A Study of the Extent to which Maternal Nutrition after Delivery Reflects the Situation in Early Pregnancy.

I. LECK, CYNTHIA A. ILES, I. M. SHARMAN, T. TOE, and G. R. WADSWORTH (*Department of Community Medicine, University of Manchester; Medical Unit, University College Hospital Medical School; Dunn Nutritional Laboratory, M R C, and University of Cambridge; and Department of Human Nutrition, London School of Hygiene and Tropical Medicine*)

The feasibility of using data collected during the puerperium or several months after delivery to identify women whose diet or nutrition in early pregnancy may have been abnormal was tested by studies carried out on 168 patients of a London obstetric unit. Blood samples were obtained from all 168 women when they registered there; from 139 during the puerperium; and from 103 twelve months after registration; 142 of the women kept dietary diaries for a week immediately after registration, and 108 did so twelve months later.

As previous work suggests that abnormal levels of vitamin A and folate may predispose to malformations, priority has been given to testing for correlations between dietary and serum vitamin A and serum carotenoids, and between dietary free folate, serum folate, and erythrocyte folate. The results suggest that one cannot learn much about blood levels of these substances in early pregnancy from the diet a year later, nor even from puerperal blood levels (except for serum carotenoids, for which the correlation coefficient between puerperium and early pregnancy was over 0.5). The correlation coefficients between the final blood levels and those in early pregnancy were, however, above 0.5 for erythrocyte folate as well as for serum carotenoids, and in the case of each of these variables nearly half the women whose final levels were more than one standard deviation above or below the mean had initial levels like this also.

On these criteria, 12 women had persistently low erythrocyte folate or serum carotenoid levels. Three of these women, but none of the other 91 whose final blood levels were known, produced children with malformations of embryonic origin during or before the study.

Incidence of Anencephalus and Spina Bifida and Variation in Risks according to Parental Birthplaces in Three Australian States. M. S. T. HOBBS, A. CARNEY, B. FIELD, D. SIMPSON, and C. KERR (*University of Western Australia*)

The incidence of anencephalus and spina bifida cystica in the Australian States of New South Wales, South Australia, and Western Australia for the period 1966–67 has been estimated from perinatal death certificates, death certificates, and hospital records. No significant variation between the States has been found. The combined incidence for both abnormalities for the three States together was 2 per 1,000 births, confirming suggestions from previous studies that Australia has a relatively low risk of CNS malformations compared with the British Isles.

For spina bifida the risk in couples where both parents were born in the British Isles was significantly greater than for Australian-born couples. In contrast, the risk

for other European-born couples was significantly less than for either British-born or Australian couples. However, no difference in risk was observed between Australian-born couples and couples where only one parent of either sex was an immigrant. For anencephaly similar but less pronounced trends were observed.

Migrant couples thus have a risk of anencephaly and spina bifida similar to that prevailing in their country of origin rather than their country of adoption, whereas the reverse appears to be true for migrants of either sex married to an Australian. As the former are likely to have entered Australia later in life, frequently after marriage, than migrants married to Australians, it is suggested that this difference may be due to environmental influences which diminish according to duration of residence in Australia.

Cyclic Variation of Obstetric Phenomena in Cardiff.

C. J. ROBERTS and SOSTUKO LLOYD (*Department of Social and Occupational Medicine, Welsh National School of Medicine, Cardiff*)

This paper analyses the cyclic behaviour of 16 categories of obstetric complication and is based on all births in Cardiff in 1965–69.

Of the 16 categories of obstetric complication studied, namely essential hypertension, mild toxæmia, severe toxæmia, threatened abortion, placenta prævia, accidental haemorrhage, other antepartum haemorrhage, hyperemesis, hydramnios, unstable lie, premature rupture of membranes, uterine anomalies, glycosuria, albuminuria, anaemia, and post-partum psychosis, only two (essential hypertension and post-partum psychosis) showed cyclic behaviour.

The absence of cyclic fluctuation in toxæmia supports the view that the condition is entirely pregnancy initiated. The marked cyclic pattern of essential hypertension supports earlier suggestions that blood pressure has a seasonal fluctuation. The cyclic behaviour of post-partum psychosis suggests that this condition is not entirely pregnancy initiated but is under the influence of something which is associated with the perceptible environment. The implications of these findings in terms of causality and prevention are discussed in the context both of obstetric management and of possible broader implications in the aetiology of the hypertension related diseases—in particular ischaemic heart disease and cerebrovascular disease.

Henoch-Schönlein Purpura in Southampton.

