	Breast fed for ≤ 10 days (n=27)	Breast fed for >10 days (n=109)
Baby fed on demand	(n=27) 12 (44)	(n=107) 89 (83)
Baby fed at set times	15 (56)	18 (17)
	$\chi^2=15.4$, df=1, $p<0.0001$	
Baby breast fed only	(n=26) 5 (19)	(n=106) 63 (59)
Baby given supplementary bottle	21 (81)	43 (41)
	$\chi^2=11.95$, df=1, $p<0.001$	
Baby put to breast within 1 hour	(n=27) 10 (37)	(n=109) 69 (63)
Baby put to breast after 1 hour	17 (63)	40 (37)
	$\chi^2=5.10$, df=1, $p<0.025$	
All mothers who breast fed (n=135)		
Baby not "roomed in" with mother	49 (36) (not significantly associated with duration of breast feeding)	

incidence of breast feeding was low and the duration short: 40-44% of mothers were breast feeding on the tenth day of each month in the second half of 1989.

In January and February 1991 I used a structured questionnaire to interview 257 of the 276 mothers who had given birth in Fife during the last three weeks of November 1990. This was to find out factors relevant in their decisions to choose and to continue to breast feed in order to promote the practice. Of the 136 mothers who had started to breast feed, 27 had stopped by the tenth day after the birth.

The survey showed that practices out of line with current policy were taking place in hospitals in Fife. In addition, although sample sizes were small, I found that most of these practices were significantly associated with breast feeding for 10 days or less. These were late initiation of breast feeding (more than an hour after the birth), giving supplementary bottles while breast feeding, and feeding at set times (table).

Beeken and Waterston emphasise the importance of attitudes of health professionals who supervise and support breast feeding mothers and, in particular, of the need "to increase their awareness of breast feeding issues, promotion, and management." In an attempt to do that the joint breast feeding initiative was launched in Fife with a seminar on breast feeding in September 1990. A breast feeding steering group, comprising hospital staff, health visitors, and voluntary counsellors, meets regularly to discuss current issues. Defects found in the study are being rectified. More opportunities for such interdisciplinary communication would aid the implementation of Unicef's code of practice for baby friendly hospitals² and may help us to practise what we preach.

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1 Beeken S, Waterston T. Health service support of breast feeding—are we practising what we preach? *BMJ* 1992;305: 285-7. (1 August.)

2 Grant J. *State of the world's children 1992*. New York: Unicef, Oxford University Press, 1992.

EDITOR.—Establishing successful breast feeding depends not only on hospital policy and technique but on acquiring skills to maintain breast feeding in the home. I recently did a study on antenatal education and found that 45 of 200 mothers whose infants were less than 3 weeks old were not breast feeding, although they had expressed a desire to breast feed. Some of the challenges facing a breast feeding mother, often before breast feeding is fully established, are dealing with embarrassed relatives and visitors, male and female; dealing with inappropriate advice, whether requested or not; dealing with physical discomfort; and dealing with a small crying infant.

Though codes of practice can be improved in some maternity hospitals by improving techniques

and implementing policy, as Sally Beeken and Tony Waterston suggest,¹ the designation of "baby friendly hospital" should be awarded to those hospitals that help parents to cope with breast feeding in the social setting of their home, which many mothers believe is not currently addressed.

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EDITOR.—Sally Beeken and Tony Waterston's paper on attitudes to breast feeding has important implications for hospital policy,¹ and the code of practice for "baby friendly hospitals" should be enshrined in contract specifications to provider units.² When "training all health care staff (hospital and community) in the skills necessary to implement this policy" provider units should take into account the communication problems and cultural differences of Asians and other ethnic groups.

In 1991 a questionnaire survey of attitudes to breast feeding among 35 Asian Muslim mothers from child health clinics in South Birmingham Health Authority found that 21 of the women required an interpreter to help them communicate in English. Although 25 of the mothers had put the baby to the breast at least once by 2 weeks, only 16 were breast or mixed feeding—a higher rate of attrition in the first two weeks than that reported by the Office of Population Censuses and Surveys in 1985.³ All the women who had given up would ideally have liked to have continued breast feeding and thought that that was the best way to feed a baby.

When asked whom they turned to for advice on feeding none of the women mentioned their community midwife despite her frequent visits during that period, and only two mentioned their health visitor. Most of the women who had given up did not speak English; this highlights the communication problems of health professionals who are trying to support women during this period. The Spitalfields infant feeding project showed that providing a worker who can give mothers information and support in their own language once they are at home can have a considerable effect on the continuation of breast feeding.⁴

All units need adequate numbers of linkworkers or interpreters to be available in maternity wards, antenatal clinics, and the community at all times for this code of practice to succeed. The needs of ethnic groups should be considered when hospital or community breast feeding counsellors are appointed.

