treatment was completed from the notes by us in order to see how well these factors were recorded.

No major differences were found among the hospitals or the specialties. In over a third of patients there was no record of disability in relation to breathlessness or mobility, or change of breathlessness before admission; in two thirds there was no record of a history of the presence or absence of ankle oedema. In only 12% had the usual (best) peak flow been recorded. Social support was not recorded in 48% and housing details not recorded in 59%. The blood count and urea and electrolyte concentrations were usually recorded, but peak flow was not recorded in 33% and blood gas tensions on air were not recorded in 21%. In patients given oxygen, repeat measurements of blood gas tensions were commonly not recorded. Before discharge, peak flow/forced expiratory volume in one second, and blood gas tensions were poorly recorded. Only 15% of case notes recorded that antismoking advice had been given to those patients who smoked on admission. In 42% of patients given steroids as part of acute management it was impossible to find plans for tailing off this treatment.

The use of antibiotics was almost universal in this series; 71% of patients received steroids (orally or intravenously), and bronchodilators were given in wide dosage, most patients receiving high dose nebulised β_2 agonist and anticholinergic treatment simultaneously with no attempt to quantify responses.

This study shows that the general standard of note keeping is poor. It would be impossible to measure outcomes with the data currently provided from most case notes of these patients. More careful assessment of this group of patients and a more critical approach to their treatment is required.

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Scottish Confidential Inquiry into Asthma Deaths

Each year 2000 people aged under 45 die in Britain as a result of asthma, about 50 of the deaths occurring in Scotland. Although several retrospective studies suggested that patients and doctors reacted inappropriately in the fatal attack, there is little evidence that practice is changing.

A confidential inquiry into asthma deaths has now been established in Scotland to review the circumstances surrounding the care of asthma patients during fatal attacks. Funded initially by the National Asthma

Campaign, the inquiry will be supported for the next two years by the Clinical Resource and Audit Group (CRAG) of the Scottish Home and Health Department. Its aims are to identify good practice and problem areas by exploring the background in cases of deaths of patients with asthma.

The inquiry will combine information gathering with local discussion of cases using a critical incident technique. Regional panels of general practitioners and respiratory physicians will review the information gathered and comments will be fed back to the clinical teams concerned. The findings will also be aggregated to identify any common themes. The results will be circulated widely to try to influence the management of other patients with asthma.

The inquiry represents a single strand in the process of reviewing and updating practice. By emphasising local consideration of the circumstances, combined with timely feedback from a regional panel, it offers theoretically a better prospect of influencing the care of other patients than, for example, publication of audit findings in medical journals. Also, by monitoring the circumstances of asthma deaths for several years it will be possible to judge whether practice is changing and whether this inquiry and other audit activities are having any impact.

Readers wishing further information should contact the area clinical audit coordinator (tel 041-248 7644 ext 2230).

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BOOK REVIEWS

Children, Teenagers, and Health.

Caroline Woodroffe, Myer Glickman, Maggie Barker, Chris Power (pp 193; £16.99). Buckingham: Open University Press, 1993. ISBN 0 335 19125 8 (pb).

To read a collection of statistics from cover to cover is a rather odd experience likely to be confined to reviewers and other minority groups. It does, nevertheless, initiate interesting trains of thought. Between the age of 1 and 14 children from social class 5 are twice as likely to die as children from social class 1; their risk of death as a pedestrian in a road accident is four times higher, and their risk of death in a fire nine times higher. If poverty is defined as affecting households with under half the average income, the percentage of children in Great Britain living in poverty rose from 12% in 1979 to 26% in 1987. Despite this, infant mortality and child mortality have continued their gradual downward trend over the past decade. Something must so far have protected children from the most serious health consequences of the relative increase in child poverty. Will we be

seeing increases in infant mortality and child mortality in due course? We should not be complacent.

The health and wellbeing of children, enormously important in itself, is becoming the object of increasingly close scrutiny as we learn more of the ways in which adult morbidity and mortality may be related to factors operating in fetal life and in childhood. Although infant mortality and child mortality continue to fall, some forms of chronic ill health in childhood are becoming more common. Advances in the treatment of life threatening conditions, from extreme prematurity to cystic fibrosis, leave a growing number of survivors in need of continuing care, while environmental changes are probably responsible for the rising prevalence of asthma.

