the Central Manpower Committee and the Joint Committees on Higher Medical and Surgical Training of the royal colleges. These have prepared schedules of training in the various specialties which, of course, include an important "service" component, recognizing that participation in the routine clinical care of patients with increasing responsibility under the tutelage of an experienced clinician is an essential element. But it is unrealistic to suppose that to spread this "service" contribution of trainees evenly over all hospitals would solve the staffing problems of the hospital service.—I am, etc.,

J. G. SCADDING

London N.W.11

SIR,—Your excellent leading article (17 November, p. 369) makes reference to some of the possible longer-term effects of transfer of registrars on the work patterns of consultants, and more especially on the prospects of those future consultants who are at the present time working as junior hospital staff.

The proposed redistribution will certainly do little to improve actual "doctor availability" since it will coincide with significantly shorter working hours. Increased off-duty for junior staff is long overdue, but though this will improve their life-style—but not their incomes—it is important to appreciate that this may have a significant effect on the future consultant staffing of our hospitals.

Your suggestion that "it seems inevitable that more emergency work will be done by consultants" is realistic. It is, however, a prospect which appears to be causing considerable alarm among a significant number of the present junior hospital staff, who see for themselves a future rather different from that which they envisaged when they began their long and arduous training. These men and women do not relish the thought of becoming "consultant registrars," albeit at a rate of pay which may (sic) include a recognition of extra night work.

It seems that the conjoint impact of registrar redistribution, reduced working hours, mandatory vocational training for general practice, and pay differentials between consultants and G.P.s is causing many of our potential consultants to rethink their personal futures. Many will no doubt become excellent general practitioners, and this we welcome since the N.H.S. needs them, but many others will—for the second time within a generation—seek their hospital careers away from our shores and this we cannot afford if our hospital services are to be maintained by men and women whose skills are used effectively and whose job satisfaction promotes a good and happy service.—I am, etc.,

J. MCNAUGHT INGLIS

General Hospital,
Birmingham

SIR,—As an older member of the profession I have been surprised many times over the years by the ingenuous acquiescence of the profession in management decisions by the Department (or Ministry) of Health that have been shown to be wrong by the course of events. The intended curtailment of the

number of registrars in training and the redistribution of posts between teaching and regional hospitals are the latest examples of misunderstanding of how to develop the medical service.

Registrar appointments in the specialties of medicine, surgery, obstetrics and gynaecology, geriatrics, casualty and orthopaedics, ophthalmology, and otolaryngology should provide the experience and training required for both the budding consultant and for the general practitioner of the future. The latter should, I think, be a generalist with a special interest if he or she is to be a member of a modern group practice. The common experience in training would abolish the gap between consultant and general practitioner. In a few specialties, such as pathology, radiology, and physical medicine, the registrar would be a committed trainee in the subject and only rarely would enter general practice.

The consequences of what is now proposed will be many. In the teaching hospitals the actual level of patient care is likely to be lower and the day-to-day load on the remaining junior staff will be increased, as will that on the consultant staff. The opportunity for the remaining registrars to study and to engage in research projects will be diminished. The number of overseas doctors applying for posts is pretty certain to fall as the relative attraction of other countries for training, notably the U.S.A., will be increased. In the regional hospitals, bearing in mind their vastly greater bed preponderance, the added number of transferred registrar posts is unlikely to have any significant effect on the level of patient care even if all the posts are filled. The posts themselves are unlikely to be attractive unless they are linked to a teaching hospital and provide real opportunity for study and training.

In my view this is not the time to curtail the number of registrar posts but it is the time to rethink what their objects ought to be. I think that rotation between teaching and regional hospitals should be arranged in registrar posts as well as at the senior registrar stage. The experience of both would give a sound basis for later consultant or general practice. If it is accepted that this is desirable the curtailment of the number of registrar posts overall is seen to be a most unwise step which will affect the patient and the service over many years.

