are invariably relieved by talking to someone who has known of similar tragedies. Many often ask if there are other mothers of stillborn babies in the hospital at the time. Others ask us, some time after delivery, if they can be put in touch with more mothers of stillborn babies. Secondly, it enables us to offer much more help to these mothers when they become pregnant again. It is at this time that many complications, often due to repressed grief reactions, can occur. This can take the form of rejecting the new baby, of acute anxiety about labour, etc. One hopes that by working well with mothers after stillbirths some of these difficulties will be avoided.

In addition to our work with mothers who have just delivered stillborn babies we have recently started to screen women booked into the hospital antenatally who have had a difficult obstetric history. These mothers can be identified from the hospital booking cards. They are written to as early in pregnancy as possible and invited to see us when they attend the clinic. We are just beginning to get some results from this.

Our approach is only a beginning and we are very aware that we need to work much more closely with both doctors and nurses. It would be very interesting to hear of any other work being done with mothers of stillborn babies.

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Drawbacks of monocomponent insulins

SIR,—The introduction of the monocomponent insulins a few years ago appeared to offer important advantages. Insulin antibodies are not produced and this allows control of blood glucose levels with lower doses of exogenous insulin than would be necessary with the older, more impure insulins. This undoubtedly happens and when a patient on one of the older insulins is switched to the monocomponent insulins hypoglycaemic reactions often occur even when the dosage of the monocomponent insulins given is markedly lower than that of the older insulins. This advantage is very useful in patients who have hitherto been controlled only with very large doses of insulin. It has been postulated furthermore that high circulating insulin levels may play a part in the premature development of atherosclerosis and possibly other diabetic complications, and lowering these levels may help to prevent or delay the development of these complications.

Because of these theoretical advantages I have been anxious to manage all my "new" diabetic patients with the monocomponent insulins and to switch over all the unstable patients attending by diabetic clinic to these insulins. Often I have obtained a good response. However, in a few patients I have had problems. There is one group of patients in whom repeated attempts to control their blood glucose with these insulins have failed and where the old-fashioned insulins have worked with little problem. There is a second group who respond beautifully to these pure insulins, but only for a period of time. Control is then lost however hard one tries to achieve it; ketonuria develops, often with vomiting, and repeated admissions to hospital are necessary. Control is achieved only when the older insulins are substituted. I have recently met two such

patients in whom the combination of Actrapid and Monotard was effective for a year; control was then lost and achieved again only when the soluble-isophane combination was substituted.

It has been suggested that insulin antibodies may be helpful to some patients in allowing a gradual release of the insulin, but other factors may well play a part in explaining the better response obtained to the older insulins.

The views and comments of your readers would be of interest.

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Mumps and its complications in Stockholm

SIR,—The justification for large-scale vaccination programmes against mumps is at present being discussed in several Western countries.¹⁻³ In a leading article last year (11 June, p 1489) you stated that the cost and work of widespread mumps vaccination seem disproportionate to its benefit. However, surprisingly little hard data concerning the social and medical implications of mumps and its complications are available. From epidemiological observations over a 22-year period (1955-76) from the city of Stockholm we have accumulated some results that may have certain relevance for the future policy on mumps vaccination in this area.

Our data on uncomplicated mumps are drawn from the statistics of the Stockholm school health authorities covering the age groups 7-16 years (1965-76) and 17-20 years (1970-6). Information on mumps meningitis (MM) and mumps orchitis (MO) was obtained from Roslagstull Hospital, which is the only infectious disease hospital of the city and serves a region with a mean of 800 000 inhabitants, constituting about 10% of the Swedish population. For information on the selection and the representative nature of the material we refer to our dissertations.⁴⁻⁶

During the period 1970-6 the average annual incidence of mumps in the age group 7-16 years was 2.4% and in the 17-20-year group 0.4%. In Stockholm patients suspected of MM are mostly admitted to hospital. The incidence of MM, here defined as ≥ 5 leucocytes/mm³ ($\geq 5 \times 10^6/l$) in the cerebrospinal fluid in cases of mumps suspected of meningitis, showed considerable annual variation, although with a close correlation to the annual incidence of mumps in the population at large. For the whole period of observation the peak incidence by age of MM was seen among children at the age of 7 years, though 40% of the MM patients were aged 15 or more. The ratio of male to female MM patients varied with age of the patients. Thus for patients below 20 years this rate was found to be 3-4:1. In the age group 20-29 years males and females were represented in equal proportions, whereas for patients of 30 years or more the males regained dominance. Over the period 1965-74 the ratio of MM to clinical mumps in the age group 7-16 years averaged 2.4% (1.4-2.8%).

The peak incidences of MO were found in the age groups 15-19 and 25-29 years (1972-6). MO was rare before puberty and after the age of 50 years. The mean age in the MO group was 28 years. In the age group 17-20 years the ratio of cases of MO admitted to hospital to cases of clinical mumps was about 5%.

In patients suffering from MM the length

of hospital care usually varied between two and four weeks during the period analysed (1955-64) and the period of disability between one and two months. However, in about 10% of these cases, many of them being in adults, the disability periods were considerably longer. In MO the disability period rarely exceeded three weeks.

