All patients gave "informed consent to the procedure." It is with diffidence and regret, as a former colleague of some of the authors and the consultants under whose care these patients were, that I write to ask to whom this consent was given, and in what terms one explains to a diabetic mother that her doctors wish to perform a procedure which may cause the precise danger to her fetus which for the previous three months they have striven to prevent.

And does one obtain informed consent from her husband, and if so, how?—I am, etc.,

T. W. I. LOVEL

Andover, Hants

**As Dr. Lovel's letter questions the ethics of this study we gave the authors opportunity to reply in the same issue of the *B.M.J.* The reply is printed below.—ED. *B.M.J.*

SIR,—The ethics of research as applied to the study of the mother and fetus present special problems, which were considered carefully before the work described was undertaken. Dr. Lovel is incorrect in his understanding of our article if he believes that we attempted to induce fetal hypoglycaemia by a maternal glucose infusion. As we have shown, glucose passes rapidly from the mother to the fetus, and the latter is only exposed to potentially dangerous hypoglycaemia when the glucose level of the mother falls to a low level. It may therefore be supposed that elevation of the maternal blood sugar at the start of labour might be at least of short-term benefit to the fetus, and would certainly not expose it to the risk of hypoglycaemia. Appearance of fetal distress in one instance was quite unexpected, and we are uncertain as to whether the glucose infusion was in any way responsible; the importance of this incident lies in the way it underlines the great value of fetal monitoring during labour, including the estimation of pH on fetal scalp samples.

With respect to the question of "informed consent," the value and safety of fetal monitoring is well established, so that only the infusion of glucose could be regarded as a research procedure. As explained above, we have never had any reason to suppose that this constitutes any hazard to the fetus. Details of, and reasons for, this infusion were explained to the mothers by Professor Beard or myself, and Professor Beard was personally responsible for the whole practical procedure in all but one patient. Consent was obtained from the mother well before the planned date of induction, to allow her time to discuss the matter fully with her husband, and for the latter to ask questions, or refuse consent, if he so wished. None did refuse consent, and in all pregnancies studied so far the patients' understanding and co-operation has been rewarded by a normal live child.—I am, etc.,

NIGEL OAKLEY

St. Mary's Hospital Medical School,
London W.2

Doctors and Overpopulation

SIR,—Mr. T. L. Barclay (12 February, p. 440) writes: "Singapore . . . where in the face of a terrifying number of births fiscal sanctions were imposed in 1966. It was

enacted that no maternity leave or benefit, nor any child allowance, would be payable in respect of the fourth or subsequent pregnancy from a given date; . . . The result was an immediate fall in the birth rate, which has since been maintained."

The birth rates in Singapore from 1957 to 1970 were as shown in the graph according to the U.N. Demographic Yearbook.

The "fiscal sanctions" were part of a co-ordinated effort to reduce the birth rate. The fall has been very satisfactory, but it is quite unjustifiable to attribute it to one measure implemented in 1966.

Whether the birthrate is a satisfactory yardstick in a population with a changing proportion in the reproductive years is another question.—I am, etc.,

M. J. COLBOURNE

Member,
Singapore Family Planning and Population Board,
1965-9
Ross Institute,
London School of Hygiene and Tropical Medicine,
London W.C.1

Population and Environment

SIR,—The recent writers on population (8 January, p. 108) and on the wasting environment (*Ecologist*, January 1972) urge government to make an adequate response. But where are those who are to direct the work? Is there a body of paid community biologists to assess the situation, execute the programme, and evaluate the outcome?

It falls most naturally to those in the public health sector, at least to a rejuvenated one. It is they who have experience of operating family planning, eugenic screening, and environment control, along with propaganda therapy and progress assessment. They it is who have the necessary community and biological outlook. Merger of the three sectors of medicine in the area board era can activate new profitable development, especially if by working on the same campus there is sharing of supporting staff, equipment, and ideas.

However, the community physician must be enabled to move into more experimental and specialized fields. His traditional field, the environment, now includes overnutrition and addiction, as well as pollution and infection. Control of population size, quality, and distribution may raise misgivings, but, as others have indicated it is a challenge to be taken up boldly. But more is involved

than the quantity of people. There should be probing sampling and screening of the population, enlarging the projects where they are of proved worth. Typing of innate characteristics can now begin to be profitable—for example, chromosomes, enzymes, histocompatibility groups, somatotypes, mental indices. At the same time screening to anticipate disorder, though it be a thorny road, lacks chiefly in sustained tested development.

