busy group practice. One of us (DS) has a diploma from the Faculty of Family Planning and Reproductive Health Care of the Royal College of Obstetricians and Gynaecologists; the other (CS) is a member of the same faculty, an instructing doctor in family planning, and a member of the British Menopause Society. We therefore have an interest in general practice gynaecology, which is a considerable part of our everyday work.

We think that Smith should elaborate on one of the sentences in the editorial: "The gynaecologists' bias against medical treatments is unlikely to be reduced while general practitioners, understandably less knowledgeable as they are, embark on ineffective medical treatments before referring patients to specialists." Is Smith suggesting that all patients with any sort of gynaecological problem should be referred to a consultant gynaecologist? We assume that this is not the case, unless the author is unaware of the sheer volume of this work that is dealt with in primary care. We would like some clarification of what these "ineffective medical treatments" are. All the medical treatments that we use are also used by our local consultant gynaecological colleagues. We are aware, in this age of evidence based medicine, that some medical treatments are hard to evaluate and may not have been scientifically proved in trials comparing them with the gold standard. We would appreciate comments on the effective medical treatments that Smith uses so that we can improve our practice.

We see the future of gynaecology as starting within primary care, where appropriately trained and interested doctors can pursue the medical investigations and treatments with appropriate funding. The hospital specialist's domain could remain the surgical procedures and more complicated medical treatments. The focus of the editorial is also on women and their needs and wants. We suspect that many women are more comfortable being investigated and treated by their own general practitioners. For some, seeing a hospital gynaecologist is daunting.

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1 Smith SK. Gynaecology—medical or surgical? *BMJ* 1996;312:592-3. (9 March.)

Home versus hospital delivery

Analysis was flawed

EDITOR,—R S Settatree's analysis purporting to show that delivery in hospital is safer than delivery at home is flawed.[1] The 388 deaths among normally formed infants weighing 2500 g or more on which this analysis was based were the subject of confidential inquiries in 1993. Such inquiries into stillbirths and deaths in infancy are initiated when relevant deaths have been identified through a voluntary rapid reporting system. In 1993 there was no case by case cross checking between statutory registration of deaths and the rapid reporting system, but a comparison with the total numbers of deaths indicated considerable underreporting to the rapid reporting system.[2] Furthermore, the annual report for 1993 noted that the results of 45 confidential inquiries into deaths in this category were submitted too late to be included in the analyses.[3]

Not only were the numerators of the ratios quoted for home and hospital deliveries incomplete but the adjustments made to the denominators to take account of unplanned births at home are also questionable. It was suggested that estimates of the proportion of births at home that are unplanned range from 10% to 60%, although references were not cited to support this. Settatree's calculations shown are based on an estimate of 26%, which is almost certainly too low. A national survey of all births at home in 1979 found that a third were unplanned.[4] A more recent survey of births in the former Northern Regional Health Authority found that 40% of births at home had not been planned to occur there.[5]

There is a further error in the calculations in that the numerator data include deaths in England, Wales, and Northern Ireland while the denominator data are for only England and Wales.

In discussing intrapartum deaths at home the report of the inquiry for 1993 stated, "A consistent theme with the small number of home deliveries which resulted in the death of the baby was insufficient surveillance and monitoring of the labour, and a lack of experience in the community management of problems such as shoulder dystocia and breech presentation. These points were equally evident in the cases of hospital delivery."[3] Its authors also strove to examine the deaths "without drawing potentially erroneous conclusions from the limited sample which incorporated both planned and unplanned home deliveries."[2] Other commentators would be wise to display similar caution.

