BOOK REVIEWS


Anyone in this field expecting to learn anything much or to be excited by this 60 page booklet is likely to be disappointed, and even depressed. Those outside the field may well be bored. The subtitle implies that it will review the evidence and one expects it to emerge with some crisp, well supported conclusions, or at least some critical discussion of the serious evidence. The fact that it does neither of these things is not all the fault of the authors: it may be a hallmark of the subject or the genre.

The "evidence" is contained in a reference list of about 270 items, which are mostly uncritically discussed. Only a little over half of these are from peer-reviewed journals, of which nearly a half in turn are ten years old or more. The rest are from reports, leaflets, and books, three quarters of them from official government or similar reports, with the usual liberal common denominator flavour characteristic of most of these "official" committee products, which rarely contain much evidence.

The first quarter of the booklet is preamble and introduction. This is followed by a section on lifestyle in pregnancy, in which the account of smoking, alcohol, and addictive drugs is straightforward enough but scarcely new. The section on maternal diet manages to steer mercifully clear of most of the vociferous but cranky minority views we hear so often, which are not evidence anyway. It leads to the probably correct conclusion that apart from vitamin D deficiencies nothing said to recommend to the overwhelming majority of pregnant women in contemporary Britain. Even the underprivileged tiny minority, although theoretically short on RDAs, are almost unexceptional in their diet. By 1995 they are not doing better.


The advent of powerful personal computers and good quality statistical packages to run on them has made it easy for those engaged in small scale research to use them. However, in cutting out the statistician middleman there is the danger of blunders.

The authors of this book aim to help their readers approach data handling and simple data analysis competently.

This work is not tied to any particular model of personal computer or data analysis package. It gives an account of how to organise data and how to select and apply appropriate analytic techniques. It is left to the reader to consult his data analysis package's manual to find out how to implement the analyses. The emphasis is on understanding when to apply a technique, how to interpret the results and what can go wrong which could be encountered. Topics covered include: data preparation and summary; analysis of data from one or more groups (leading to analysis of variance); regression and correlation; distribution free methods; handling categorical data; methods for diagnostic tests; survival analysis (introducing Cox regression); sample size and power; and writing up the statistical analysis in a scientific report. There is also a brief review of five commonly used statistical packages. The prose is lucid and gives an accurate account of the techniques discussed.

The work appears initially to have been conceived with pathologists in mind and many of the examples reflect this. However, its content and presentation should be acceptable to anyone in the clinical disciplines. Used by itself this book stands on its own. It covers all the needs of those engaged in epidemiological research.

In terms of its stated purpose, this book can be recommended with reservations. Even with the authors' clear guidance many of the techniques, such as regression analysis, which nowadays are computationally straightforward, nevertheless require considerable sophistication and experience to be used properly. Hence the book might best be used in conjunction with an elementary statistics course. However, standing alone it would be useful to undergraduate students and analyses presented in published papers.

It is a pity that there is a plethora of books that seem to imagine that data arise from thin air and give the impression that their analysis can be undertaken without much thought to their provenance - that is, the conceptions which led to the study, the underlying theoretical framework, the study design, and the measurement procedures. Data analysis, or perhaps more accurately data processing, might have been reduced to a simple task using a personal computer but there is a danger that many will not come to understand the broader art and science of designing, undertaking, analysing and interpreting studies. This danger is particularly so for the kind of people attracted to books of this type. By all means use it but as, by definition, you will be a beginner, do consult a professional at the planning stage of your study.

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Epidemiology does not exist for the gratification of its practitioners. It is justified when its findings influence disease control and political policy. The public is not committed to the concepts and the terms used to express them should be accessible to members of the many disciplines that consume epidemiological findings. Furthermore, the terms should be used consistently.

Publication in 1983 of the first edition of the dictionary marked the coming of age of epidemiology. Its practitioners had moved toward agreement on their technical terms and hence it might be expected that the publication of a second edition would be a considerably easier task. Further terms were added, however, and the dictionary was expanded and brought up to date. The revised edition is a considerable achievement.

Publication of the third edition of the dictionary contains almost 300 new entries and revisions of previous entries. Because the boundaries of epidemiology and other disciplines are not closely defined, the scope of the entries has increased and there is improved coverage of infectious disease epidemiology and control, health promotion, genetics, informatics, health economics, and biomedical ethics. The definitions have been referenced to current research and authoritative texts, and the dictionary is intended for students, epidemiologists, and many experts. For the most part they represent a consensus view.

In the preface to the second edition the editor expresses the hope that the dictionary will be "authoritative without being authoritarian". A scan through the definitions of the third edition quickly confirms the authoritative nature of the work. There are few definitions with which one would quibble and barely any with which one could not live. Indeed, perhaps the time has come for those who teach epidemiology to set aside their favourite but idiosyncratic definitions and proselytise those from the dictionary in an authoritarian manner; the first edition of the dictionary was most helpful to me in resolving the confusion students had with the variety
of definitions of measures of attributable-risk found among the textbooks. This is a very important work. Practitioners and students of epidemiology and related disciplines would be well advised to have it easily at hand for ready reference. The epidemiological community must surely owe a great debt to Professor Last, his editorial colleagues and the many others who contributed. A fourth edition is planned. In the meantime we must keep the language of epidemiology precise and alive.

