

Books & Electronic Media

Official health statistics — an unofficial guide

Edited by Susan Kerrison & Alison Macfarlane. Published in 2000 by Edward Arnold Limited (www.arnoldpublishers.com), London, England. ISBN 0-340-73132 X, price: £16.99.

“Official statistics” is a label usually applied to any data collection or compilation, with or without accompanying qualifications, analysis, interpretation or description, which has been produced by an agency of government or others acting directly on behalf of government. Indeed, the term “statistic” originally meant state-related, and came into use in the 18th century with the practice of collecting large data sets for use by the state. In that context, the title of this book might be considered misleadingly broad; it is not a guide to collections of health data undertaken by governments or international organizations which collect such data from governments. It is, rather, a guide to the official health statistics produced and used inside the United Kingdom. This limitation in scope is not immediately apparent, although a paragraph on the back cover does reveal that it is about England, Wales, Scotland, and Northern Ireland. So, seekers of a guide to official health statistics and their sources in the broader sense will not find much assistance here.

However, this book provides a valuable and in-depth overview of the situation regarding official health statistics in the United Kingdom. The editors’ inclusion of topics under the rubric of health statistics is satisfyingly broad, ranging from traditional subjects such as basic vital statistics and hospital morbidity to issues of health care and population morbidity, including occupational illness, disability, and environmental pollution effects. They have included coverage of statistics dealing with a variety of measures such as social class, ethnicity, poverty, housing, diet, unemployment, and social services as correlates of health. In fact, the range of data is sufficiently broad to make this guide a very useful tool for the potential health data user, especially since the sources of these statistics are spread widely amongst various ministries and departments of the government.

That this is “an unofficial guide” is not surprising since it is unlikely that any single focal point within government would have the awareness, expertise or mandate to pull all of this information

together. Instead, the editors have assembled a group of authors from academia, government and the private sector, each with special knowledge about their assigned topic.

A publication written by a large number of unrelated authors might suffer from uneven treatment of topics, but in this case the contributors were each asked to answer four questions about their subject areas: what data are collected? How are they collected? Where they are published? What are their strengths and limitations? This minimizes the unevenness of treatment between chapters, though the last question was interpreted in different ways. Some authors focused on the weakness of the data set or its inability to respond to important questions, while others dealt more with the quality and completeness of the data.

The guide lists the main publications in which the data appear, and provides contact addresses and websites from which further information can be obtained. These sources alone might save a seeker of health information much time and effort.

The intended readers of this publication are postgraduate research students in epidemiology, social policy and medical statistics; undergraduates studying health care, health policy, sociology and social work; and professionals involved in management and policy-making in health and social services. This publication provides them with valuable information on the availability of official statistics for planning and evaluating health programmes in the UK.

Of course, the availability of data, even high quality data, is no guarantee that they will be correctly applied to the questions at hand, or that appropriate conclusions will be drawn. The user of statistical data needs to understand not only the “how” and “why” of those data but their biases and weaknesses. This guide aims to assist in that respect. The editors and contributors have taken steps both to increase awareness of the existence of health-related data and to improve their appropriate use. An underlying theme throughout the book is “caveat emptor”: it is the buyer’s responsibility to check the quality and suitability of the goods. ■

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Biomarkers in cancer chemoprevention

Edited by A.B. Miller, H. Bartsch, P. Boffetta, L. Dragsted, & H. Vainio. Published in 2001 by International Agency for Research on Cancer, Lyon (IARC Scientific Publications No. 154). ISBN 92 832 2154 0, price: US\$ 30.

Clinical trials to evaluate chemopreventive agents usually require large study populations and long-term commitment of resources; this is because cancer is an infrequent event, and because clinically overt disease may take many years to develop. Biomarkers are cellular, biochemical, molecular, or genetic alterations measurable in biological media. They may be used to identify individuals who are at increased risk for cancer, resulting either from exposure to exogenous or endogenous carcinogens or from certain genetic susceptibilities, thus enabling chemoprevention studies to be carried out in smaller high-risk populations and still have adequate statistical power to detect intervention effects. In addition, because cancer can arise through multiple pathways that may proceed in parallel at different rates in various types of cells, identifying and characterizing the cellular, biochemical, molecular, and genetic events involved in these pathways is critically important to the rational evolution of effective chemoprevention strategies. The development of valid intermediate-effect biomarkers that are part of the cancer pathways and causally related to cancer, and could thus serve as surrogate endpoints for clinical disease, would make it possible to carry out chemoprevention trials in less time than is currently feasible. The potentially important role of biomarkers in chemoprevention research is well recognized by the scientific community.

