LETTERS

Audit in prisons

The call by Rees and Longfield for "encouraging collaboration through audit"¹ between the NHS and the Health Care Service for Prisoners is timely. Because of its relative poverty and restricted pool of expertise, the prison service is most unlikely to be able to develop effective audit on its own. However, it is extremely doubtful that "help from visiting NHS consultants" will prove a good "way of transferring expertise". This was suggested some time ago by the Royal College of Psychiatrists,² but the brief encounters typical between such outsiders and the service have not nurtured a hardy culture of quality.

Rees and Longfield note "prison doctors' efforts at integration had largely been ineffective" but much health care for prisoners involves professionals who already have to function "outside and inside." Such general practitioners, therapists, or pharmacists provide a bridge between the prisons and community care with its growing experience of audit.

For prison and community standards of care to converge, two long term organisational priorities could promote better quality care. The first priority is for continuity of care (many prisoners have problems which outlast their period of custody).³ A sustained collaboration between prison and aftercare services,⁴ which grew in parallel with nursing led community keyworking⁵ did stimulate clinical audit which proved educational and teambuilding. The second priority is the need for individual clinicians who work part time for the health service and the Home Office to maintain good standards of practice for all their clients. Problems around record keeping, best practice, and case management should be solved by extension of local community practice into audit of care for local prisoners.

This grass roots approach would produce heterogeneity in audit, between different areas. Likely benefits include facilitating treatment which entails prisoners moving through local NHS facilities⁶ (for example, by developing consistent referral criteria and transfer of information at the interface⁷ or tracing health events linkage⁸) and providing an opportunity for regional audit training⁹ to influence the planning of good quality care.

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Improving accuracy of coding plastic surgical operations

Clinical information and other hospital activity data such as number and types of surgical operations performed are usually recorded in coded form by highly trained clerical, but non-medically qualified, staff, who often work in isolation from medical staff and sometimes have to extract the data from poorly handwritten entries and disordered records. The coders also have to understand the clinical procedures or surgical operations recorded to assign the appropriate codes. Some plastic surgical operations and techniques can, however, tax the understanding of those other than plastic surgeons, even trained medical coders, and they are a potential source of coding inaccuracy.

Previous studies have shown significant inaccuracy with data coded by Hospital Activity Analysis (HAA) clerical staff.^{1,3} Since this information underpins general hospital administration, clinical audit, and research its accuracy needs to be ensured. James and Reid found significantly lower agreement between codes produced by medical staff and those produced by professional coders on a study panel,⁴ but they did not distinguish between accuracy of coding and agreement between coders.

We describe here a study designed to assess the accuracy of coding plastic surgical operations when jointly reviewed by clinicians and a coder.

Our commonly performed plastic surgical operations were assigned to minor, intermediate, and major categories with a modified British United Provident Association (BUPA) classification, and 50 cases in each were randomly selected from operations performed in 1992. The operation records were jointly reviewed by clinicians (AA, IT) and a senior medical coder (AW), and an OPCS 4 code (study code) was selected for the main operative procedure in each case, without prior knowledge of the code previously assigned by the coding clerks.

The study codes were compared with the previous codes, discrepancies were resolved by referring to the main text of the OPCS 4 codes, and the most accurate codes were selected for entry.

Among the 150 cases reviewed, six coding discrepancies were found, all of which were resolved in favour of the study codes. This implies an original coding error of 4%. Five of the six miscoded cases were in the major category and one in the intermediate category. Apart from one case in which there was no appropriate code for the operative procedure, all miscodings arose from poor understanding of the operations by the coding clerks; no errors resulted from poorly documented records or illegible handwritten entries in the case notes.

Medical staff working closely with the senior coder improved the accuracy of coding, from its previously high level (96%), and such collaboration under routine working conditions might produce a similar improvement, as suggested by Wilkinson and Harvey.⁵

Some centres provide more accurate clinical codes than others.⁶ The high level of accuracy of the initial codes in this study correlates well with that found in the south west regional clinical coding audit for 1992, in which this hospital was ranked first out of nine hospitals in the region, with only 3.6% errors among 391 codes sampled. However, quality needs to be assured if the data are to be of real value.

Studies have shown that the same mistake is often repeated with coded information, suggesting a deficient monitoring procedure.² Closer collaboration between clinicians and coders could help to prevent this and to improve coding accuracy, especially in specialties such as plastic surgery with its myriad complex reconstructive techniques.

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Assessing and treating patients admitted to hospital with chronic airways obstruction

Exacerbations of chronic airways obstruction are a major cause of admission in the United Kingdom (Lung and Asthma Information Agency, personal communication). In our experience patients with this condition are often poorly assessed and are treated with a combination of antibiotics, bronchodilators, and steroids, the individual effect of which is inadequately reported.

To record how these patients are managed, we studied the case notes of 97 randomly selected patients admitted with chronic airways obstruction (International Classification of Diseases 490, 491, 492, 496) to seven hospitals in the London area, during 1993. The patients were under the care of chest physicians, general physicians, and geriatricians. A questionnaire covering the patients' degree of disability, social circumstances, examination, history of respiratory function, blood gas measurements, and

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.

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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