Seen from the standpoint of the hospital, this is the sector of medicine in most need of development. It could meet the policy maker's greatest need and will require from him sustained backing.—I am, etc.,

H. F. BARNARD

East Riding Group Laboratory,
Westwood Hospital,
Beverley, Yorks

Clotting Factor Concentrates

SIR,—Mr. T. W. Barrowcliffe and others are to be congratulated on their successful application of Bruning and Loeliger's¹ method for small scale preparation of prothrombin complex (29 January, p. 309), but we question the relevance of their achievement to the treatment of liver disease and the rational use of national plasma resources.

"Prothrombal," relying on closely controlled absorption of plasma with aluminium hydroxide with subsequent rapid elution and dialysis, appears possessed of two major limitations. Firstly, the coagulation factors undergo more "activation" than occurs in at least two alternative concentrates.^{2,3} This leads to less acceptable in vivo recovery and, more seriously, makes it essential to demonstrate that each batch can be administered safely to patients having reduced ability to cope with activated factors. We are not convinced that even P.P.S.B. (which has been used cautiously for several years in treatment of liver disease) is completely safe; from Bruning and Loeliger's own assessment, we would be even more reluctant to prepare "Prothrombal" for this application. It would be of interest to learn if means have been found to avoid activation during modification of the original method. Certainly, the quoted in vivo recoveries appear higher than claimed by the originators. Secondly, the method is inherently unsuitable for large pool exploitation and the economies of multiple small pool processing, because of the high cost of control, can be justified only in situations where no alternative exists.

The Figure shows the increasing annual production of prothrombin concentrates

(300 unit dose) by this centre, supplying most of the needs of the Scottish community (5.2 million) for such products and now beginning to supply prophylactic treatment of haemophilia B. Even in the projected situation of meeting all existing demand for this fraction it will not be possible to guarantee, beyond doubt, the fulfilment of every surge in such demand. It is difficult to visualize how output, even for the modestly estimated needs of six teaching hospitals, can be maintained without functional distortion of a regional blood transfusion centre. It is even more disturbing to contemplate the proliferation of other small scale processing units, possibly ill-equipped to assess the potency and safety of potentially dangerous products.

Human plasma is a scarce national resource and must be carefully husbanded. Calculation of the plasma protein solution needs for Scotland indicate that the amount of plasma now available for processing is, almost certainly, inadequate to meet full use of this product. This calculation is in close accord with the rate of use in other European countries as described recently at a Washington conference in October 1971 on plasma derivatives for clinical use (unpublished). In this context, at a time when national fractionation centres in the United Kingdom are rapidly expanding and acquiring the capacity to satisfy need for all plasma products it seems retrograde to advocate fragmentation of our supplies of fresh plasma and of rare expertise.

The national need for carefully standardized preparations of all coagulation factors, albumin, plasma protein solution, and the widening range of immunoglobulin preparations can best be met by central, comprehensive fractionation of known quality plasma rather than by pooling the residues from unco-ordinated individual efforts, irrespective of the success of such efforts in a limited clinical context.—We are, etc.,

JOHN G. WATT
JAMES K. SMITH

Scottish National Blood Transfusion Association,
Protein Fractionation Centre,
Royal Infirmary,
Edinburgh

¹ Bruning, P. F., and Loeliger, E. A., *British Journal of Haematology*, 1971, 21, 377.

² Didisheim, P., Loeb, J., Blatrix, Ch., and Soulier, J. P., *Journal of Laboratory and Clinical Medicine*, 1959, 53, 322.

³ Deggeller, K., *Vox Sanguinis*, 1969, 16, 407.

"Cot Deaths"

SIR,—I agree with Dr. John L. Emery's comment (4 March, p. 612) that families in whom cot deaths occur are a particularly neglected group. My experience during 20 years in community medicine does not corroborate Dr. Emery's view that in the majority of cases the family doctor and health visitor have not the full confidence of the bereaved parents. It is my experience that, with a few exceptions, parents seek their support.