The editors of this book have compiled a list of chapters based on an international workshop — Use of Biomarkers in Chemoprevention of Cancer — held in Heidelberg, Germany, in February 2000, to assess the current state of knowledge regarding biomarkers indicative of either exposure to carcinogens or individual susceptibility and intermediate-effect biomarkers predictive of overt clinical cancer, relevant to their use in cancer chemoprevention. The text covers topics ranging from basic principles of biomarkers to epidemiological criteria for surrogate endpoints to application

of biomarkers in chemoprevention. In the first chapter, the book presents the consensus report of the workshop, which clearly defines exposure biomarkers, intermediate-effect biomarkers, and susceptibility markers in the context of chemoprevention, discusses appropriate examples and issues, and highlights the workshop recommendations. This chapter, along with introductory chapters on the utility of biomarkers as surrogate or intermediate end-points for monitoring the efficacy of chemopreventive agents and on the contribution of epidemiology to the selection and validation of biomarkers (specifically, DNA adducts) for chemoprevention, nicely lays the groundwork for readers who may need clarification regarding the basic principles important to this research area. For example, Kensler and colleagues have meticulously set forth experimental and statistical criteria relevant to useful biomarkers, including the concepts of reliability, precision, accuracy, and validity. Also, they have provided a classification scheme that relates the degree of surrogacy of a biomarker — that is, the degree to which the effect of an intervention on disease is reflected in the modification of the biomarker — to its usefulness in preventive interventions. The remainder of the book is thoughtfully organized according to major cancer sites — skin, colorectum, breast, prostate, liver, and upper aerodigestive tract — with individual chapters focusing on biomarkers of exposure, intermediate effect, and susceptibility for cancers at each of these sites. Its contents reflect the continually increasing research emphasis on genetic susceptibility and address the contributions of both high-penetrance susceptibility genes associated with familial cancer syndromes (e.g. APC, MMR genes, BRCA1, BRCA2) and low-penetrance susceptibility genes, such as those involved in the oxidative metabolism and conjugation of carcinogens (e.g. CYP, GSTM1, NAT2). A number of the chapters include informative figures and tables that are valuable additions and enhance the readability of the text, and all of the chapters are well referenced, which is convenient for readers who wish to examine any of the topics further.

Several contributors throughout the book have described and used a variety of biomarkers in chemoprevention trials and proposed them as potential surrogate end-points for cancer. Realistically, however, relatively few biomarkers are likely to achieve this status, because of the complex mechanisms associated with carcinogenesis and the limited capability of a single biomarker to reflect the collective impact of multiple chemo-

preventive effects on disease outcome. It is likely that future studies will employ a panel of biomarkers as the surrogate end-point, an approach that will require additional biological studies and insights.

We acknowledge that research on biomarkers is moving forward rapidly and, thus, when a book such as this is published, the information presented might no longer be on the “cutting edge”. Nevertheless, led by the outstanding editorial committee and the contribution authors, some of whom are pioneers in chemoprevention research, this book should serve as a useful resource for many scientists, particularly those who may not be actively engaged in chemoprevention research, but who wish either to gain basic information about biomarkers in chemoprevention or to keep up-to-date regarding relatively recent developments in this promising area of research. Further, because this book captures the essence of the international workshop upon which it is based, it will help to document the evolution of cancer chemoprevention research and, from that perspective, can be viewed as a valuable addition to previously published texts. ■

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The professor and the madman — a tale of murder, insanity and the making of the Oxford English Dictionary

By Simon Winchester. Published in 1999 by HarperCollins, New York. ISBN 0-06-099486-X, price: US\$ 13.

This account of a strange element in the making of the Oxford English Dictionary (OED) is not scientific or recent (first published in 1998), but is worthy of a corner in the *Bulletin's* rare Books & Electronic Media section. It offers several illuminating perspectives on mental health care, the imperialistic pretensions of the English language, and manic commitment to a big project.

The professor is Sir James Murray, editor of the OED from 1879 to 1915, 36 years during which he brought out several volumes of it. The madman is William Minor, a paranoiac schizophrenic American ex-army doctor. During his 38 years as an inmate of the Asylum for

Criminal Lunatics in Broadmore, England, he contributed many thousands of quotations to the Dictionary. He had been sentenced to this asylum for shooting a man dead in London, mistaking him for one of his Irish persecutors.

A possible contributing factor to Minor's madness was trauma and guilt at having obeyed orders to brand an Irish deserter with the letter C (for coward) on his cheek, during the American Civil War. At night, vengeful demons tormented Minor in unspeakable ways, but for much of the time during the day he was mild, intelligent and scholarly.

As he came from a wealthy family and had an army pension to live on, he could afford to turn one of his two large cells into a library, with teak shelving from floor to ceiling, and collect rare books. The OED is built on the system of providing quotations to illustrate the changing meanings of a given word, starting with its first known occurrence in writing, and proceeding with at least one quotation per century. Volunteers were recruited to read through books looking out for catchwords, and copying out the sentences in which they occurred, providing full bibliographic details for each sentence. Minor turned out to be one of the most assiduous and talented of these volunteers, often sending in dozens of impeccably written out and entirely apposite quotations a day.

Murray, himself manic about the project and with an obsessive craving for linguistic knowledge in general, appreciated Minor's excellent work and used to enjoy visiting him at Broadmoor and having good long chats about philology with him.

There is not a great deal more to this story, and Simon Winchester is hard pressed to spin it out for 240 pages (or a 7½ audio tape), picking cherries from desultory research on mental health, American history, nineteenth century England and the history of dictionaries, supplementing them with lush or lurid imaginings of his own and quaint extracts from the OED (not a bad recipe for a bestseller, come to think of it). But it is a tale worth lingering over. It reflects in an intriguing way on how friendship, work and an intellectual project can make life worth living in the most improbable circumstances. ■

Desmond Avery, *Bulletin*