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3 Martin J, White A. *Infant feeding 1985*. London: HMSO, 1988.

4 Hilder L. *Infant feeding project report*. London: Tower Hamlets Maternity Services Liaison Scheme, 1989.

EDITOR.—Sally Beeken and Tony Waterston report an unhelpful and muddled attitude of midwives and health visitors to breast feeding despite a campaign on breast feeding aimed at health care professionals.¹ Many breast fed babies were given additional water or formula feeds. Thirty three of 50 mothers who answered a questionnaire had been separated from their babies for the first night.

The authors are unclear and obviously puzzled about the reasons for the professionals' ambivalence to breast feeding. They suggest a possible fear "of making bottle feeding mothers feel guilty or inferior"; there is some truth in this hypothesis. The mothering that a woman has had affects how she cares for her child. Changing attitudes to childrearing involve understanding how we feel about the way our mothers cared for us. Feeding a baby differently from the way we were fed means making implicit or explicit judgments on our own mothers; so midwives and health visitors are uncomfortable about making the mother they have in their minds feel guilty or inferior.

A contented mother with her satisfied baby at the breast can provoke desires in caring professionals to be cared for and nurtured. If unacknowledged this desire to be looked after may get in the way of our being able to provide the conditions that we know to be optimal.

The attitudes of staff towards sensitive subjects like breast feeding are difficult to change by exhortation. Discussions in small groups led by suitably trained staff are necessary. Regular discussion helps to prevent rigid positions developing on sensitive issues. The provision of nurseries that facilitate separation of the mother from her healthy neonate born in hospital reminds us of the struggle to get staff to allow mothers to see and hold their stillborn child; this change in attitudes to a flexible approach has required continuing group discussions.

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Early parenteral penicillin in meningococcal disease

EDITOR.—Jeffrie R Strang and Edwin J Pugh¹ and Keith Cartwright and colleagues² have studied the effect on outcome of giving penicillin before admission to hospital in suspected cases of meningococcal disease. We have looked at the early use of antibiotics in Worcester district, where there is a higher than average incidence of meningococcal disease (10.2 cases/100 000 population in 1991).

We have retrospectively studied cases of meningococcal disease reported to Worcester and District Health Authority from 1 January 1986 to 30 June this year. Of 121 recorded cases, 109 have been evaluated by review of medical case notes and the general practitioner's admission letter. In each case meningococcal disease was diagnosed on the basis of one or more of the following criteria: (a) *Neisseria meningitidis* isolated from blood or cerebrospinal fluid, or both; (b) Gram negative diplococci seen on microscopic examination of cerebrospinal fluid; (c) a rise in serum meningococcal antibody.

coccal antibody titre; and (d) clinical signs of meningococcal meningitis or septicaemia.

Of the 109 patients, 92 were admitted to hospital by their general practitioner, 13 were admitted through the accident and emergency department, three were found dead at home, and one was admitted after a domiciliary visit by a consultant paediatrician. Parenteral penicillin was given to 23 patients (21%) either by their general practitioner or by a casualty officer. A further seven patients had been taking oral antibiotics before presentation. During 1989, after the chief medical officer's recommendation about early use of penicillin¹ and widespread media coverage of a cluster of cases in this district, 14 of 27 patients (52%) received penicillin before admission. Excluding the patients who had been taking oral antibiotics before presentation, the overall case fatality rate during our study was 12% (one of the 23 patients (4%) given early penicillin died compared with 11 of the 79 (14%) not given it).

The frequency of early use of penicillin in suspected cases of meningococcal disease in our study was similar to that found by Strang and Pugh and Cartwright and colleagues. Early parenteral penicillin was associated with reduced mortality, and, although this was not significant, it is consistent with the trend observed by these other workers. General practitioners need to be continually reminded of the value of early treatment with parenteral penicillin whenever meningococcal disease is suspected.

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- 1 Strang JR, Pugh EJ. Meningococcal infections: reducing the case fatality rate by giving penicillin before admission to hospital. *BMJ* 1992;305:141-3. (18 July.)
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Giant cell arteritis

EDITOR,—Justin C Mason and Mark J Walport suggest that C reactive protein concentration may be a more effective marker of disease activity in giant cell arteritis than the erythrocyte sedimentation rate.¹ The study they cite was of 13 patients with polymyalgia rheumatica, and C reactive protein concentration reflected disease activity more accurately over the first two weeks of treatment.² We carried out a prospective study of 74 patients and found that the erythrocyte sedimentation rate correlated better than C reactive protein concentration with disease activity.³ The C reactive protein concentration fell more rapidly in the first two weeks after treatment, but assessing response at this stage is rarely difficult. Thereafter the erythrocyte sedimentation rate was a better marker.

