Wisconsin conference reconvened in 1988, and its consensus statement on decisions to forgo medical treatment was published recently.⁸ These guidelines should prove useful as a basis for discussion in different countries and hospitals if their availability becomes widely known.

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- Williams BT. Life sustaining technology: making the decisions. *Br Med J* 1989;298:978. (15 April.)
- Jennett B. Decisions to limit treatment. *Lancet* 1987;ii:787-9.
- Age Concern Institute of Gerontology and Centre of Medical Law and Ethics, King's College, London. *The living will*. London: Edward Arnold, 1988.
- Barlow P. Audit of mortality in a neurosurgical unit. *J Neurol Neurosurg Psychiatry* (in press).
- Working Party of British Medical Association. *The euthanasia report*. London: British Medical Association, 1988.
- Higgs R. Not the last word on euthanasia. *Br Med J* 1988;296:1348.
- Gillon R. Euthanasia, withholding life-prolonging treatment, and moral differences between killing and letting die. *J Med Ethics* 1988;14:115-7.
- Stanley JM, Abrams FR. The Appleton consensus: international guidelines for decisions to forgo medical treatment. *Journal of the Danish Medical Association* 1989;March:700-6.

Changing character of cervical cancer in young women

SIR,—We welcome the interest shown by Dr E J Buxton and colleagues¹ in our paper.²

The concern of Dr Buxton and colleagues about the representative nature of the trends in incidence of cervical cancer in women aged ≤ 35 was precisely why we included available data from the New South Wales population based Central Cancer Registry in our figure. Because it is the largest gynaecological oncology unit in New South Wales these figures predictably closely paralleled the increase in the proportion of younger women with cervical cancer seen at this unit. The slight difference in the proportion of younger women between the hospital figures and the total population figures reflects the referral pattern of the hospital.

The objection of Dr Elliot and colleagues that the increase in the proportion of women with affected nodes may reflect differences in other prognostic factors seems to miss the point that this finding has been an indicator of a more aggressive type of disease in younger women recently.

The histopathological review was indeed contemporary, sections of all cases of cervical cancer being re-examined. We are surprised that Dr Buxton and colleagues suggest that the increased frequency with which less common cell types were seen among younger and older women after 1970 is due to intracavitary radiation obscuring the histological findings before this date. Such a premise is untenable and invalidates all studies of cell type from institutions where radiotherapy alone is used to treat cervical cancer. Moreover, wedge biopsy specimens before irradiation were so generous that new sections for review were cut from stored blocks when necessary.

The proportional hazards models of survival and time to relapse were limited to factors available for all or at least a reasonable proportion of patients. They included clinical stage, age group (split at 35 years), time period (modelled variously as two, five, 10, and 17 year intervals), less common cell type as described previously, and pathological lymph node state (available in 57% of women). Analysis confined to 1223 women in whom cervical cancer was diagnosed before 1982 and whose node state was known showed independent highly significant adverse effects of higher stage of tumour and positive lymph nodes, with an improved survival more recently. After allowance for these factors the younger age group was associated with a trend to improved survival that was not conventionally significant ($\beta=0.19$ (SE 0.15), $p=0.2$). When

lymph node state was not considered 2039 patients were available for analysis. In this model stage of tumour remained highly significant and less common cell types were associated with a worse prognosis ($p=0.03$); the effect of time period was less clear—apparently survival was worse in the earliest decade of the study. With or without allowance for the effect of time period the favourable prognosis associated with younger age group for the overall period 1953-81 was significant ($p=0.002$). The extent to which correlations among age group, cell type, and node positivity may explain the differences between the analyses in which nodal state was included or excluded remains unknown.

Our concern about the apparent worsening of prognosis in young women with node negative disease in 1985-6 was explicitly qualified by reference to the small numbers affected and seems to be justified by our subsequent experience with a further 16 young women with stage Ib-IIa disease treated by radical hysterectomy and lymphadenectomy in 1987-8. Two of six patients with positive nodes had a relapse despite adjuvant treatment. Of 10 patients with negative nodes, two have already had a relapse, and these were among seven women who did not receive adjuvant treatment.

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- Buxton EJ, Stuart NSA, Kelly KA, Blackledge GRP. Changing character of cervical cancer in young women. *Br Med J* 1989;298:829. (25 March.)
- Elliott PM, Tattersall MHN, Coppleson M, et al. Changing character of cervical cancer in young women. *Br Med J* 1989;298:288-90. (4 February.)

