This month ● hospital budgets ● good doctors ● sickle cell disease ● maternal mortality

Effect of hospital budgets on psychiatric admissions

THIS paper is well timed for the current discussions on the review of the health service. The rate of hospital admissions for psychiatric patients in hospitals paid on a per-case basis in one area in New York state was compared with the rate in hospitals with a prospectively set budget in another area. Similar populations were studied in each area. The introduction of a prospectively set budget in 1981 was monitored over the next three years in seven private and one publicly owned hospital.

In the hospitals with a prospectively set budget there was a 29% decrease in admissions from 1981–84 while the hospitals paid on a per-case basis experienced a 6% rise over a similar period. The populations and psychiatrists had not changed in age, sex or number over this time.

The authors speculated that these results were due to an increased use of outpatient and other services by psychiatrists. They did not find any evidence to suggest that the outcomes differed between the two groups or that the standard of care had dropped.

This paper is important in the present discussions in the UK. It demonstrates that if there is a financial incentive to admit patients then more will be admitted. In the 'new' National Health Service there will be pressure on psychiatrists to admit more patients because their hospital will make more money if they do. Although many general practitioners spend hours on the telephone trying to get acutely ill patients admitted to psychiatric hospitals and may welcome easier admission, is it a good idea for hospital psychiatry to take back the management of minor mental illness? Over the last 20 years it has been demonstrated that it is possible for general practitioners and community psychiatric nurses to treat the majority of mental illness in the community, without recourse to the large mental hospitals of the past and this paper suggests that the traditional way of budgeting hospitals was not all bad.

(J.A.)

Source: Frank RG, Jackson CA. The impact of prospectively set hospital budgets on psychiatric admissions. *Soc Sci Med* 1989; **28:** 861-867.

What makes a good doctor?

THIS Austrialian study looked at factors which might affect eventual achievement as a medical practitioner eight years after qualifying. Information was collected on sex, personality, school scores and grades at medical school for 115 doctors. They were given scores according to their professional experience and further qualifications.

It was interesting to note that a consultant with a hospital appointment obtained 20 points and a consultant without a hospital 16, but only eight points were given for family medicine. In terms of further qualifications a fellowship of general practice obtained 14 points, but a diploma in psychiatric medicine 17. It was found that the most important causal factor governing the professional career of the graduates was their sex, the outlook for women graduates being much poorer than for men even though women had higher achievements at medical school. Of the school subjects chemistry was a surprising long-term predictor of postgraduate achievement. Academic achievement during medical school training, particularly in the final year, was a significant predictor, while personality attributes made their contribution to achievement at earlier stages in training but made little additional direct contribution to postgraduate performance in the long term.

This is a difficult area of research and the applicability of the results to another country creates further problems.

(S.M.)

Source: Huxham GJ, Lipton A, Hamilton D, Chant D. What 'makes' a good doctor? *Med Educ* 1989; **23:** 3-13.

Skeletal complications in sickle cell disease

COMPLICATIONS of sickle cell disease are seen increasingly in the UK. A recent report of 150 cases in Liverpool points out that many of the patients are born in the UK, although they are of West Indian or West African origin. Sickle cell disease can affect the patient either with anaemia or by vaso-occlusive crises. Both may cause skeletal complications. In vaso-occlusive crises a vessel is blocked in the spleen, the lung, the brain or in a bone. If a metacarpal bone is affected it will lead to shortening of the digit, but this phenomenon is only seen in children up to the age of five years. Infarcts in long bones, or at the shoulder may resemble osteomyelitis, but osteomyelitis only occasionally follows such an infarct. Changes in the hip, owing to avascular necrosis, cause collapse of the femoral head, leading to pain and early osteoarthritis. In Nigeria this condition is often seen in patients under 30 years of age (*J Bone Joint Surg* [*Br*] 1985; **67B:** 29-32). Marrow hypertrophy in vertebral bodies, in association with anaemia, leads to their deformity. Sickle cell crises are particularly common in pregnancy and postpartum, and in conditions associated with hypoxia, such as anaesthesia or flying. It is important to prevent anaemia, and to be aware of the onset of complications, so that they can be treated early.

(G.P.)

Source: Theis JC, Owen R. Skeletal complications of sickle cell disease in the UK. *J R Coll Surg Edinb* 1988; **33:** 306-310.

Maternal mortality

IN a comparatively short time maternal deaths in childbirth have become so rare in the UK that we now take survival of the mother for granted. These two papers, together with the commentary, serve as a reminder of our own not so distant past, as well as of the major problems facing obstetricians in the developing world.

The bald figures on their own convey a chilling picture. Estimates of maternal mortality rates per 1000 births are 6.4 in Africa, 4.2 in Asia, 2.7 in Latin America, and less than 0.1 in middle and northern Europe. There are estimated to be 500 000 maternal deaths annually, 150 000 of them in Africa and 282 000 in southern and south eastern Asia. There are more deaths in India in one day than there are in all the developed countries in one month. In parts of West Africa the rate of over 20 per 1000 births is comparable to that in England in the sixteenth to eighteenth centuries.

The study from Egypt is a survey of all deaths of women aged 15–49 years during 1981–83, in a small area of the Nile delta just north of Cairo. The cause of

death was identified by a medical panel using case notes and information from an interview with surviving relatives. Maternal mortality accounted for 23% of deaths, second only to the 28% caused by diseases of circulation. Of 385 maternal deaths, 241 were directly due to obstetric causes (haemorrhage, sepsis, toxaemia, and associated with caesarean section), 102 were indirectly obstetric, and 21 a result of abortion. The report concluded that many of the deaths could have been avoided if women had made use of the available facilities and relied less on traditional midwives.