I suggest, therefore, that in most circumstances the erythrocyte sedimentation rate could be safely used to monitor disease activity in polymyalgia rheumatica and giant cell arteritis.

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- 1 Mason JC, Walport MJ. Giant cell arteritis. *BMJ* 1992;305:68-9. (11 July.)
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EDITOR,—By considering giant cell arteritis from a rheumatologist's viewpoint Justin C Mason and Mark J Walport make several statements in their editorial that are probably not applicable generally and certainly not applicable to giant cell arteritis causing visual loss.¹ The sensitivity of temporal artery biopsy is much higher than 60%: it correctly predicts the need for corticosteroid treatment in 94% of cases² and should be regarded as crucial to management.

Doctors have recourse to diagnostic methods other than "mystery and mystique." In ischaemic optic neuropathy both ocular pneumoplethysmography and appreciably delayed choroidal filling on fluorescein angiography are extremely useful in differentiating ischaemia due to giant cell arteritis from that due to non-arteric causes.^{3,4} Systemic markers of the underlying immunological disturbance can also be sought: both raised levels of IgG anticardiolipin antibodies and selective depletion of CD8+ lymphocytes in the peripheral blood are reliable.^{5,6}

The authors' advice on treatment, particularly for patients with visual loss, should be treated circumspectly. Graham *et al*'s recommendation of 250 mg of intravenous hydrocortisone at presentation coupled with a starting dose of 80 mg of prednisolone orally, reducing to 30 mg over the first 10 days, is the standard regimen.⁷ Regimens of lower steroid doses are more suited to the treatment of polymyalgia rheumatica, especially as inadequate steroid treatment has been identified as a possible factor in death in the acute phase of giant cell arteritis.⁸ Although use of inadequate steroid doses is to be deprecated, recommendations to use high dose intravenous pulses of steroid in acute visual loss are not based on convincing evidence.⁹ Monitoring the withdrawal of steroids by measuring the erythrocyte sedimentation rate is unreliable,¹⁰ and a better approach is to use a fixed withdrawal regimen.⁷ During a fixed withdrawal regimen the recurrence of symptoms or signs should be monitored (and the dose of steroids increased to the dose that previously controlled the recurrent features) and CD8+ lymphocyte counts measured serially.¹¹

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- 1 Mason JC, Walport MJ. Giant cell arteritis. *BMJ* 1992;305:68-9. (11 July.)
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AUTHORS' REPLY.—Referral bias means that ophthalmologists, rheumatologists, and general practitioners each see a different part of the large clinical range of severity of giant cell arteritis. Ophthalmologists see a higher proportion of patients presenting with visual loss and therefore requiring more aggressive treatment. As far as

diagnosis is concerned, we do not question the importance of temporal artery biopsy. Such biopsies, however, yield negative results in up to one third of patients with symptoms suggestive of giant cell arteritis, with false negative rates of 10-61% reported.¹

We question the value of raised levels of anti-cardiolipin antibodies and reduced CD8+ lymphocyte counts both as diagnostic tools and as a means of monitoring disease activity in giant cell arteritis. Anticardiolipin antibodies may be a marker of a small subset of patients with ischaemic optic neuropathy as part of the antiphospholipid syndrome.^{2,3} There is no evidence that the CD8+ lymphocyte count is any more than a very expensive indirect correlate of the acute phase response.⁴

The prescription of high dose corticosteroid regimens in patients with giant cell arteritis presenting with visual loss is not in dispute, though no "gold standard" regimen exists. There is, however, evidence to support lower initial doses of corticosteroids in patients without visual loss, and these do not seem to be associated with an increased risk of relapse.⁵ There is no reliable method of predicting which patients will relapse while taking steroids,⁶ and recurrence of severe disease in patients taking stable doses of steroids is well described.⁷ Too rapid a reduction in the dose of corticosteroids is probably the main risk factor. We therefore favour a gradual reduction of treatment, not confined to a fixed regimen but dictated by careful and frequent monitoring of the patient's symptoms and acute phase response.

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Removal of central venous catheter and venous air embolism

EDITOR,—I share Peter Mennim and colleagues' concerns about air embolism occurring when a central venous catheter is removed and agree with their recommendations for preventing this complication.¹ I first witnessed a death due to venous air embolism via a central venous catheter in 1973.² The postmortem examination was carried out by the late Professor Keith Simpson, who coincidentally reported the first episodes of venous air embolism via transfusion equipment.³ He mentioned that he had seen several other deaths due to air embolism via central venous catheters and criticised the integrity of the devices. Unfortunately, little has changed during the past 20 years.

The incidence of important air embolism associated with central venous catheters is, however, much higher than the authors suggest. I have been carrying out a regular search of published work for several years: to date 151 cases in which cardiorespiratory distress or considerable neurological morbidity occurred have been reported and