In considering who might visit these homes Dr. Emery did not include senior medical officers of the local health authority who often have experience in counselling and have the knowledge of all cases in the district. The local coroner in the district where I work has arranged that, as a pilot project in his area of jurisdiction, a senior medical officer visits the home as soon as possible after the death, in the company of

the family's health visitor and with the knowledge of the general practitioner. A second visit is paid after the postmortem and then if the family wishes the health visitor provides long-term support in conjunction with the family doctor. The average duration of the initial visits so far has been two hours and appear to have been welcomed by the families.—I am, etc.,

AUDREY TREVOR EVANS

London N.W.11

A Fair Wage for Auxiliaries

SIR,—The interim statement by the Committee on Remedial Professions¹ that improved rates of remuneration are required urgently to reverse the falling numbers and quality in these professions highlights a situation that has been only too obvious for many years to those doctors closely associated with their work. Although it is recognized that a national shortage of these valuable individuals exists, the actual shortage in numbers and experience is unknown as no attempt has been made to determine the establishments necessary to provide a satisfactory service through the N.H.S.

The numbers of hospitals and other units able to provide such a satisfactory service are all too few. A limited number, in a position of advantage from a recruitment point of view because of type of work done, prestige, or geographical site, have been able to increase the numbers of medical auxiliaries over the years, and to meet the increasing demands from rising numbers of patients and developments in medicine and surgery, but only at the expense of other less favoured units.

In this respect, the rich have got steadily richer and the poor steadily poorer, and this has resulted in the very uneven staffing position that exists throughout the country. The situation has now arrived where less popular departments are becoming nearly, if not completely, devoid of all qualified staff.

One defect of the present system that must be remedied concerns the method of grading of superintendent physiotherapists and head occupational therapists, etc. Surely such individuals should have their grading and therefore their pay determined by the responsibilities of the post that they hold, and not by the present ridiculous method of linking it to the number of professionally qualified auxiliaries in their charge? It is iniquitous that departmental heads should have their grading kept low because of their unfavourable recruitment position, and this entirely due to the national shortage. Is it any surprise that so many of these skilled and valuable individuals, after years of trying to organize high standards of treatment in the face of all possible difficulties and with inadequate financial reward, decide that the struggle is too much and depart to other climes?

Surely, if it is possible to work out the needs of medical units in terms of the numbers and grading of nursing staff, it is possible to do so for the remedial professions also. An increase in the demands on the remedial departments, arising from the opening of new hospital units or an expansion in work of the present ones, would then bring about an automatic increase in establishment and upgrading of the appropriate heads.

As you state in your leading article on "A Fair Wage" (26 February, p. 526), for too long advantage has been taken of the wish of the young to help the sick. However, it is not the young the sick require, it is an adequate number of skilled and enthusiastic qualified medical auxiliaries.—I am, etc.,

B. E. BROCKS

Oldchurch Hospital,
Romford, Essex

¹ Statement by the Committee on the Remedial Professions. London, H.M.S.O., 1972.

Chairman of Manpower Committee

SIR,—The C.C.H.M.S. (*Supplement*, 4 March, p. 57), discussing the decision to appoint a medical representative from the Department of Health to the chair of the Central Manpower Committee, resolved that the chairman of the committee should be democratically elected. It then went on to agree to co-operate and to review the arrangements about the chairmanship in one year's time. How could it possibly do both? What was the chairman doing when the second resolution was proposed?

The C.C.H.M.S. is as weak and indecisive in its dealings with the Department as the B.M.A. is over the G.M.C. Anyone reading the reports of meetings over the past months will see that it is consistent only in eating its own words. It is time for a democratically elected body to take over.—I am, etc.,

D. ZUCK

Chase Farm Hospital,
Enfield

More for Whole-timers

SIR,—It has seemed to me for some time that much of the consultant staffing problem would be solved if full-timers received more remuneration per session than part-timers (say 15-20%). A part-time consultant should obviously have the option of changing according to circumstances. The opposite option of course already exists. The differential could be achieved in one or more stages as part of the normal functioning of the Review Body.

From the profession's point of view the differential would have two advantages. It would reduce bad feeling which can exist between groups of consultants in different regions and generally defuse some of the emotion which tends to surround the subject of private practice. It would present the senior registrar, often the possessor of a large overdraft, with a less difficult decision when applying for jobs. From the national point of view better pay for whole-timers would probably fill hundreds of vacant posts in less popular parts of the country.

As in the case of education, the private sector would largely disappear if the State was prepared to compete. No Government seems to find this feasible, quite apart from the fact that paying beds are very profitable to the Exchequer. However, the health of the nation would probably benefit from a change of emphasis towards more full-timers, and I can think of no medical or political groupings who could object to these proposals.—I am, etc.,

ROSS WATKIN

Guy's Hospital,
London S.E.1