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Book Review

Powerful Medicines. The Benefits, Risks, and Costs of Prescription Drugs, Jerry Avorn, MD (First Vintage Books Edition, August 2005). ISBN 1-4000-3078-1

Powerful Medicines is another highly critical book about the complex and often turbulent world of prescription medicines. It is written by Jerry Avorn, who is an associate professor of pharmaco-epidemiology and, pharmaco-economics at Harvard Medical School and a practicing physician with several decades of experience. In not less than 448 (!) pages of small print, he describes and analyses many aspects of drug therapy that are currently wrong or problematic and, at the end of the book, he proposes several solutions that could improve the system to the benefit of the patients and tax payers.

To wake up his readers, the *introduction* describes several recent drug related topics that made headlines in the press such as the Vioxx case, the risks of SSRIs in young patients, the new Medicare legislation in the USA and the price differences for the same drugs between the USA and Canada. Then there is a *prologue* with case histories of patients suffering from a stroke, each illustrating a different aspect of pharmacotherapy, from (side-)effect to costs of drugs and to biased information on new drugs. In the following 5 sections of the book, Avorn analyses and comments in great detail on the benefits, the risks and the costs of medicines, the sources and quality of information about drugs for the prescribing physician, and the policy aspects of drug development and supply. In each section examples are given, some from several decades ago but others from more recent times, that illustrate the point, together with relevant background information and personal experiences, which often give the reader an interesting insight into the career of a pharmaco-epidemiologist and the practice of a geriatrician.

In the section on drug benefits the rise and fall of hormone replacement therapy for menopausal women is used to illustrate widely divergent points such as the risks of using surrogate markers in drug studies, the strengths and weaknesses of different study designs, and the often dubious role of marketing departments of pharmaceutical companies. In the next section Avorn gives many illustrative examples showing that the risks of medicines are often underestimated and that the system to prevent harmful drugs from entering the market, or when they have been launched to quickly remove them, is far from watertight. Also, the challenge of an accurate risk/benefit analysis is extensively explained. Concerning drug safety he is not only critical on the role of pharmaceutical companies, but also on that of the FDA. The third topic that is covered is the (high) costs of drugs and the price differences of the same product between the USA and other industrialized countries. Avorn is particularly critical on cost-effectiveness analyses and its influence on prescribing and on the money wasted on more expensive patented drugs while cheap generics are as good or better. In this respect the outcome of the ALLHAT study on calcium channel blockers and diuretics for the treatment of hypertension is repeatedly quoted throughout the book.

The next section is about the information that is provided to prescribing physicians and nurses. To his regret and annoyance this area is clearly dominated by pharmaceutical companies and therefore likely to be biased, despite the fact that academic specialists are heavily involved. In his earlier days Avorn tried to set up a counter system of so-called “academic detailing” that, despite its limited success, is described in great detail. He also mentions the low place of (clinical) pharmacology and pharmacotherapeutics in today’s medical curriculum and the minimal regulatory requirements as contributing to the lack of

objective information. He especially detests FDA's "better than nothing" requirement for registration in the USA. The book ends with a chapter on policy aspects in which various proposals are presented to change the system.

Overall the book provides a comprehensive and compassionate overview of the field of prescription drugs, emphasizing the negative aspects and the need for changes especially for the situation in the USA. Many other countries struggle with the same problems but seem to be ahead of the USA with finding solutions. Unfortunately, Avorn does not explore this disturbing observation in more detail.

Although the message that much needs to be improved is well taken, I cannot agree with the views of Avorn on several points. For instance, his division of drugs in good and bad drugs seems sometimes rather simplistic and does not take into account the inter-individual variation in drug response and the importance of prescribing the right dose. It is also overlooked that whereas comparative trials can provide useful information, they do not regularly give black and white answers for the prescribing physician. Furthermore, it is not mentioned that comparative trials are needed for registration or reimbursement in Europe, and that this information is also available for American physicians. His continuous hammering on a preference for diuretics over calcium antagonists based on the ALLHAT study seems rather dogmatic in view of the ongoing scientific discussion and renewals of treatment guidelines.

Although at times interesting for professionals from academia, the government and the pharmaceutical industry, *Powerful Medicines* is clearly written for the lay man. The humorous style may be liked by some readers, but I found it detracting from the messages.

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