Hypoxaemia and adenoidectomy

SIR,—Dr V H van Someren and colleagues found nocturnal hypoxaemia in 34% of children admitted for adenotonsillectomy.¹ One of the clinical features that distinguished this hypoxic group was physical signs of nasal obstruction.

Although adenoidectomy is commonly performed at the same operation as tonsillectomy, its indications are different and should be considered separately.² The commonest indication is in children whose nasal obstruction and mouth breathing are thought to be due to enlarged adenoids.³ Controversy exists over the usefulness of adenoidectomy in glue ear, but Maw's work seems to show that adenoidectomy is important in the resolution of glue ear, provided the palatal airway (distance between the soft palate and adenoidal mass) is reduced to 3 mm or less—sufficient to produce physical signs of nasal obstruction.⁴

All children undergoing adenoidectomy should therefore have gross obstruction of the postnasal space by adenoidal tissue, preventing nasal breathing. It would be of interest to know the indications for adenoidectomy in the children who suffered no nocturnal hypoxaemia. It is difficult to see how the physical signs of nasal obstruction will help otorhinolaryngologists avoid unnecessary operations.

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- van Someren VH, Hibbert J, Stothers JK, Kyme MC, Morrison GAJ. Identifying hypoxaemia in children admitted for adenotonsillectomy. *Br Med J* 1989;298:1076. (22 April.)

- Grace ARH, Bailey CM. Tonsil and adenoid problems in children. *Respiratory Disease in Practice* 1989;6:18-26.
- Hibbert J. Tonsils and adenoids. In: Maran AG, Stell PM, eds. *Clinical otolaryngology*. Oxford: Blackwell Scientific, 1979; 481-4.
- Phillips DE, Maw AR, Harvey K. The nasopharynx and adenoid in children with glue ear compared with normal controls. *Clin Otolaryngol* 1987;12:255-60.

Effects on birth weight of smoking, alcohol, caffeine, socioeconomic factors, and psychosocial stress

SIR,—I concur with the findings of Dr Oliver Brooke and colleagues that smoking is the single most important biomedical influence on birth weight.¹

I do not, however, concur with the conclusion that social support and stressful social factors do not affect birth weight once smoking is controlled for. Others have shown that birth weight is influenced by biomedical and psychosocial factors^{2,3} and that certain psychosocial stressors can be neutralised or buffered by psychosocial resources. Dr Brooke and colleagues measured the stressors but did not in my opinion measure the psychosocial resources as their measure of social support dealt only with the frequency of contact with friends, relatives, and neighbours. A more appropriate measure of psychosocial assets entails not only the number of resources and frequency of contacts but also the satisfaction with those resources as well as a measure of family functioning.^{4,5}

Had the quality of such relationships been evaluated the authors might have found an additional effect.

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- Brooke OG, Anderson HR, Bland JM, Peacock JL, Stewart CM. Effects on birth weight of smoking, alcohol, caffeine, socioeconomic factors, and psychosocial stress. *Br Med J* 1989;298:795-801. (25 March.)
- Reeb KG, Graham AV, Zyzanski SJ, Kitson GC. Predicting low birth weight and complicated labour in urban black women: a biopsychosocial perspective. *Soc Sci Med* 1987;25:1321-7.
- Oakley A. Social support in pregnancy: the 'soft' way to increase birth weight? *Soc Sci Med* 1985;21:1259-68.
- Ramsey CN, Abell TD, Baker LC. The relationship between family functioning, life events, family structure, and the outcome of pregnancy. *J Fam Pract* 1986;22:521-7.
- Smilkstein G, Helgeson-Lucas A, Ashworth C, Montano D, Pagel M. Prediction of pregnancy complications: an application of the biopsychosocial model. *Soc Sci Med* 1984;18:315-21.

General practitioner obstetricians

SIR,—The future role of the general practitioner obstetrician is uncertain. General practitioners' involvement in intrapartum care has declined dramatically over the past 30 years: home deliveries have all but disappeared as an option in most areas of the country, and the number of general practitioner obstetric units continues to fall.

