LETTERS TO THE EDITOR

Quantitative estimates of sensitivity and specificity in mammographic screening

Sir—Warmerdam et al rightly point out that breast screening in the German decentralised health care system may not be worth implementing.1 They conclude that if up to 20% of the total cost of a screening programme can be spent on quality improvement, screening may be cost effective. However, though the modelling exercise used by the authors, though academically interesting, is of questionable validity in the German situation. The Mammography simulation model (MISCAN) was originally developed for populations into which screening is being introduced for the first time.2 This does not hold for Germany, where approximately 2 million women are already screened each year.3 In Germany, the clinical stage distribution probably differs from the Dutch distribution which was used in the MISCAN model. This may explain the cancer detection rate of about 3% in the prevalence round of the German mammography study (DMS).

Warmerdam et al concede that they did not consider the effect of spontaneous screening since it is difficult to measure.4 However, this effect is important because if the level of spontaneous screening is high, introduction of population based screening as a competing service is probably not cost effective when the marginal costs and benefits are balanced against each other. In addition, a modelling approach for population based screening using the DMS data may not be valid, since this study did not adhere to the European Union guidelines.5

Thus, the authors derive sensitivity values from a screening interval of 1.1 year, although a screening interval of 2 years is recommended for women in the age group 50-69 years. As sensitivity values depend on the screening interval chosen, obtaining sensitivity values comparable to the Dutch ones using a shorter screening interval is not a valid approach. It make the high quality scenario referred to an unlikely possibility.

It is difficult to obtain reliable epidemiological data in Germany. However, where available, data should be used. It is difficult to understand why the authors did not include some of the original data made available in 1980, rather than hypothetical assumptions and under-referencing intervention.6

The authors do not discuss their current findings in the light of their previous analysis.7 A modelling approach is required which takes into account the every year. In Germany, breast care and the level of opportunistic screening. As Muir Gray formulated, “Never think about screening tests, only about screening programmes.”8 In Germany, the optimal early detection of breast cancer is being reviewed. German decision makers now require sound epidemiological advice based on robust evidence which is applicable to the reality of the German decentralised health care system. Result based on partly invalid and sometimes merely hypothetical assumptions do not help this process.

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Reply

Our article was intended to quantify the impact of the quality of mammographic screening on breast cancer mortality reduction, unfavourable side effects such as biopsies and referrals, and cost.1 We showed, with the help of three plausible scenarios, that the breast cancer mortality reduction achieved at population level might well vary between 10-12% (difference of 400 deaths prevented per year) between “low quality” and “high quality” scenario, and a cost effectiveness ratio between 15 000 and 21 000 DM per life-year gained in a German situation. We did not state or suggest that screening in the decentralised health care system in Germany may not be worth implementing.

Given the disease and the possibilities of mammographic screening when screening a large proportion of thus far unsymptomatic women, breast screening might still be cost effective even in a low quality scenario. It should not, however, be the goal for a national programme, and our analysis simply shows that quality improvement is necessary and cost effective; it is not ethically acceptable not to put much effort into it for the women involved.

Robust evidence is something we are all aiming at. The lack of empirical data in the German situation in 1995-96 has made screening a more questionable procedure than ever before, and the model has been used and cross checked in several contexts. One relatively hard piece of evidence is the incidence and mortality data from Germany, which led us to assume a worse survival rate in Germany compared with The Netherlands. Up to the beginning of the 90s, neither these data nor those from the KFU programme showed that screening had had a substantial effect, but apparently the Medical Tribune did show this in 1996. Even Dr Wernerke can only state that the clinical material probably differs. The working of the present “wild screening” in Germany has never been analysed in a rigorous manner. Annual reports on the German screening programme do not give data on these activities. Cancer registries, where they exist, can not often give good information on the mode of detection. First results from four different regions in Germany, comprising approximately 1350 new breast cancer cases in 1995-96, show that 45% are diagnosed at stage T1 (≤ 2 cm). This corresponds very well with our estimate for the “reference situation” in Germany without a nationwide screening programme.

We are not clear about part of the message in Dr Wernerke’s letter. It is not clear whether screening is not be worth implementing screening in Germany, claims rather good results from spontaneous screening (having influenced stage distribution and detection rates in an organised screening setting), but ends again with confusion, stating that the high quality scenario exemplified in The Netherlands is unlikely in Germany. Our paper is based on German mammography study results and it is true that the German mammography study may not be identical to a future national mammographic screening programme, should there be such a programme. So far, however, our data are the closest estimate of what would happen and the extent to which quality would influence screening results. As far as the accusations that our approach is partly invalid and sometimes merely hypothetical is concerned, we can but refer to the reality of the Dutch nationwide screening programme and our modelling estimates made beforehand, and these new German data.

With estimates from actual German data we concluded that it was likely that up to 20% of the total costs of a screening programme could be spent on quality improvement in order to achieve a substantially higher reduction in mortality while retaining the same cost effectiveness ratio. In that sense, we hope we have helped German decision makers view the reality of the German decentralised health care system, and if not, perhaps other European countries considering implementation of cancer screening programmes.