By collecting together data on child health from the Departments of Health, Social Security, Transport and Environment as well as from the national birth cohorts and from morbidity surveys the authors of this book have provided a valuable service to anyone wishing to scan the evidence relating to major child health problems, or wishing to know where to look for more detailed information. Separate sections cover overall population statistics, morbidity and mortality, and factors in the socioeconomic, physical and cultural environment of children as they relate to health. Most of the data are presented in graphical form with accompanying discussion. The writing is clear and the book is well referenced. Libraries in hospitals and health centres should get a copy, and someone should send one to the Treasury.

DUNCAN KEELEY
General Practitioner

Medical Accidents. Charles Vincent, Maev E. Ennis, Robert J. Audley, eds (pp 293; £35). Oxford: Oxford University Press, 1993. ISBN 0 19 262289 7.

An important book that should be essential reading for medical directors, hospital chief executives, deans, and all those concerned with education in the health service, *Medical Accidents* examines the research on accidents and puts accidents in the context of operational health care. Medical accidents have the characteristics of accidents occurring in industry or transport but have not, until now, been given serious study and analytical thought. In medicine accidents are seen by doctors overwhelmingly in terms of litigation and financial settlements. There is also the feeling that someone is to blame. This book shows that accidents are the result of faults, failures, and omission in the way care is organised and delivered rather than a single person's responsibility. Blaming a clinician is too easy and can absolve the rest of the organisation from taking corrective action. Persistence in this way of thinking will not help to prevent accidents nor help professionals to understand and change the conditions that lead to medical accidents.

Clinicians should think seriously about medical accidents as an opportunity for ensuring reflective learning and as an aid

to improving training at all levels, rather than as a signal for introducing defensive practice. This book needs to be discussed by those who select medical students or recruit doctors and by all concerned with the education and welfare of doctors, and especially doctors in training. The importance of communication is a common theme throughout the book, and yet so often communication is considered as separate from clinical ability and competence. Those who are devising both the new curricula for doctors in postgraduate training, in order to encompass proposals of the Calman committee, and the content of continuing medical education need to act on the implications of the research described in this book.

Medical Accidents has set the academic background to the study of medical accidents; it is now the responsibility of the healthcare professionals to define and implement the practical applications. The quality of patient care can only benefit from such action.

ANGELA JONES
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Quality and Excellence in Human Services. Dickens P (pp 200, £14.95). Chichester: Wiley, 1994. ISBN 0471 94054 2.

The British healthcare system is an unusual service industry. Its products are hard to define and market forces, when they apply at all, may be perverse. Workers who increase productivity are as likely to be penalised for "over performing" as to be rewarded. Purchasing power does not lie with the consumers but with purchasing authorities who, being accountable financially to a central body (the government), are often poor proxies. Most customers when dissatisfied with what they are being offered have no option other than to "take it or leave it."

Services are managed through rigid hierarchical structures with targets imposed from above (Health of the Nation) in a way reminiscent of the five year plans of Stalinist Russia. At the same time the great majority of available resources are committed by a group of workers – namely doctors – who not only do not account to the service managers for their professional decisions but are often in an adversarial relationship to them. These workers are not trained to view the recipients of the service as consumers, and they view quality more as "doing the right thing" than as "satisfying the customers."

While acknowledging these issues, Paul Dickens argues that healthcare organisations are service industries and that industrial models of quality are relevant to them. As more and more providers and purchasers of health care seem to agree with him, and are attempting to introduce such models of quality and excellence, his book is timely.

Although it touches on "home grown" products such as clinical audit, the bulk of the book consists of a clear, readable, and critical account of the various approaches to quality used in industry. Brief descriptions of the work of four "quality gurus" are accompanied by relatively jargon free accounts of the principles

behind their philosophies and the techniques and tools they developed. Thus the reader is given an introduction to quality costing, quality circles, and to some of the statistical methods employed in quality control procedures. The British standard on quality systems – BS5750/ISO9000 – is described and the suggestion made that more healthcare providers might seek accreditation.