On the basis of the above data we estimate that about 1000 Swedes are treated in hospital or at home for MM and about 300 for MO each year. The implications of our investigation are that in Sweden the average annual number of days of hospitalisation due to MM could be 20 000, and correspondingly the number of days of disability in individuals aged 15 years or more is between 20 000 and 40 000. In addition, we have to count on considerably larger numbers of people on sick leave at home owing to mumps or complications of mumps.

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¹ Modlin, J F, Orenstein, W A, and Brandling-Bennet, A D. *Journal of Infectious Diseases*, 1975, **132**, 106.

² Lang, W. *Münchener medizinische Wochenschrift*, 1976, **118**, suppl (24 September), p 9.

³ Alestig, K, et al. *Läkartidningen*, 1977, **74**, 326.

⁴ Skoldenberg, B. *Scandinavian Journal of Infectious Diseases*, 1972, suppl 3.

⁵ Bjørvatn, B, and Wolontis, S. *Scandinavian Journal of Infectious Diseases*, 1973, **5**, 253.

⁶ Bjørvatn, B, and Wolontis, S. *Scandinavian Journal of Infectious Diseases*, 1974, **6**, 5.

GP obstetrics

SIR,—Several recent publications¹⁻³ question the present-day role of the general practitioner obstetrician and seem to imply that the GP maternity unit may soon be an anachronism. Our experiences in Oxford, in a GP obstetric unit very similar to that described by Mr B V Lewis and his colleagues (25 February, p 484), suggest that this need not necessarily be the case. For example, in 1977 of 705 patients booked, 38 cancelled and 183 (26.0%) were transferred for consultant care during pregnancy. Of 484 patients admitted in GP care, 61 (12.6%) were transferred in labour and some degree of specialist aid was required with a further 26 (3.7%). Altogether 88.6% of patients delivered spontaneously, the instrumental delivery rate was 10.4%, and a further five patients (1.0%) came to caesarean section. GP obstetricians attended 78% of their patients at some time during labour and 64% at the actual delivery. The perinatal mortality rate for admissions was nil and that for all original bookings 3 per 1000 (one stillbirth—anencephalic; one neonatal death—placental abruption at 28 weeks).

A paper in the course of preparation will review the results obtained by the Oxford unit over the past 10 years with particular reference to the performance of GP obstetricians and also the outcome for nulliparous patients booked in GP care. However, a number of factors can already be identified that have without doubt contributed to its success. Firstly, GPs operating in the unit should have an overriding commitment to the care of their patients and all new entrants are required to have approved postgraduate experience in obstetrics. Secondly, we have the dedicated support of a group of experienced community

midwives who form an integral part of the primary health care teams. Thirdly, the unit is situated in the district obstetric hospital and, although autonomous, is subject to the same professional disciplines and patient management policies as generally prevail there. Fourthly, selection of patients for GP booking, while not entirely inflexible, is maintained within well-defined guidelines. Fifthly, GP contact and consultation with specialist staff is promoted and ongoing participation of the GP in cases transferred to consultant care is encouraged. A regular series of lunchtime meetings is held to update practitioners with advances in obstetrics and thus maintain high standards of antenatal and intranatal care. Finally, the unit is subjected to regular and penetrating audit when statistics are examined and problem cases discussed in depth by GPs, consultants, and midwives.

In conclusion, while universal induction of labour, fetal monitoring, and epidural analgesia may in some eyes be the counsel of perfection for intranatal care, three questions must be asked: (1) Is such a policy economically feasible on a nationwide basis? (2) Are the results so greatly superior to more traditional systems of care? (3) In any case, is this what the patient wants and expects? Until these questions can all be answered in the affirmative there may yet be a place for the GP obstetrician and community midwife backed by proper training, support, and facilities.

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¹ Lloyd, G, *British Medical Journal*, 1975, 1, 79.

² Wilkes, E, *et al*, *British Medical Journal*, 1975, 4, 687.

³ Curzen, P, and Mountrose, U M, *British Medical Journal*, 1976, 2, 1433.

Alcohol and cirrhosis

SIR,—Minerva's discovery (25 February, p 516) that there has been a ninefold increase in cirrhosis of the liver in Finland between 1964 and 1974, due supposedly to a trebling in alcohol consumption, is impossible to reconcile with statistics from the World Health Organisation.^{1,2} She also fails to mention the fact that mortality from the disease in Finland, as in other northern countries, is remarkably low compared with the death rate of the more southern Europeans, who are predominantly wine drinkers. The accompanying table gives the death rates per million of population from cirrhosis of the liver in 1967 and 1972 for Finland and other representatives of the two groups.