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5 Bundesverband der BKK und IKK. Qualitätsicherung in der Mammographie. Dokumentation der 1 Expertengesang in Frankfurt am 2 November 1993.


10 Comprehensive Cancer Centres Aachen (Rachl, Mittermayer) Jen (Bühlender), Halle (Saale), Bielefeld, Münster (Mischmartsch, Köhler), Münster (Engel, Sauer). Breast cancer registries from four regions. Abstract 168. In: Proceedings of the first international meeting on advances in the knowledge of cancer management. Vienna, Austria June 28 to July 1, 1997.

Paracetamol in suicide and non-accidental overdose—are restrictions justified?

Sir—Gunnell’s article is timely in view of recent Government changes to the product information and sale of paracetamol. However, it cannot be seen as the complete answer
to the question, "are restrictions on availability justified?" posed in its title. The relationship between the supply of the drug and its use in overdose is relevant to the discussion, but such factual information is insufficient in itself to justify the proposed changes. We also need to consider the values which underpin our provision of health services. The title encourages us to believe that clarification of facts alone can justify our actions. Such a shorthand is dangerous since it may lead some to miss out other vital considerations altogether.

The authors conclude from an association between availability of paracetamol and the levels of its use in overdose that sales of this drug should be restricted. At least three relevant debates which question this have been raised.

The restriction of sales is intended to reduce the harm caused by overdose. When considering the benefits of the suggested intervention, we need to also look at the associated costs. Such restrictions on sales will create increased demand and extra costs which will be born by the vast majority of users who do not abuse the product. Are such measures affecting the millions who use paracetamol for suicide and non-fatal poisoning in the UK and France: are restrictions on availability justified? 3 Epidemic Community Health 1997: 51-175-2.

5 O'Connell S. Reducing paracetamol overdoses: proposals will have negative effects. Letter. BMJ 1997;314:75.

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4 O'Connell S. Reducing paracetamol overdoses: proposals will have negative effects. Letter. BMJ 1997;314:75.

NOTICE

VIIIth Annual BEES Workshop (British Epidermo-Epidemiology Society) was founded in 1990 with the aim of promoting a high standard of epidemiological research into all forms of skin disease, with emphasis on an interdisciplinary approach. The VIIIth BEES Workshop will be held on 16 January 1998 at the University of Nottingham. 100 places only. Further information, contact: Dr Hywel Williams, Department of Dermatology, C Floor, South Block, Queen's Medical Centre, Nottingham, NG7 2UH. Tel: 0115 924 9924 ext 44539. Fax: 0115 970 9003.

BOOK REVIEWS


This book offers a selection of the most important articles and documents on health promotion, its concept, and the different strategies and methodologies. Editors and contributors, grouped around Helena Restrepo and PAHO's Division of Health Promotion and Protection, have achieved a formula acceptable to all involved that has successfully oriented them to the completion of the 26 articles and 4 appendices which comprise this volume. Somehow, this book is a recapitulation of the history of health promotion.

The book is divided into five parts, plus the appendixes. The first part consists of five different documents and is an attempt to provide different points of view on both the conceptual framework and health promotion theory. This part clearly establishes the link between health promotion and the promotion of public health that stress the social constituents of health and disease. The second part of the book is made up of four interesting articles that focus on the concept of public health policies, an essential constituent of health promotion strategies. The third and fourth sections of the work deal with the strengthening of community action and the development of personal skills. Together, both sections offer 14 documents with a wide variety of practical examples. The fifth part of the book focuses on three particular projects aimed at specific issues: young people, AIDS, and alcohol addiction.

There are four appendices at the end of the book which provide interesting documents on the development of health promotion in Latin America and the Caribbean. The book is completed with a glossary of terms. The PAHO's Scientific Publications series had already published historical compilations of articles in the fields of epidemiology and health services research. The book reviewed here is a step forward in this sense, including versions in both English and Spanish. I think this will be very useful material, especially for teaching and public health research, as all the documents chosen are of great interest. This is, arguably, one of the best books on health promotion available.

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This book examines the effectiveness of modern medicine in meeting the health needs of women and the extent to which ineffective or dangerous interventions are perpetuated because of vested interests. To achieve these aims evidence from a wide range of sources is presented. Since providing ineffective or dangerous services for profit in doctor-patient relationships based on trust must be the most unethical form of marketing dangerous products, the book contains important information for researchers and providers as well as users of health care to consider.

The author points out that any bias in citing evidence is a wide range of sources. Contradictions in evidence and the validity of research findings are discussed in relation to issues such as the impact on knowledge of not publishing findings, biased allocation of research funds, and the influence of organization and funding mechanisms on how vested interests affect services. As critical scrutiny of available evidence is asymmetrical and other sources of knowledge, these are major contributions of the book.
Paracetamol in suicide and non-accidental overdose--are restrictions justified?

S J Hobson

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