

BOOK REVIEWS

The Strategy of Preventive Medicine. By Geoffrey Rose. (Pp 138; £17.50.) Oxford: Oxford Medical Publications. ISBN 0-19-262125-4.

During the past decade, Professor Rose's articles about the "high risk" and "population" strategies of disease prevention have attracted considerable attention. This book is a development of the same themes, but it is not merely a restatement of the earlier ideas.

The book begins with a brief discussion of the objectives of preventive medicine. The author then shows how the rational choice of preventive policy depends on a knowledge of the shape of the dose-response relationship between exposure and risk (whether linear, curved or J shaped) and the distribution of exposures within the population. The particular importance of small but widespread risks and the limitations of a preventive policy addressing only individuals at high risk are given detailed attention. The core of the book deals with the population strategy of prevention, which the author regards as critical in the prevention of mass disease. This section discusses at length a pair of crucial assumptions underlying the population strategy, namely that the average level of exposure to risk in the population (whether of plasma cholesterol or alcohol intake) determines the prevalence of very high risk exposures and that shifts in the average value will influence that prevalence. The closing sections of the book examine the influences which can produce population wide changes in risk and the practical and ethical difficulties of attempting to bring such changes about. These issues are simply but skilfully discussed and address the political issues without risking the charge of authoritarianism. The book includes numerous practical examples. While many are from the field of cardiovascular epidemiology in which Professor Rose is perhaps best known, the implications of population strategies in many other contexts (osteoporosis, radiation induced cancer, mental illness, and violence, for example) are considered.

This book will be of interest to all concerned with the prevention of mass diseases. The arguments put forward in the book are strong and some are beginning to achieve wide currency (the health of the nation White Paper, for example, includes the goal of reducing the average level of systolic blood pressure in the population). However, much of the evidence on the effects of population strategies is based on extrapolations from observational data. The book is a challenge, to the epidemiologist, to the public health physician, and to the politician, to test the population strategy of disease prevention in practice.

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In the Best of Health: The Status and Future of Health Care in the UK. Eds E Beck, S Lonsdale, S Newman, D Patterson (Pp 355; £14.95.) London: Chapman and Hall, 1992. ISBN 0-412-38710-7.

In 1983, a group of doctors rejected part of what they considered was an excessive pay award, and used the money to develop some services for patients "which might not be possible within the NHS". Since then they have funded schemes such as a purpose built garden for young people with chronic disability, or a video recorder for ethnic minorities to watch health education films in their own language.

This book is their latest project. Its aim is to inform the debate about change in the NHS, and it stems from their conviction that the speed of change has been too fast to permit assessment of possible benefits and costs of alternative policy options. It is a compilation of 16 chapters by experts in their fields, and covers patterns of disease and public health; health service professions and their roles; and issues arising from the growth of consumerism and a market economy in health care.

Each chapter is interesting in itself and all are well referenced, reviewing developments in the past decade and then setting out the policy and development options for the future. Examples are Ray Fitzpatrick and Karen Dunnell on measuring outcomes; David Hunter on community care; Virginia Beardshaw on the "new nursing"; and Robert Maxwell on international comparisons of expenditure.

Potential readers? Public health medicine trainees certainly, but also others who seek a broad view of the state of play in many crucially changing components of UK health care. It would have been unreasonable to expect the editors to have blended the 16 chapters into an overall picture and prognosis; but the pieces of the jigsaw are there for others to make their own best guesses.

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On Being in Charge (2nd ed). R McMahon, E Barton, M Piot, N Gelina, F Ross (Pp 472; SF30; developing countries SF20.) Geneva: WHO, 1992. ISBN 92-4-154426-0.

Management skills are not inherited; nor do nursing and medical schools produce managers. Yet newly graduated health workers in developing countries, posted out of the safety of the big hospitals, are expected to take command of district hospitals and public health programmes. *On being in charge*, now in its second edition, attempts to redress their training deficit.

Does it succeed? The book is well laid out, the text simple to read, and the tone positive. The topics covered are practical (such as managing drugs and money). Each section contains useful advice and procedures, and there are many illustrative case studies and exercises. Particularly useful sections are those that are rare in district health manuals, such as "dealing with disputes", and "managing time".