S. ATKINSON and D. J. P. BARKER (*Division of Community Medicine, University of Southampton*)

In most cases of Henoch-Schönlein purpura the cause of the disease is unknown. It has been suggested that hypersensitivity to haemolytic streptococcal throat infection may be an aetiological factor. However, in only 33% of 76 patients admitted to Southampton Children's Hospital was there evidence of recent streptococcal infection, and only 17% of throat swabs taken from patients yielded haemolytic streptococci, compared with 9.6% of swabs from a control group. The seasonal

pattern of the disease in Southampton, which shows a peak of frequency in September–October, does not correspond with the pattern of isolation of haemolytic streptococci from throat swabs. These findings suggest that streptococcal infection is not a factor in the aetiology of most cases of the disease.

Data from four other areas of Britain show a varying seasonal pattern, but a trough in frequency in July–August is a constant finding.

It has been suggested that the disease may result from hypersensitivity to organisms other than haemolytic streptococci which cause upper respiratory tract infection. Of the Southampton patients 63% gave a history of upper respiratory infection in the month preceding admission compared with 50% of a control group. The geographical distribution of the disease within the city showed only a slight correlation between incidence and overcrowding. This finding does not support the hypothesis that a contagious disorder such as respiratory infection is important in the aetiology of the disease.

Accidental Child Poisoning and Health Education. M. CALNAN (*Medical Research Division, Health Education Council*)

A population of 23,457 children aged under 15 was studied for 107 weeks. This sample of 48,000 person years at risk produced 163 persons under 15 years who used the medical care services in the area following a poisoning or suspected poisoning.

Initial findings show that, contrary to expectations, boys were found to be not significantly more frequently involved in poisoning and suspected poisoning. Children from social class 1 families (professional) were more frequently involved in poisoning or suspected poisoning where the medical services were contacted.

The substances most frequently involved in the cases studied were household substances (57 cases (35%)), which included paraffin, turpentine, bleach, and weed killer; non-prescribed medicinal remedies (50 cases (31%)) predominantly junior aspirin (21 cases (13%)); prescribed medicines and drugs (48 cases (29%)) which included valium, iron tablets, and antibiotics.

In the study 81% of the prescribed drugs, medicines, and other household remedies had been used within 24 hours of the accident. Therefore the campaign to reduce unwanted medicines and drugs may be relevant to much less than half the problem of poisoning and suspected poisoning from medicines and drugs.

The study also shows that only 23% of the cases developed signs or symptoms of poisoning and thus can be regarded as true poisonings. Admission to hospital for a night or more does not appear to be a function of the presence of signs or symptoms but it does appear to be a function of treatment. It thus appears that the HIPE statistics on accidental child poisoning do not accurately represent the problem.

Evaluation of Social Work in the Mental Health Field. B. COOPER and M. SHEPHERD (*Institute of Psychiatry, University of London*)

A social worker was attached to a group general practice on the understanding that patients with psychosocial problems could be referred to her directly by the practitioners. Each patient was then dealt with, either by recommendations to the practitioner, by referral to a local psychiatric or social agency, or by social casework, if necessary with psychiatric consultative backing by the research group. During a three-year period the social worker saw a total of 199 patients in the practice. Of these, the present evaluative study covers only the 106 who were confirmed to be chronic psychiatric cases (having had continuous symptoms and/or psychotropic drugs for at least one year); more especially, with the 92 patients (86.6%) who could be followed up and reassessed after a further 12 months. The control group comprised 115 chronic psychiatric patients drawn from eight other practices in the area: of these patients, 97 (84.3%) were followed up and reassessed. Psychiatric status and social adjustment were independently assessed, both initially and at follow-up, by means of standardized interview and rating techniques of known reliability. It was thus possible to measure and compare clinical and social change among both experimental and control groups over the relevant period.

Although individual matching was impracticable, the two groups proved to be closely similar in their distributions by age, sex, marital status, social class, and occupational status, as well as in their psychiatric and social profiles at the outset. Preliminary analysis of the data reveals a significantly greater clinical improvement, and also a greater improvement in social adjustment, among the experimental patients than among the controls. The findings cannot be accounted for by any differences in medical treatment between the two groups.

Randomized Controlled Trial of Early Discharge for Inguinal Hernia and Varicose Veins. M. W. ADLER, J. J. WALLER, I. DAY, C. KING, and S. C. THORNE (*Department of Social Medicine and Clinical Epidemiology, St. Thomas's Hospital Medical School*)

The paper described some preliminary results of a randomized controlled trial of early discharge of patients following operations for inguinal hernia and varicose veins. Patients were discharged either 48 hours or six to seven days after operation. The following aspects were studied:

- (a) the patient's experience in terms of clinical outcome, attitudes, and costs or benefits;
- (b) the effects on the family's activities or economic position;
- (c) the attitudes and workload of general practitioners and local authority staff; and
- (d) the costs of hospital and community care.

Only preliminary results are available at present. There was no difference in the complication rate among the hernia patients; in the vein patients none of the short-stay group suffered complications.

Patients were asked whether they would have preferred to have belonged to the short-stay group. The results