The 38% increase in cirrhosis mortality in Finland between 1967 and 1972 is inconsistent with the alleged 800% increase between 1964 and 1974, and it still leaves spirit-drinking Finland with only 13% of the cirrhosis death rate of wine-drinking France in 1972. If

drinking is really the main cause of cirrhosis of the liver then it must be due to some constituent of wine other than alcohol which is not carried over by distillation into spirit. Only a comprehensive survey of the relationship between all types of alcoholic drink and drink mortality will permit an unprejudiced judgment of the effects of alcohol. I strongly suspect that the negative correlation between alcohol consumption and deaths from ischaemic heart disease would far outweigh any positive connection with cirrhosis and that a regimen of moderate drinking of well-diluted spirits before and during meals would come out statistically as the ideal for long life.

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¹ *World Health Statistics Annual*, 1967, vol 1, Vital Statistics and Causes of Death. Geneva, World Health Organisation, 1970.

² *World Health Statistics Annual*, 1972, vol 1, Vital Statistics and Causes of Death. Geneva, World Health Organisation, 1975.

Traumatic tenosynovitis of the wrist

SIR,—With reference to your leading article (4 March, p 528), until 1947 I used to treat cases of tenosynovitis in plaster-of-Paris for three weeks. When it was removed they were usually symptom-free but frequently relapsed in a few days. In 1947 a gardener came to see me with a bad tenosynovitis crepitans. I told him I would have to put him in plaster-of-Paris for three weeks and he would have to stop work. He said he could not do this as he had a cow of his own which he had to milk every day. I told him that if he carried on like that he was unlikely to get better. I applied an Elastoplast bandage and hoped for the best. He came to see me a week later having milked his cow every day and remained at work and he was symptom free. I removed the Elastoplast and he did not relapse.

Since then I have encouraged all patients with tenosynovitis to remain at work. I apply an Elastoplast bandage and ask them to apply deep friction to the tender area through the Elastoplast and show them how to do it. I cannot remember any that did not get better in a week, nor do I remember any relapsing.

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Factors affecting length of hospital stay

SIR,—The paper by Dr L Carol Fernow and others (4 March, p 556), compiled from a great deal of clerical work, confirms the well-known fact that "length of stay . . . is complex, and that these complexities should be taken into consideration before establishing norms." Quite so.

Even if "the study shows that much new information could be [made] available routinely" what good would this do? Suppose that after allowing for patient and process variation some differences in length of stay were found among the surgeons in an area health authority. It would be argued that some of the difference was due to unavoidable factors such as day-of-week of operation leading in some firms to the optimal discharge day falling at the weekend (no ambulances and shops shut). Eventually, after consideration of every variable in the hospital it might

be shown that one or two surgeons kept their patients in a day or two longer than their colleagues did. These surgeons would certainly argue that this policy was better for their patients (fewer return cases, complications, GP consultations, etc). A very expensive investigation might disprove this claim to the satisfaction of some non-clinicians but not of the doctors concerned, who are unlikely to alter their policies.

The collection of the routinely recorded information that this study uses can only add to administrative costs at a time when everyone is trying to reduce these costs. Qui bono?

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Inactivation of agent of Creutzfeldt-Jakob disease

SIR,—In the interests of neurosurgeons, pathologists, virologists, and others who may have to deal with material from cases of Creutzfeldt-Jakob disease it is important to clarify the puzzling and possibly inaccurate description given in your leading article "Creutzfeldt-Jakob under control" (25 February, p 463) of the conditions leading to the inactivation by wet heat of the related agent of scrapie.

The combination described, of a temperature of 121°C and a pressure of 20 psi (1.4 kg/cm²), is in theory obtainable in an autoclave if only two-thirds of the air has been removed. The above figures occur in Gajdusek's article referred to¹ and also in an earlier one of his² so may be a correct description of the results of his procedures, but it is a very unusual way of using an autoclave and the conditions operating in the vessel under these circumstances are probably not uniform.

If, however, his autoclave was used in the normal way with all the air evacuated or discharged either the temperature or the pressure is incorrect, as 121°C then corresponds to 15 psi (1.05 kg/cm²) and 20 psi to 126°C.

In order to be sure that autoclaving will inactivate the agent of Creutzfeldt-Jakob disease, about which rather less is known and which will often be embedded in tissue debris, it would seem extremely important to set out clearly, accurately, and in full how the autoclave should be operated to achieve inactivation.

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¹ Gajdusek, D C, *et al*, *New England Journal of Medicine*, 1977, 297, 1253.

² Gibb, C J, jun, and Gajdusek, D C, *Abstracts of 3rd International Congress for Virology*, Madrid, September 1975, p 47.

Aids to drug compliance

SIR,—We were very interested to read Dr M R Klaber's letter (4 February, p 302), in which he made some valuable suggestions regarding aids to drug compliance.

The concept of a "calendar pack" has been considered by our group working on aspects of drug compliance but was rejected on the grounds of expense and the significant increase in storage space that would be required in

Regional mortality from cirrhosis of the liver^{1,2}

Country	Deaths per million		Percentage change
	1967	1972	
<i>Northern Europe</i>			
Finland	32	44	+38
England and Wales	28	34	+21
Sweden	74	102	+38
Norway	38	46	+21
<i>Southern Europe</i>			
France	357	342	-4
Spain	203	221	+9
Italy	248	318	+28