For an experienced manager, unease sets in as the book follows programme planning through to evaluation. Is this life? Managers

work within a structure, and what happens is as much a product of politics, history, and system design as it is of their management. A sanitised view risks disillusioning the new manager, who finds the fairy tale world the book paints to be different in practice. The well worn primary health care rhetoric grates a little at times, and the section on training is vague. Some parts of the book are dated: household surveys are promoted for finding out about communities, and old fashioned words like "chairman" and "manpower" are used.

On being in charge is suitable for inexperienced district health staff. It could do the same job in fewer pages; while the exercises are useful, the authors could have been more selective. Further editions or complementary WHO publications should include sections to aid understanding of organisational structure and how to manage change. On balance, this book is a good start in the process of empowering health workers to sit in the driving seat and start managing.

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Occupational Health in Developing Countries. Ed J Jeyaratnam (Pp 499; price not stated.) Oxford: Oxford University Press, 1992. ISBN 0-19261799-0.

On first appearance the hard cover version of this book looks remarkably similar to *Fitness for work*—a book considered essential reading for practising occupational physicians. The contents of this book are no less impressive and make it essential reading for occupational physicians in developing countries. The topics are broad enough to interest other occupational health and safety professionals and are focused on issues that are particularly relevant to developing countries. These topics are neatly categorised into four sections: Occupational health services, Technology, Special issues, and Education, training and research. Professor Jeyaratnam has got together an impressive list of contributors including occupational health experts from developing and developed countries. Perhaps the selection was partly based on the premise that developing countries can learn from the experiences, expertise, mistakes, and successes in tackling occupational health problems in the developed world.

Most of the authors are physicians, and I was anticipating a relevant chapter from an occupational health nurse, since these health workers must form a large group providing occupational health care in developing countries. As it turns out Professor Bill Glass does a good job on a chapter on the occupational health nurse and primary health care worker. I found the chapter most interesting, especially the reference to occupational health in the cigarette factory in London in the 1930s, his views on the role of the occupational health nurse, and the part where a gremlin got into the printing works resulting in the phrase "occupational overuse medicine"! The chapter on export of industrial hazards to

developing countries is thought provoking, and so is the paper on environmental standards at the workplace—and the options for setting standards in developing countries. The authors refer to the dilemma of proposing stricter environmental standards for developing countries, because of possible differences in the health status of the population in such countries, versus adopting some practical, achievable, less stringent standard which can be gradually raised. There is also a useful catalogue of vegetable dusts which cause lung disease in developing countries, a good classification of pesticides, and a debatable approach to medical surveillance for exposure to mineral dusts—which advocate medical examinations and chest radiology as a minimum for pneumoconiosis due to mineral dusts. The problem of acute pesticide poisoning and accidents at work in developing countries is highlighted, and these are clearly much bigger problems than in developed countries.

It is a fascinating book, well worth reading and definitely to be recommended as a standard text book for occupational health professionals in developing countries. It will also be an eye opener for occupational and public health physicians in developed countries with an interest in approaches to occupational health in the developing world.

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Environmental Epidemiology: Public Health and Hazardous Wastes. The National Research Council. (Pp 282; £29.95.) Washington DC: National Academy Press, 1991. ISBN 0-309-04496-0.

This book was written by a committee on environmental epidemiology and as a report for the board on environmental studies and toxicology in the Commission on Life Sciences of the National Research Council. It defines environmental epidemiology as “the study of the effect on human health of physical, biologic, and chemical factors in the external environment, broadly conceived”. This area is an expanding field for which in 1987 the World Health Organization established a global environmental epidemiology network.

The committee was charged to review current knowledge of the human health effects caused by exposures to substances emanating from hazardous waste sites and to clarify and suggest how to improve the scientific bases for evaluating the effects of environmental pollution on public health, including specifically the conduct of health assessments at hazardous waste sites. This first report examines and evaluates the scientific literature, and develops recommendations about major data gaps that need to be remedied in order to advance the field. Despite repetition of some case histories and the difficulty for most readers of accessing the many unpublished cited reports, I found it particularly worthwhile reading. It focuses on one environmental health problem, develops a strategy for investigating and managing it, discusses policy issues, and ably demonstrates how environmental epidemiology can help to elucidate public concerns about possible health effects and the effectiveness of measures to mitigate them.