The profession must not acquiesce; it must, together with the Department of Health undertake a very serious reconsideration of the aim of registrar appointments. Only by doing so can the gloomy forebodings of your leading article (17 November, p. 369) be prevented from materializing.—I am, etc.,

F. PYGOTT

Willoughby, Warwicks

SIR,—The gloomy writer of your leading article (17 November, p. 369) requires the therapy of the word. Happily it can be supplied. If instead of the words "teaching hospital" and "non-teaching hospital" he uses the terms "undergraduate teaching hospital" and "postgraduate teaching hospital" (and the latter is what district hospitals have become), his spirits will rise with a new vista. Ahead lie encouraged consultants,

prestigious departments, active teaching programmes, district hospitals affiliated with universities, research facilities, and a wealth of clinical material undreamed of by the specialist trainee of undergraduate teaching hospitals.—I am, etc.,

JOHN G. HOWELLS

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Fertility Drugs and the Media

SIR,—There have recently been two television programmes on the topics of infertility and multiple pregnancy. The contributors to both made statements which could be easily misinterpreted by the public in general, and especially by the infertile patient. In the course of the first programme, directed solely towards infertility, one felt that the programme and the contributors were giving the impression that fertility drugs were almost a panacea in the treatment of infertility. This feeling was borne out at our next infertility clinic when almost all of the new patients inquired how soon they could commence taking the fertility drug. They were both disappointed and a little incredulous to be told that fertility drugs (in this case clomiphene and the gonadotrophins) were indicated in a comparatively small number of carefully selected, thoroughly investigated patients. This legacy has, to an extent, remained with us in our infertility clinics.

In the second programme, mainly concerned with Mrs. Rosemary Letts and her multiple pregnancy, a statement was made by one of the contributors that a sextuplet pregnancy had been achieved on clomiphene; this was not qualified by any firm statement that multiple pregnancy in the hands of experienced clinicians dealing with large numbers of infertile patients is now very much the exception rather than the rule, especially with clomiphene. Indeed, multiple pregnancy in excess of twins is now something of a rarity and in the present climate of treatment, while a twin pregnancy is acceptable and a triplet pregnancy barely acceptable, anything in excess of this should be a matter not for self-congratulation but for self-criticism and a careful re-examination of one's methods. This latter programme resulted in several anxious telephone calls from patients pregnant on clomiphene, or under treatment with clomiphene, genuinely distressed at the possibility of a large multiple pregnancy.

I appreciate from past experience the unsettling effect of speaking before television cameras, but there must surely be a major rule for use in any communication with the press media: avoid comments which may promote false hopes or give rise to unnecessary anxiety.—I am, etc.,

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Sudden Death in Infancy and Vitamin E Deficiency

SIR,—Increased attention has been recently given to dietary factors in the aetiology of the sudden infant death syndrome. A prominent suggestion is due to Money,¹

who, on the basis of observations on pigs, postulated that selenium and/or vitamin E deficiency may cause sudden death in human infants. In addition, there is a widespread notion that breast-feeding may protect against this syndrome,² which would be reasonable in the light of Money's hypothesis and the high concentration of vitamin E in human milk (7-8 IU/l.).³ However, we have previously shown that the blood selenium levels of infants dying suddenly and inexplicably are essentially identical to those of normal controls⁴; their plasma vitamin E levels appeared to be slightly lower than normal, but our initial studies were performed on only a small number of samples and thus did not permit a strong conclusion regarding this point.

We now have obtained additional data on the plasma vitamin E levels of infants dying suddenly and controls. Plasma samples from 18 victims of the sudden infant death syndrome, confirmed by necropsy, were obtained through the courtesy of Mr. Robert Creason, Coroner, San Diego County. Plasma samples from 17 normal control infants were obtained from Dr. Victor H. Lipp, Department of Pediatrics, School of Medicine, University of California at San Diego. Fresh cord-blood samples from 18 normal neonates were obtained from the Blood Bank, University Hospital, San Diego. Total vitamin E levels in plasma were determined spectrophotometrically by a standard technique.^{5,6} The observed vitamin E levels of neonatal plasma (0.28 ± 0.11 mg/100 ml), while lower than those noted by Nitowsky *et al.*,⁷ were similar to more recently published values;⁸ the neonates had lower plasma vitamin E levels than either the infants dying suddenly (0.49 ± 0.45 mg/100 ml) or control infants (0.79 ± 0.26 mg/100 ml; $P=0.01$). The infants who died suddenly (age at death 2.33 ± 2.85 months), though younger than the controls (4.28 ± 1.97 months), did not have significantly lower vitamin E levels than the controls ($P=0.05$). Accordingly it seems unlikely that infants dying suddenly are seriously deficient in vitamin E during any period of their life.

To determine the effect of breast-feeding on the incidence of the sudden infant death syndrome we have obtained dietary histories of 46 infants dying suddenly and 38 control infants in San Diego County. The two groups were similar in respect of parental social class, age, occupation, education, race, and income, date and hospital of birth, sex, race, birth order, and birth weight ($P>0.05$). In these samples similar proportions of infants dying suddenly (39%) and control infants (27%) were breast-fed during early infancy ($P=0.22$), comparable with the results of other studies.^{9,10} While the average age at death of the 27 infants dying suddenly who had been wholly formula-fed was 3.65 ± 2.79 months, the 19 totally or partially breast-fed infants died at 1.78 ± 0.70 months ($P=0.02$); thus breast-feeding does not appear to protect against sudden death.