The author seems to advocate introducing a modified form of total quality management into the healthcare services. For this to be more than just a time consuming paper exercise clinicians, and in particular doctors, would have to learn to work more as part of a team and pay much greater attention to patient satisfaction.

Possibly, however, there may be an incentive, that may also be a prerequisite, that will encourage clinicians to embrace total quality management. That is the promise it holds of catalysing a culture change within health service management. Total quality management must involve all within a healthcare organisation, including managers and purchasers. Each person must strive to improve the service he or she provides for customers. For clinicians the patient is the customer, for managers and support services the clinician is also a customer. Such a model puts a different complexion on the relationship between the clinician and human resource, finance, and medical records departments and may lead to a service that enhances the quality of clinicians' working lives.

PAUL LELLIOT
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Computers and Clinical Audit: An Introduction for Doctors and Health Care Professionals. Kinn S, Siann T. (pp 200, £15.95 pb). Chapman and Hall, 1993. ISBN 0 412 49280 6.

The health service has been fascinated by computers since the 1960s. It seems axiomatic that such a data rich service would benefit from the most advanced forms of information handling. However, disaster has struck again and again, from the abandoned personal computer in the consultant's office to the large scale disasters such as those in the Wessex and West Midlands regions. As the publication of this book shows the introduction of audit has helped rekindle the fascination.

One major problem is communication. Professionals always invent their own languages to distinguish themselves from the common herd. Clinicians label a runny nose with the term rhinitis, the systems analyst labels the start up procedure for a computer –AUTO EXEC.BAT. Thus incomprehension grows as each professional spends years learning his or her own language. The first nine chapters of the book are an excellent basic primer for the first lessons in computer language; only the final three discuss the application to audit. A language is best learnt by use – be it French or "computerese." The earlier in life one learns a language the easier. As computer studies are now part of the school curriculum, hopefully the gap will

close. However, as the computer is only a tool in audit or elsewhere consumer demand will accelerate the trend to simpler interfaces, and, hopefully, the book's next edition will have only three chapters or fewer as a basic primer!

The last three chapters emphasise that data collection with the use of computers is involved in only the second (measuring current performance) of the four stages of the audit cycle. Equal priority must be given to setting standards, assessing performance against standards, and identifying the need for and implementing change. The audit must be planned first and then the use of a computer considered. However, for large audit projects the use of a computer becomes essential and the value of integrating good data through large scale computer systems is self evident. The increasing cost in equipment, training, and planning leads to many pitfalls, which in the book are clearly laid out.

The ultimate goal for audit is for it to be embedded in both the ethos and practice of the health service. The tool to enable this is the computer. The ultimate goal for the computer is for it to be integrated into the daily work of the hospital, probably through a hospital information support system. Every user of that system is supported in their job. Their data are integrated to produce information on which to base audit, thus reducing the extra data required for each individual audit.

CHARLES PANTIN
Consultant Physician

Review of Seven Mental Health Information Systems: A Functional Perspective. Lelliott P, Flannigan C, Shanks S (39 pp, £5). London: Royal College of Psychiatrists, 1993. ISBN 0 902241 59 1.

This first publication from the research unit of the Royal College of Psychiatrists reflects a commitment to share the experience of projects undertaken by the unit with a wider professional audience. Here are brief descriptions of seven systems, all developed with the active involvement of mental health practitioners. Each was demonstrated to the college's visiting panel and the capabilities of the seven systems were compared against a standard set of questions that captured the essential needs of mental health information systems.

The rate of change in the structure of the NHS and in its information requirements is apparent from the descriptions of the psychiatric services in which the systems are working. There is hardly a mention of the application to contract information requirements, and most of the systems described were unable to link with the patient administration system. Some of the systems have the potential of helping with clinical audit and quality programmes, but little attention has so far been given to these applications. Disappointingly, most of the systems are not being used directly by clinicians. It would have been helpful if the review had given some suggestions about the most effective approaches in gaining clinician ownership.