A S ST LEGER
Associate Editor JECH

This comprehensive book on pharmacoepidemiology involves the contributions of 59 authors, edited by the editor Brian Strom. The book aims to be both a reference source and a textbook, and it indeed fulfills both roles admirably. For those new to the subject area there is a thorough introduction section which forms part 1 of the book defining "what is pharmacoepidemiology?". This discusses when studies should be conducted and what study designs are available. There are also a couple of very practical chapters on the basic principals of clinical pharmacology which are relevant to the pharmacoepidemiologist, and a section on sample size considerations which is supplemented by tables as an appendix to the book. Part 2 of the book includes perspectives on pharmacoepidemiology from academia, industry, regulatory agencies, and the court room. These sections are all written by authors from the United States and relate almost exclusively to that country. This is particularly true about the chapter on legal aspects. A substantial amount of the book is devoted to reviewing the systems for collecting information on drug use which are available for conducting studies. This section is more international, including a chapter on substance reporting systems outside the United States and whole chapters devoted to data collection systems in, for example, Scotland, The Netherlands, and Canada. Of particular interest to those already working in the area will be section 4 which considers specific methodological issues in the field including economic evaluation of pharmacoeuticals, quality of life measurements, n-of-1 randomised clinical trials, and the use of meta-analysis. There is a particularly clear and well written chapter on the important issues of confounding. Finally, the editor devotes a chapter to his personal views of the future of the subject.

This is a quite superb book, useful to both the novice and the experienced epidemiologist alike. It is well laid out and written in a style which makes the reading enjoyable. I could find few typographical errors and the index is extensive. For those working the area, and especially if only intermittently, this will be an invaluable source of information and one well worth persuading your local librarian to purchase.

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This is one of a series of multi-author American texts which have covered various aspects of addictions, the subject here being the role of alcohol and drugs in causing accidents.

All chapters consider alcohol, and the main themes are the prevalence of alcohol use prior to car, air, or aquatic accidents, mechanisms of adverse effects of alcohol on performance, preventative strategies, and clinical treatment of offenders and at risk individuals. There is some consideration of the effectiveness of media campaigns, while drinking is examined in various sections, from adolescent issues through to the effectiveness of clinical treatment and novel measures such as car ignition devices which can check blood alcohol levels. Other aspects right up to date include the issue of liability of barpersons who have served intoxicated individuals. There are the usual overwhelming statistics linking alcohol use to driving impairment, but much of the work reviewed here suggests some hopeful signs emerging from changing attitudes and behaviors. As in alcohol and drug abuse generally, prevention is clearly preferable to having to resort to clinical treatment. The problems of young people receive attention, ranging from situations such as having to ride home with an impaired driver, to the particularly reckless driving behaviours where alcohol abuse is associated with other deviant characteristics.

Given that only one drug is considered here, cocaine is a good choice. Crack cocaine is strongly associated with violence given the acutely psychotic effects, the nature of the withdrawal effects, and the high stakes in dealing and criminal activity. Its contribution to American murder rates and rates of accidental injuries is re-examined here along with some clinical aspects.

There is much interesting information on alcohol and accidents contained in this book, and anyone involved with the subject in administration or other capacities is likely to find a better reference source.

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This book contains the findings of the major study undertaken by the WHO European Centre for Environment and Health. The centre was asked during the preparation for the Second European Conference on Environment and Health, held in June 1994, to assess all aspects of environmental health in the European Region. The comprehensive report outcome of this assessment is contained in this report, which is unique in that it presents for the first time a Europe-wide picture of environmental health, set out in a readily readable and accessible form within one volume.

The 19 chapters are divided into three parts. The first introduces and discusses the factors influencing the state of the environment, such as economic activity and environmental management, as well as profiling the state of human health across Europe. The middle section presents and discusses the detail of the nature and extent of environmental exposure, with the final chapters concerned with analysis, discussion and the recommendations of the findings of the survey.

This publication merits more than a casual glance, it is a useful source of reference which will be of value to a range of personnel for a range of purposes. Whether your interest is in the extent of acid deposition in the WHO European Region, or in obtaining data about the effects on health of environmental exposure then this publication will be of value.

As the foreword states "this report is intended to be of assistance in rational decision making, so that real priorities may be identified and limited resources efficiently utilised." I think it ably provides that assistance.

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This stimulating book reminds us how limiting can be the vision of even such an exciting construct as the human genome. Variability and plasticity are defined biologically as "evolutionary processes additional to natural selection by which organisms achieve long-term adaptation to their environments". As Gar- ruto remarks, "it is one of the few remaining multi-disciplinary sciences in today's re- ductionist scientific world." Rich sources for the investigation of plasticity have been the changes in anthropometrics and behaviour of populations, especially migrant populations. Most familiar to medical epidemiologists will be the changes in morbidity and mortality to be found in such communities as Japanese Americans. However, the concepts of variability and plasticity provide a richer substrate in which the work of such as Barker, on the long-term effects of maternal nutrition, may be seen.

In "reductionist" terms we are thus in the world of biological bias and confounding. As another author, Schell, observes, "barriers to use (of the adaptability paradigm) include non-standardised terminology . . . . " Paraadoxically, this confusion, looked at from "outside", may offer us the chance of developing a sophisticated way of understanding variables which create "noise" in our scientific studies. This is perhaps not the intention of the book but may nevertheless give it a wider readership!

Whilst the ideas are stimulating, the language, as has already been remarked, has something of Lewis Carroll's Red Queen in it and also suffers at times from almost impenetrable sophistication. The authors' aims may explain why another theme running through the text is that of valedictory for the seeming demise of a subject which offered so much and yet appears to have influenced so little.

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