Critical Appraisal of Epidemiological Studies and Clinical Trials

This book presents a logical system of critical appraisal, to allow readers to evaluate studies and to carry out their own studies more effectively. This system emphasizes the central importance of cause and effect relationships; its great strength is that it is applicable to a wide range of issues, and both to intervention trials and observational studies.

The logical system presented in this volume unifies the often different approaches used in epidemiology, health services research, clinical trials, and evidence-based medicine, starting from a logical consideration of cause and effect. The author’s approach to the issues of study design, selection of subjects, bias, confounding, and the place of statistical methods has been praised for its clarity and interest. Systematic reviews, meta-analysis, and the applications of this logic to evidence-based medicine, knowledge-based health care, and health practice and policy are discussed. Current and often controversial examples are used, including screening for prostate cancer, publication bias in psychiatry, public health issues in developing countries, and conflicts between observational studies and randomized trials. Statistical issues are explained clearly without complex mathematics, and the most useful methods are summarized in the appendix.

The final chapters give six applications of the critical appraisal of major studies; randomized trials of medical treatment and prevention, a prospective and a retrospective cohort study, a small matched case-control study, and a large case-control study. In these chapters, sections of the original papers are reproduced and the original studies places in context by a summary of current developments.