

Decision Making in Health and Medicine supersedes the highly respected text, *Clinical Decision Analysis*, by Weinstein, Fineberg, Elstein, and colleagues published in 1980. Its main purpose is to provide insights and tools that can aid decision making in health care. In this, like its predecessor, it eminently succeeds. The flyer makes the bold claim that the user-friendly text will help everyone involved in health care and medical decision making, specifically practitioners, trainees, and students studying clinical decision analysis, evidence-based medicine, and clinical epidemiology. Although a little hyperbole is to be expected, this description has serious potential to mislead. Despite being extremely well written and structured and furnished with a wealth of supporting information on the accompanying CD-ROM, size alone makes the book an inappropriate place to start for those wanting an introduction to decision support techniques. It is appropriate as a text to support attempts to do decision analysis. Some familiarity with the concepts of decision analysis are required to make the most of this book.

There is no information on how the resource was compiled, although such information would be unusual for a methodological publication. It is debatable just what it might have added and whether greater explicitness might be appropriate for future editions. However, it was frustrating that the tools described had changed from those in Weinstein and colleagues' *Clinical Decision Analysis*, and there was no discussion on what prompted these changes.

The book contains 12 chapters:

“Elements of decision making in health care” is an initial overview

“Managing uncertainty” explores the fundamental rules of probability and the concept of expected utility

“Choosing the best treatment” explains the use of decision trees to determine the best treatment under conditions of diagnostic uncertainty

“Valuing outcomes” outlines utility assessment

“Interpreting diagnostic information”; “Deciding when to test”; and “Multiple test results” deal with sequentially more sophisticated tools concerning decisions relating to tests, starting with Bayes' theorem

“Finding and summarizing the evidence” discusses tools for identifying the best available data and managing their limitations

“Constrained resources” introduces the tools of cost-effectiveness and cost-utility analysis

“Recurring events” and “Variability and uncertainty” are 2 chapters introducing modelling techniques, including Markov models and Monte Carlo simulation

“Proactive decision making: a way of life” concludes by revisiting the steps of clinical decision making represented by the PROACTIVE mnemonic

The accompanying CD-ROM contains solutions to exercises (the approach to imminent Markov madness in chapter 10 is particularly appreciated!), decision analytic software, examples of the decision models, supplementary materials including useful spreadsheets, and references with abstracts.

This is not a resource designed to directly provide clinically useful answers. But such answers would undoubtedly flow from clinicians or policymakers equipped with the skills the book seeks to impart. It is difficult to dip into without a clear overall understanding of the subject, but this might well be gained initially by reading the book in its entirety. In contrast to many textbooks, the readability, effective structure, and well-chosen illustrative examples make such a cover-to-cover journey feasible. I will certainly use the resource and will recommend it to Master's level students—I do not anticipate much use at the undergraduate level. Given the growing importance of the tools described in this book, the need for an introductory text or article suitable at the undergraduate level is highlighted.

Decision Making in Health and Medicine is an excellent resource dealing with the conduct of increasingly important and ubiquitous decision aids, but is not suitable as an introduction to them.

Decision Making in Health and Medicine can be purchased online at www.us.cambridge.org for U.S. \$65.00.

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Meyer D. **Essential Evidence-based Medicine**. New York: Cambridge University Press; 2004.

Essential Evidence-based Medicine is of interest to both basic and advanced students of evidence-based medicine (EBM). The book has 31 chapters and 6 appendices and comes with a CD-ROM. Each chapter starts with several learning objectives and a brief paragraph summarizing the content of the chapter. The first 10 chapters deal with basic epidemiology, including such topics as searching the medical literature, different types of medical literature, study design, strength of evidence, precision and validity of instruments, types of bias, basic statistics, and principles of hypothesis testing. Chapters 11 to 17 address critical appraisal and use of articles on therapy. Chapters 18 to 26 discuss evidence-based diagnosis, including usefulness of diagnostic tests, screening tests, likelihood ratios, receiver-operating characteristic curves, Bayes' theorem, and the critical appraisal of diagnostic articles. Chapters 27 to 31 deal with prediction rules, decision analysis, outcome analyses, cost-effectiveness analysis, and meta-analysis. The book contains 39 tables and 118 figures that highlight key points in the chapters.

The accompanying CD-ROM contains multiple-choice questions, short essay questions, and questions requiring calculations and filling out a worksheet. The exercise is interactive and prompts the reader to check the correct answer.

Essential Evidence-based Medicine has an extensive bibliography of relevant references, including other EBM textbooks, and lists important free Web sites related to EBM. The appendices provide additional information, especially grades of evidence, formulas, and critical appraisal questionnaires.

The author is an EBM expert who provides an excellent overview and practical approach to the topic. The book includes a history of medicine and statistics and a thought-provoking essay on what constitutes EBM. Several chapters are dedicated to topics that would normally require reading in additional textbooks, thereby making this an all-in-one resource.

The narrative text of chapters, clinical relevance of the topics, and user-friendly layout make reading this book a pleasure. The chapter on literature searching provides a useful description of MEDLINE and PubMed. The author has taken elaborate care in dedicating separate chapters to number needed to treat, risk assessment, screening tests, and uses of diagnostic tests, which makes reading easy and explains the concept of using EBM in clinical practice. Separate chapters also address evaluation of negative studies and sources of errors in clinical encounters. The chapters on decision making and Bayes' theorem provide a detailed review of the tenets of clinical decision making with its uncertainties and details of probabilistic reasoning.

When we used the SQ3R study method (Survey, Question, Read, Recite, Review) to peruse the contents of each chapter, we found that by converting the headings into questions, we could read each of the paragraphs to answer the question. Students could recite the answers, write key points, and review their notes to revise major points quite easily from the information presentation in this book.

Several chapters on instruments and measurements, incremental gain, and the threshold approach to diagnostic testing, multivariate analysis, type II errors, cost-effectiveness analysis, and outcome analyses may be reserved for advanced learners.

A few limitations are worth noting. In an attempt to combine such a vast amount of information into one book, a few chapters tend to be lengthy. Chapters on the uses of diagnostic tests and sources of bias could be improved by the addition of tables. Finally, despite the book's 2004 publication date, there are few general references more recent than 2002.

In summary, the text is well organized and offers comprehensive information on EBM that would serve both basic and advanced students.

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Essential Evidence-based Medicine can be purchased online at www.us.cambridge.org for U.S. \$34.99 (softcover) and \$80.00 (hardcover).

Ratings:

Methods: ★★☆☆☆

Clinical usefulness: ★★★★★☆