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1 Dowswell T, Thornton JG, Hewison J, Lilford RJL, Raisler J, Macfarlane A, *et al.* Should there be a trial of home versus hospital delivery in the United Kingdom? *BMJ* 1996;312:753-7. (23 March.)
2 Confidential Inquiry into Stillbirths and Deaths in Infancy. *Annual report for 1 January-31 December 1993. Part II.* London: HMSO, 1995.
3 Confidential Inquiry into Stillbirths and Deaths in Infancy. *Annual report for 1 January-31 December 1993. Part I.* London: HMSO, 1995.
4 Campbell R, Macdonald Davies I, Macfarlane AJ, Beral V. Home births in England and Wales; perinatal mortality according to intended place of delivery. *BMJ* 1984;289:721-4.
5 Northern and Yorkshire Regional Health Authority. *Report of the Northern regional home births survey 1993.* Newcastle upon Tyne: Regional Maternity Survey, 1994.

Author's reply

EDITOR,—The data from the 1993 confidential inquiry into stillbirths and deaths in infancy[1] have weaknesses, but none of those suggested by Rona Campbell undermine the conclusion that the relative risk of fetal or infant loss due to intrapartum causes is greater in planned home delivery than in delivery in hospital.

The lack of national denominator data on planned and unplanned home delivery forces consideration of a range of estimates based on regional studies. My analysis showed that if 26% of home births are assumed to be unplanned then the relative risk of planned home birth becomes significantly greater than unity. If the most recent estimate referred to by Campbell (40% in the Northern region[2]) is reflected nationally then the relative risk increases to 2.50 (95% confidence interval 1.29 to 4.85, P=0.012 by Fisher's exact test).

The possibilities arising from missing data are more serious. However, even if all of the 45 cases for which results of the confidential inquiries were not received in time for analysis were hospital deliveries, the relative risk, on the same assumption of 40% of all home deliveries being unplanned, is still 2.24 (P=0.023), and if only one of them followed planned home delivery this rises to 2.49 (P=0.0087).

I would have expected professional awareness of intrapartum deaths to result in high reporting rates. If, however, there were some missed cases among the admitted underreporting of all cases to the inquiry this would render the current findings non-significant only if there were an improbably high number of unreported deaths after hospital delivery. If the report of the confidential inquiry erroneously excluded live births in Northern Ireland from its denominators then restoring them would reduce the estimate of absolute risk but would be unlikely to affect relative risk.

Total annual national data can hardly be regarded as a sample, but the number of deaths after planned home birth was small and 1993 may have been a freak year. If a similar result is observed for the years 1994 and 1995 then some current assumptions on the safety of home birth[3] will have to be reviewed. One major advantage of the data from the confidential inquiry is that they exclude congenital anomaly, prematurity, and fetal death before the onset of labour. This avoids the problem of comparisons of crude perinatal mortality, which Campbell and others have rightly noted cause confusion in the statistical debate that surrounds the issue of the safety of home birth.[4]

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1 Confidential Inquiry into Stillbirths and Deaths in Infancy. *Annual report for 1 January-31 December 1993. Part I.* London: Department of Health, 1995.
2 Northern and Yorkshire Regional Health Authority. *Report of the Northern Regional home births survey 1993.* Newcastle upon Tyne: Regional Maternity Survey, 1994.
3 Department of Health Expert Maternity Group. *Changing Childbirth.* London: HMSO, 1993.
4 Campbell R, Macfarlane AJ. *Where to be born? The debate and the evidence.* 2nd ed. Oxford: National Perinatal Epidemiology Unit, 1994.

Good quality evidence is lacking

EDITOR,—T Dowswell and colleagues report that in a feasibility study of a randomised controlled trial of home and hospital births 14.2% (71/500) of women were considered eligible for randomisation; 15% of them (11/71) consented to be randomised.[1] Participation rates depend both on the expectations of the inviting physician and on women's willingness to participate, and neither of these is free from the influences of experience, context, and personality. The low proportions suggest that the obstetrician perceived childbirth as a dangerous event and was confident in his or her ability to judge risk, even though prediction of obstetric risk is notoriously unsuccessful. The reluctance of most of the selected women to participate may reflect an expectation that hospital delivery is "normal" and their being unprepared for a different suggestion. This pair of findings should therefore not be accepted as universally generalisable to all circumstances, especially as we agree with Gavin Young that one cannot reliably generalise on the basis of an overall participation rate of 2%.[1]

Two types of information are required. Firstly, the difference in the risk of perinatal death, however small, between home and hospital births must be quantified. A randomised controlled trial that can answer this question is probably not feasible. Secondly, the relative frequency of non-fatal outcomes (both clinical and psychological) should be established, given the high population impact of these events; home delivery may have some advantages in this respect. The randomised controlled trial remains the most powerful means of doing this but depends on a better participation rate being achieved than has been the case in the past.