The justification for this trend has been the supposed greater safety of specialist care. Increasingly, however, evidence is becoming available that does not support this assumption but, on the contrary, shows that for many women care by a general practitioner or midwife can match the safety of specialist care.¹ Care by a general practitioner or midwife seems to be preferred by most women² because it requires less intervention.³ The audit of 26 years of obstetrics in general practice by Drs G N Marsh and D M Channing is further important evidence that the majority of women can be delivered under general practitioner care, and delivered safely.⁴

Despite the evidence on safety and patients' wishes, such care is still under threat—there are "predators on the loose." Professional and political pressures for centralisation of maternity care need to be countered. Many young general practitioners shy away from intrapartum care, doubting their own competence because, unfortunately, the trainee senior house officer gains more experience of abnormal than normal delivery. This may be inappropriate for future general practitioner obstetricians.

General practitioners involved in intrapartum care agreed at a recent meeting in Birmingham to establish an association to support such care. The association will be concerned with all aspects of maternity care in the community, whether birth takes place at home or in isolated, integrated, or attached general practitioner units. We look forward to close links with midwives, the users of such services, and their representative organisations.

After your news item of 11 March³ and Dr David Jewell's leading article emphasising the necessity of immediate action to save an endangered but valuable species⁶ there has been an enthusiastic response to the Birmingham proposal.

There may be doctors who are unaware of the proposed association. If they are interested please could they inform Dr Young. The steering committee of the proposed association will meet shortly, and we will then write to all those who have expressed interest.

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- 1 Tew M. Place of birth and perinatal mortality. *J R Coll Gen Pract* 1985;35:390-4.
- 2 Taylor A. Maternity services: the consumer's view. *J R Coll Gen Pract* 1986;36:157-60.
- 3 Klein M, Lloyd I, Redman C, Bull M, Turnbull AC. A comparison of low-risk pregnant women booked for delivery in two systems of care: shared care (consultant) and integrated general practice unit. *Br J Obstet Gynaecol* 1983;90:118-22.
- 4 Marsh GN, Channing DM. Audit of 26 years of obstetrics in general practice. *Br Med J* 1989;298:1077-80. (22 April.)
- 5 Anonymous. GP obstetricians organise. *Br Med J* 1989;298:626. (11 March.)
- 6 Jewell D. General practitioner obstetrics. *Br Med J* 1989;298:690-1. (18 March.)

Neck sprains after car accidents

SIR,—We agree with Mr K M Porter in his editorial¹ that the term whiplash injury should not be used as a diagnosis, though the general public is not incorrect in associating whiplash injury with lasting disability and litigation. In a study in Blackburn we found that after 10-15 years 31% of our original group of patients with whiplash injuries still suffered from residual symptoms; this supports the findings quoted by Mr Porter.^{2,3} Norris and Watt found that 66% of patients with whiplash injuries pursued litigation.⁴

The so called true whiplash injury due to a rear impact should be differentiated from neck injuries due to other mechanisms. There are several reasons for believing that the true whiplash injury carries a poorer prognosis. Firstly, in our series the incidence of residual symptoms was significantly greater in the group with true whiplash injuries than in the group with neck injuries due to other mechanisms. Secondly, from an anatomical point of view with an impact from the side or front the impingement of the head on the chest or shoulder prevents the neck moving outside its normal range, whereas in the case of a rear impact extension can occur well beyond the physiological range. Thirdly, in animal studies MacNab showed that a true whiplash injury is capable of producing

considerable tissue damage in the form of tears in the anterior longitudinal ligament or even detachment of the disc from the vertebral end plate.⁵ We suggest that the term hyperextension strain be used for injuries caused by rear impact and would reserve the term neck sprain for injuries caused by other mechanisms.

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- 1 Porter KM. Neck sprains after car accidents. *Br Med J* 1989;298:973-4. (15 April.)
- 2 Deans GT, Magalliard JN, Kerr M, Rutherford WH. Neck sprains—a major cause of disability following car accidents. *Injury* 1987;18:10-2.
- 3 Hohl M. Soft tissue injuries of the neck in automobile accidents: factors influencing prognosis. *J Bone Joint Surg [Am]* 1974;56:1675-82.
- 4 Norris SH, Watt I. The prognosis of neck injuries resulting from rear end vehicle collisions. *J Bone Joint Surg [Br]* 1983;65:608-11.
- 5 MacNab I. Acceleration injuries of the cervical spine. *J Bone Joint Surg [Am]* 1964;46:1797-9.