All the infants who died suddenly appeared to have received an adequate amount of dietary vitamin E, since the infant formulas fed to them contained 4.3-7.9 IU of vitamin E/l.³ In addition, some had received extradietary vitamin supplements containing 5 IU of vitamin E/ml; interestingly, however, fewer infants dying suddenly than controls had received vitamin supplements

($P=0.02$). Though the significance of the latter observation still remains to be explained, no other differences between the dietary histories of the two groups were found. In agreement with earlier studies,¹¹ we also noted a slightly higher incidence of maternal smoking during pregnancy in the sudden infant death group (one-tail, $P=0.05$); other reports indicate increased mortality during the first year of life in infants whose mothers smoked during pregnancy.¹² Finally, the drug intake during pregnancy of the mothers of infants dying suddenly was unremarkable, being limited to aspirin, cold remedies, and diuretics.

In summary, our studies do not support the claims that vitamin E and/or selenium deficiency is associated with the aetiology of sudden and unexpected death in infancy, nor that breast-feeding has any protective effect.²—We are, etc.,

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Abortion in 1972

SIR,—Because of my interest in and concern about abortion deaths I should like to comment on some of the statistics in the Chief Medical Officer's annual report for 1972.¹

(1) The risks of sepsis and haemorrhage in general are each 2.9 when pregnancy is terminated before 13 weeks, and 6.1 for sepsis and 5.1 for haemorrhage at or after 13 weeks, these being the rates per 1,000 notified abortions in each group. In other words the risks are roughly doubled after the first trimester.

(2) The report states that the pregnancy was terminated at over 13 weeks in 23% of abortions in 1971 compared with 29% in 1970. However the actual numbers of abortions performed after 13 weeks has increased from about 24,000 in 1970 to 29,000 in 1971.

(3) Of the 7,534 hysterotomies, 2,986 were performed before 13 weeks. It may be

that this was to allow sterilization, but vaginal termination followed by laparoscopic sterilization or tubal ligation would surely be safer.

(4) A total of 6,532 vaginal terminations, either by dilatation and curettage or by vacuum aspiration, were performed at 15-23 weeks and 63 after 24 weeks. I distrust the recorded complication rates for these methods, chiefly because of the high incidence of 0-1-day stay in abortions performed in "approved places," and I personally regard vaginal termination after 15 weeks as a hazardous procedure.

(5) The sepsis rates when utus paste is used, whether before (48.5 per 1,000) or after 13 weeks (32.1 per 1,000), should surely condemn this method.

(6) Though there has been an increase in abortions performed on women from abroad (50,198 in 1972) it should be noted that just over 50,000 women resident in England and Wales had abortions in "approved places," compared with 55,828 in N.H.S. hospitals.

The annual total of abortions continues to rise, but abortions must be regarded as the least satisfactory and most dangerous method of birth control. I think it is unlikely that we shall copy the Chinese in rejecting promiscuity, but the only alternative is to persuade participants to use the more efficient methods of contraception which have been developed. Meanwhile abortions after the first trimester should be done only if there is a danger to life or a serious risk of fetal abnormality.—I am, etc.,

HUMPHREY ARTHURE

London W.1

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Rubella Arthritis

SIR,—Your leading article (27 October, p. 186) prompts me to report a possible associated complication of rubella.

After rubella a 35-year-old married woman developed polyarthritis which, within a week, responded to phenylbutazone. Ten days later she developed an extremely acute right carpal tunnel syndrome with lesser symptoms in the left hand. As she was not relieved by pethidine or by local injection of hydrocortisone, after three sleepless nights complete relief was obtained by division of the flexor retinaculum under a general anaesthetic. The flexor synovial sheath was seen to be pale yellow, glistening, and swollen. Examination of a section (Dr. R. T. Cooke) showed delicate infiltration with polymorphonuclear leucocytes. The less severe pain in the left hand persisted and was relieved recently by operation.

There were no general signs of fluid retention, so I presume that the wrist synovial swellings were part of a viral synovitis rather than a side effect of phenylbutazone.—I am, etc.,

WRAY ELLIS

Stockton-on-Tees

Influence of Digitalis on Labour

SIR,—The conclusions reached by Drs. Judith B. Weaver and J. F. Pearson (8 September, p. 519) concerning the apparent