These two types of information taken together will help pregnant women put the risk of perinatal death into perspective by viewing it in the context of other risks and benefits of place of

birth. For most women, probably, even a small excess risk of death would be reason enough to avoid the possibility of being the "extra" one to suffer a perinatal loss. At present, the advice available to women is hampered by the lack of sufficient good quality evidence.

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Making British blood supply safer

EDITOR,—L A Kay states that the blood supply in Britain could be made safer, specifically identifying the absence of routine screening for HTLV antibody and hepatitis B core antibody and the failure to introduce quarantining of frozen components as specific causes for concern.[1]

Several factors contribute to the overall safety of the blood supply. The use of appropriate donor exclusion criteria in conjunction with well documented quality assurance programmes is at least as important as the number of screening tests undertaken in determining the overall level of safety.

Kay states that up to 200 components infected by HTLV may be given in transfusions each year. This is likely to be a considerable overestimate. The figure is based on a study in north London,[2] which found 1 in 19 000 donors were positive for this marker. A similar study in Yorkshire[3] identified a prevalence of 1 in 80 000, which if applied across Britain would result in a figure of approximately 50 components, not all of which would be transfused; only a proportion would result in transmission of infection.

Hepatitis B core antibody testing has been proposed as a mechanism to further reduce the risk of transfusion associated hepatitis B. The incidence of hepatitis B surface antigen positivity has fallen significantly in the donor population over the past few years. In the absence of prospective studies any estimate of the current level of transfusion acquired hepatitis B must be treated with some caution and the figure of 50 cases a year quoted by Kay is likely to be an overestimate. Ongoing research may assist in answering this particular question.

Quarantining of frozen components aims to minimise the likelihood of infectious donations entering the blood supply during the window period. It is one of several ways the safety of frozen components might be improved. The low level of positivity for viral markers within the British donor population suggests that the overall benefit of such an approach would be small, and this must be considered in the context of significant cost and the future availability of more specific viral inactivation protocols for these components.

The requirement for extending current measures used to ensure the safety of the blood supply is kept under regular review. Innovative approaches such as "first pass testing," as proposed by Pagliuca and others,[4] merit consideration, although the operational feasibility of this will require careful assessment. Additional measures will be taken if appropriate to ensure that the current high reputation of British transfusion services in this area is maintained.

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1 Kay LA. Blood supply in Britain should be made safer. *BMJ* 1996;312:706. (16 March.)
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3 Flanagan P, McAlpine L, Ramskill SJ, Smith AG, Eglin R, Parry JV, *et al.* Evaluation of a combined HIV-1/2 and HTLV-I/II assay for screening blood donors. *Vox Sanguinis* 1995;68:220-4.
4 Pagliuca A, Pawson R, Mufti GJ. HTLV-1 screening in Britain. *BMJ* 1995;311:1313-4.

Wrong comparison quoted for breast screening

EDITOR,—Minerva has got it wrong.[1] She quotes figures comparing the rate of detection of breast cancer in women aged over 64 attending for screening for the first time (prevalent round) with rates in women aged 50-64 invited for the second time (incident round).[2] The first figure should have been compared with the detection rate in the prevalent round in women aged 50-64, which was 10/1000.[2] The detection rate in women aged over 64 (14.2/1000 in those aged 65-69 and 13.2/1000 in those aged 70-74) is only marginally higher.