Burns from fluid heated in a microwave oven

SIR,—I endorse the sentiments recently expressed by Dr Maeve Lambe and by Messrs K Herbert and S K Varma about safety in the kitchen^{1,2} and would like to draw attention to the danger of fluid heated in the microwave oven, a piece of equipment that has become popular in recent years. An admission to our unit of a child with scalds requiring skin grafting after an accident with such fluid prompted this investigation. The child had tipped over a cup containing fluid that had been reheated in a microwave and left to stand for several minutes. According to published cooling curves, this liquid should have reached a "safe" temperature (55°C),³ but the manufacturer's handbook states that a "standing time," in which the material continues to cook, is often required after microwave heating.

We looked at the cooling characteristics of six British Standard cupfuls of conventionally boiled water and compared the results with water boiled in a microwave oven. Water heated in the microwave oven reached the "safe" temperature 10 minutes later than did water heated conventionally.

This fact should be borne in mind when a scald is assessed as the burn may be deeper than first thought if the fluid was heated in a microwave.

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- 1 Lambe M. Burns from a tumble drier. *Br Med J* 1989;298:1250. (6 May.)
- 2 Herbert K, Varma SK. Burns from a tumble drier. *Br Med J* 1989;298:571.
- 3 Mercer NSG. With or without? A cooling study. *Burns* 1988;14:397-8.

Orthopaedics and the core curriculum

SIR,—Though the suggestion of a core curriculum is an excellent one, Drs I C McManus and R E Wakeford are correct in stating that "the apparatus of medical education contains too much friction and inertia."¹ This is well illustrated in orthopaedic surgery, a specialty that has seen rapid growth from a small branch of general surgery in the 1930s to being almost as big as general surgery itself. The 1987 GMC report does not, however, recognise orthopaedics as a separate subject.² It states, "The questionnaire asked about surgery and surgical

specialties. It has therefore been assumed that the responses cover not only general surgery, but also urology, orthopaedics and any teaching given in plastic surgery, neurosurgery, etc. Otorhinolaryngology was, however, enquired about separately."

The assumption made is in all probability incorrect because orthopaedics is often not taught within the surgical block but tends to be lumped together with the so called "minor specialties." Though orthopaedics occupies such a small proportion of the surgical part of the undergraduate curriculum (entirely for historical reasons as far as I can ascertain), it is likely that orthopaedic outpatient waiting lists will continue to grow. Some of this growth is preventable by better undergraduate teaching of the subject: up to 30% of referrals in my practice are inappropriate.

Is it not time for the colleges of surgeons to look critically, objectively, and fairly at the advice they give to the GMC on the undergraduate curriculum?

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- 1 McManus IC, Wakeford RE. A core medical curriculum. *Br Med J* 1989;298:1051. (22 April.)
- 2 General Medical Council Education Committee. *Report of a survey of medical education practices in United Kingdom medical schools*. London: General Medical Council, 1988.

Training for coronary angioplasty

SIR,—In her letter Dr Linda Walker questions the necessity for expansion of use of angioplasty in the light of the recent thrombolysis in myocardial infarction trial.^{1,2} Careful reading of this study reveals that nearly a third of those patients in the conservative strategy group underwent coronary angiography; 16% required angioplasty, and 10-5% needed coronary artery bypass surgery within 42 days after infarction. Since the protocol required that recurrent ischaemia or ischaemia induced on exercise be present before catheterisation, these patients were in a group whose prognosis is known to be worse than that of those without ischaemia. Thus the data suggest that up to a quarter of all patients aged under 76 may require revascularisation procedures after myocardial infarction, and many will be suitable for angioplasty.

Given the large number of patients with myocardial infarction the data from the thrombolysis in myocardial infarction trial suggest that expansion of angioplasty services will be required even if a conservative strategy is followed.

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- 1 Walker L. Training for coronary angioplasty. *Br Med J* 1989;289:1102. (22 April.)
- 2 TIMI Study Group. Comparison of invasive and conservative strategies after treatment with intravenous tissue plasminogen activator in acute myocardial infarction: results of the thrombolysis in myocardial infarction (TIMI) phase II trial. *N Engl J Med* 1989;320:618-27.

Attitudes to blood donation and AIDS

SIR,—The report by Mr S G MacAskill and colleagues in Scotland¹ complements our own work in Wales. A decline in blood donation in Wales, although not as steep as that in Scotland, has occurred in the period during which AIDS has emerged as a public health problem.

Two surveys conducted by the Health Promotion Authority for Wales in 1987 and 1988 have