The committee concludes that despite the lack of adequate data with which to characterise the effects of hazardous wastes on public health in general, there is sufficient evidence that they have produced serious health effects in some populations. It notes too that identification, assessment, and ranking of hazardous wastes site exposures are at present inadequate, and that the overall impact on public health cannot be assessed.

A subsequent report will identify research opportunities and methodological issues, and will select and evaluate a sample of relevant non-peer-reviewed reports. I look forward to it and hope the committee will include with the case histories details of the environmental epidemiology methods used for their investigation and management. We all have much to learn.

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Preventive Medicine: A Report of a Working Party of the Royal College of Physicians. (Pp 212; £10.) London: Royal College of Physicians, 1991. ISBN 1-873240-32-5.

Those who feel that preventive medicine is the domain of all health professionals will be pleased that the Royal College of Physicians has produced a timely and well written report on the subject. The views of a number of specialties including medicine, general practice, occupational medicine, and public health medicine were represented on the working party, which set out to provide objective guidance about the factual content of often controversial topics, and to assess the risks of different health problems and the cost-benefits of preventive programmes. Practical steps which can be adopted by people generally and by health professionals to improve prospects of good health are described. Each chapter deals with a specific topic or part of the life cycle: smoking, cancer, infectious disease, accidents, occupational disease, childhood, and later life.

Although the report does not cover new ground, I found it a useful summary of existing evidence, well illustrated with graphs and tables. The recommendations at the end of each chapter vary from the very practical (eg, how to give up smoking) to the rather all embracing type (eg, the need for better information systems). Some areas are not covered in any depth—screening in pregnancy, for example—but references are given to more detailed reviews. Other omissions, I feel, are less easily justified. Mental illness surely deserves to be included in such a review. I thought that the attitude to one or two areas where prevention is needed is rather dismissive. For example the widely recognised role of harm reduction in prevention of HIV is not emphasised and advocating condoms seems to be discouraged, without supporting evidence, because “compliance is usually poor, especially among those most at risk”.

Another omission which I feel deserves attention is the role of the clinician in referral and liaison with other agencies which have a

crucial role in prevention—local authority departments and voluntary agencies in particular. This has relevance for areas covered such as accident prevention and social contact in later life.

Despite the criticisms outlined, this book will be useful for all clinicians—both undergraduate and postgraduate. It will also be of interest to those whose work is mainly about prevention—public health physicians and health promotion officers.

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Developments in Biological Standardization. Vol 73. Ed International Association for Biological Standardization (Pp 386; price not stated.) Basel: Karger, 1991. ISBN 3-8055-5457-5.

The mechanism of naturally acquired and vaccine induced immunity against *B pertussis* remains elusive despite an ever increasing volume of technical and epidemiological publications on this fascinating subject. The latest collection of papers can be found in *Developments in biological standardization*, vol 73, where the proceedings of a symposium held in Tokyo in September 1990 are reported. Four of the eight sections are devoted to laboratory aspects of pertussis such as the molecular biology and genetics of the organism, the biological standardisation of acellular vaccines, and the development of antibody assay systems. These are specialist papers without immediate epidemiological relevance, although the work may eventually lead to novel applications such as genetically engineered vaccines containing non-reactogenic pertussis toxin, or possibly live attenuated vaccines. An essential step in developing improved pertussis vaccines is to identify the important protective antigens and the mechanism by which they induce immunity. None of the animal work reported at the symposium sheds any real light on this problem or the reason why a serological correlate of protection has not been found in children vaccinated with acellular preparations. For the future, therefore, demonstration of efficacy in the field will continue to be essential for all new acellular preparations.

Although there is a section entitled “Clinical evaluation of vaccine efficacy” it contains little new information. Results from the post-trial follow up of children who took part in the Swedish efficacy trial in 1986 show that protection from acellular vaccines lasts for at least four years. However, more up to date results have now been published elsewhere. The two papers reporting the results of vaccine efficacy studies in Japan confirm earlier publications and illustrate the epidemiological problems inherent in trying to use routine surveillance data for such purposes. The difficulty in obtaining laboratory confirmation of cases, of ensuring unbiased reporting, and of identifying which acellular preparations have been used in the field raise doubts about the efficacy estimates presented and underline the importance of obtaining reliable efficacy data from