There is no point in routinely inviting women aged over 64 for screening until it has been shown that the improvement in mortality in women who have already been offered screening is greater than that in older and younger women. Additionally, not enough staff are available or interested in screening for the service to be extended at the moment.[3]

In the meantime, the government has funded a large pilot study extending the age for a routine invitation for screening to 69. East Sussex, one of two centres in England taking part in the study, will invite 20 000 women aged 65-69 over the next three years. This study should provide useful information on the attendance rate, practical issues such as whether mammography takes longer in these women, and the incidence and prognostic index (staging, pathological grading, and size) of cancers detected in this group.

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1 Minerva. *BMJ* 1996;312:648. (9 March.)
2 Horton Taylor D, McPherson K, Parbhoo S, Perry N. Response of women aged 65-74 to invitation for screening by mammography: a pilot study in London, UK. *J Epidemiol Community Health* 1996;50:77-80.
3 Field S. UK radiology workforce survey—breast imaging service. *Royal College of Radiologists Newsletter* 1996;45:10-2.

Study of breast feeding and hypertrophic pyloric stenosis does not conflict with others

EDITOR,—Alfredo Pisacane and colleagues found no association between breast feeding and hypertrophic pyloric stenosis in infants.[1] Contrary to their statement, their data are entirely consistent with those of Webb *et al*, who showed that the rise in infantile pyloric stenosis after 1976 affected predominantly bottle fed babies.[2] In that paper my colleagues and I speculated that "some other environmental change must therefore be found to explain the increase" in infantile pyloric stenosis that had occurred in south Wales and elsewhere in Britain after 1976, which coincided with the abrupt withdrawal of unmodified cows' milk formulas and their substitution by low solute "humanised" feeds. Although there was a significant excess of breast fed babies with pyloric stenosis in Belfast before 1970,[3] this was not apparent after artificial infant feeds were modified.

A careful reading of the papers cited by Pisacane and colleagues[2 3] will show that there is no conflict between their data and ours.

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1 Pisacane A, de Luca U, Criscuolo L, Vaccaro F, Valiante A, Inglese A, *et al.* Breast feeding and hypertrophic pyloric stenosis: population based case-control study. *BMJ* 1996;312:745-6. (23 March.)
2 Webb AR, Lari J, Dodge JA. Infantile hypertrophic pyloric stenosis in South Glamorgan 1970-1979. *Arch Dis Child* 1983;58:586-90.
3 Dodge JA. Infantile hypertrophic pyloric stenosis in Belfast, 1957-1969. *Arch Dis Child* 1975;50:171-8.

Global commissioning by GPs could be detrimental to rehabilitation services

EDITOR,—We read Jonathan Shapiro's editorial on global commissioning by general practitioners with some concern.[1] While we favour increasing the involvement of general practitioners in the commissioning of health services, we are concerned about the possible impact of extending the scope of general practice fundholding on the provision of specialist rehabilitation services for adults and children with complex disabilities.

Some aspects of rehabilitation in common disorders such as stroke are relatively routine, but many people with disabling disorders have a complex and changing pattern of need and require specialist assessment, management, and support. Individual general practitioners are likely to have relatively little experience or knowledge of the management of conditions such as motor neurone disease, major acquired brain damage, or cerebral palsy, yet there may be considerable numbers of people with such conditions in an average sized traditional NHS district.[2]

We see little evidence that the consequences of fragmenting the purchasing of critical rehabilitation items such as complex orthotics or brain injury services have been adequately thought through. In the NHS internal market, with necessarily limited resources, there is a risk that the provision of more complex and expensive services will suffer through competition with larger volume services that are better understood.

The development of good quality accessible local services would benefit greatly from a collaborative approach from general practice fundholders, perhaps purchasing packages of services but in close liaison with specialists in rehabilitation and in public health and taking account of the views of users of the services. Further fragmentation of the purchasing of rehabilitation services could well discourage the development of good quality local services designed to address the population's needs. It would be all too easy to spend a great deal of money on rehabilitation services to little effect, and this surely is what the NHS reforms seek to prevent.

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1 Shapiro J. Global commissioning by general practitioners. *BMJ* 1996;312:652-3. (16 March.)
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