

tives and visits are often infrequent. To this extent, therefore, I see the community hospital in populations in excess of 40 000 being of primary significance to the community in respect of acute diagnostic and surgical services at an appropriate level, and the geriatric and long-stay element as a part of the overall picture rather than the pre-dominant feature. In populations less than this figure, however, then I would agree entirely with Dr Evans's comments about the role of community hospitals. This assumes that they can be viable in small communities, and this again is an area that, I would suggest, needs careful study in relation to the overall costs of these establishments set against the benefits to the community.

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Immunisation against whooping cough

SIR,—In showing that 75% of infants below 3 months of age with whooping cough were admitted to hospital and that 42% of all hospital admissions of children notified as whooping cough were infants of 5 months or younger, Drs Christina L Miller and W B Fletcher (17 January, p 117) have indeed confirmed the widely held belief that "in young infants whooping cough is still dangerous." They have not shown that "at all ages previous vaccination reduced the severity of the disease." What they have shown is that, among notified cases, a significantly higher proportion of the more severe cases and of those admitted to hospital were not immunised or were incompletely immunised. This does not mean that immunisation is necessarily protective. Of 8092 cases notified to them, 2940 (36%) were fully immunised while only 2424 (30%) were definitely not immunised.

In the same issue (p 128) Dr N D Noah claims that "current vaccines provide young children with substantial protection against whooping cough." What he actually shows, in a single tabulation of notifications uncorrected for age, is that the incidence of whooping cough is lower in immunised than in non-immunised children. But the rate of notified infection was still relatively high (50 per 100 000) in 1974 in children fully immunised with the new vaccine. There is no evidence in either article that immunisation of older children protects younger ones.

Several questions arise:

(1) What kind of immunisation is this for which success is being claimed? It is an immunisation which leaves those at highest risk (that is, below 6 months of age) unprotected and which, even when complete, is associated only with partial protection of those in the lowest risk groups.

(2) What kind of epidemiology is this which advocates immunisation by excluding consideration of factors other than immunisation? It is admitted in both articles and is indeed obvious from the data that factors other than immunisation must influence susceptibility to whooping cough. If immunisation is to be tested for efficacy the data must be standardised for domestic, demographic, and social factors. Whooping cough is much lower in incidence, hospital admissions are less frequent, and immunisation schedules are often better maintained in districts where socioeconomic conditions are favourable. The reported association between

protection and immunisation could be an expression of better social conditions and child care as much as of biological protection by pertussis vaccine.

(3) What kind of editorial policy is this which publishes incomplete data and promotes far-reaching claims about the efficacy of immunisation but refuses to publish collateral data questioning this efficacy?

Paradoxically, the articles by Drs Miller and Fletcher and Dr Noah reinforce the suggestion made in my letter in your issue of 10 January (p 93) that evidence about the efficacy of pertussis vaccine is lacking. But the questions remain.

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Low-dose heparin and the prevention of venous thromboembolic disease

SIR,—With reference to your leading article on this subject (23 August, p 447) there is, I believe, an important distinction to be made in terms of the population at risk and the efficacy of low-dose heparin.

Our study¹ showed that low-dose heparin was not an effective agent in the prevention of thromboembolic disease in patients following elective hip surgery, in this instance total hip replacement. This study was one which compared low-dose heparin, aspirin, warfarin, and dextran 40. The determination of fresh postoperative thrombi was by the routine use of venography by the technique of Rabinov and Paulin.²

Our findings were quite clear that low-dose heparin was not effective in this population group. Similar findings have been reported by Everts and Alfidì.³ The report by Gallus *et al*⁴ on hip fractures also showed that low-dose heparin was less effective here than in other population groups. I think this is an important distinction to be made and feel that it should be called to the attention of your readers.

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¹ Harris, W H, *et al*, *Journal of Bone and Joint Surgery*, 1974, 56A, 1552.

² Rabinov, K, and Paulin, S, *Archives of Surgery*, 1972, 104, 134.

³ Everts, C M, and Alfidì, R J, *Journal of the American Medical Association*, 1973, 225, 515.

⁴ Gallus, A S, *et al*, *New England Journal of Medicine*, 1973, 228, 545.

Management of babies with diarrhoea

SIR,—In temperate climates the dangers of hypernatraemic dehydration in diarrhoea and electrolyte overload due to concentrated milk formulae are well documented. It is also recognised that a proportion of children with diarrhoea have temporary lactase deficiency. These factors have encouraged recent management regimens which recommend that "all solid food and milk [are] taken out of their diet for the first 24 hours" (your leading article, 6 December, p 539) and "the most important principle of management is to stop all milk and solids initially."¹

I believe the most important principle in the management of diarrhoea is the replacement