The survey from Hong Kong strikes a more optimistic note. The maternal mortality rate fell from 0.45 per 1000 in 1961 to 0.05 per 1000 in 1985. Over the same period the birth rate fell and the number of legal abortions rose. The proportion of births to women over the age of 35 years fell from 16% to 9%. Other factors thought to have had an effect are the high population density of Hong Kong, ensuring easy access to services, and the rapidly rising gross domestic product in the study period.

Overall, high parity and increasing maternal age are seen as being the strongest predictors of maternal mortality. Next are the need for an improvement in the status of women and, more specifically, better and more widespread education. Educated women bear fewer children than the less educated: in the Egyptian study 76% of the maternal deaths were of illiterate women, and only 7% had had a secondary education. Modernization is the answer to this problem, and this can only proceed with universal education and a resolution of the debt crisis.

(D.J.)

Sources: Harrison KA. Maternal mortality in developing countries. *Br J Obstet Gynaecol* 1989; **96**: 1-3; Duthie SJ, Ghosh A, Ma HK. Maternal mortality in Hong Kong 1961–1985. *Br J Obstet Gynaecol* 1989; **96**: 4-8; El Kady AE, Saleh S, Gadalla S, *et al.* Obstetric deaths in Menoufia Governorate, Egypt. *Br J Obstet Gynaecol* 1989; **96**: 9-14.

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FILL THIS SPACE

Contributions to the Digest pages are welcome from all readers. These should be from recent papers in research journals which general practitioners might not normally read. Send to: The Editor, Journal of the Royal College of General Practitioners, 8 Queen Street, Edinburgh EH2 1JE. Please quote the full reference to the article (authors, title, journal, year, volume, page range).

INFECTIOUS DISEASES UPDATE

Staphylococcal endocarditis in intravenous drug users

While infection with the human immunodeficiency and hepatitis B viruses receives much important publicity, there are other infections to which intravenous drug users are particularly vulnerable. Special problems are caused by organisms being introduced from skin surfaces into the body though the act of injecting itself. Abscesses are frequently encountered as are thromboses of the veins which may be septic and especially serious when this involves deep veins such as the femoral. Infection can spread to distant parts of the body. A particularly common presentation of deep-seated infection is staphylococcal broncho-pneumonia secondary to tricuspid endocarditis. This can be of acute onset and complications include cardiac and renal failure. Because the infection is of the right side of the heart, septic emboli are lodged initially in the lungs and common features of bacterial endocarditis such as splinter haemorrhages and septic peripheral emboli are usually absent. The diagnosis is made by blood culture and echocardiography which confirms tricuspid valve vegetations. Response to treatment is often better than with other forms of bacterial endocarditis but recurrences are likely unless intravenous injecting is discontinued.

Rotavirus infections

At the time of writing we are at the height of this year's epidemic of rotaviral enteritis which presents most commonly with diarrhoea in young children. An associated coryzal illness is possibly the principal means of spread. It is unknown why such large epidemics of rotavirus infection occur every spring and summer with only sporadic cases at other times of the year. Apart from dehydration, one of the common reasons for hospital admission is continuing diarrhoea often owing to cows' milk sensitivity or disaccharidase deficiency precipitated by the effects of the infection on the gut mucosa. This is probably much more common than generally recognized but with the availability of soya-based cows-milk-free substitutes the management has been simplified. Once the causes of persistent diarrhoea, such as giardiasis, have been excluded a trial of one of these substitute milks is often worthwhile. Cows milk preparations can be cautiously re-introduced after six weeks or so. The life-threatening complication of hypernatraemia is nowadays infrequently seen since infant milk preparations and proprietary electrolyte solutions for rehydration have their salt content carefully regulated.

Travel to Turkey

Turkey has recently become a common destination for package tourists. Although malaria is present in Turkey it is predominantly of the benign vivax type and restricted largely to the eastern end of the country. Most authorities agree that for the usual tourist destinations along the north, west or south coasts, malaria prophylaxis is inappropriate and that the side effects of the drugs outweigh the risks of disease. However, because a very small risk exists, travellers should be advised to seek urgent attention if fever occurs while abroad or during the month after return. Many package tours include bed and breakfast but other meals are taken at local restaurants. Hygiene is therefore unpredictable and there is a risk of faecal/oral infections. Poliomyelitis immunization is important and typhoid generally advised (see DHSS leaflet SA40). Last year a number of tourists contracted hepatitis A. The need for protection against this infection is greater for the longer term tourist and those unwilling or unable to be scrupulous about taking only clean water or drinks, well-cooked food, avoiding salads and so on. Immunoglobulin should be especially considered for non-immune travellers, who already have intestinal or other disabilities and for those who are pregnant.

Meningococcal vaccination

Merieux UK Ltd have recently made available through ordinary prescription their single dose vaccine against meningococcal (types A and C) infection. This is not normally used in Britain but is advised for travellers to epidemic regions such as the central belt of Africa. In these circumstances, the vaccine is chargeable (cost less than £10) and should be issued on a private prescription.

Suggestions for topics to include in future updates are welcomed and should be passed to the contributor, Dr E. Walker, Communicable Diseases (Scotland) Unit, Ruchill Hospital, Glasgow G20 9NB (041-946-7120), from whom further information about the current topics can be obtained.