nurse, while the non-manual classes tended to be more cautious. It appeared that the great majority of the respondents were in favour of the nurse performing traditional tasks such as giving injections or minor medical treatment; they were fairly evenly divided for and against the nurse undertaking more responsible activities such as home visiting or being the patients' initial contact with the medical team. Hence the respondents had fairly limited expectations of the capabilities and role of the nurse in general practice.

General Practitioners and Birth Control Advice in 1970/71. MARJORIE WAITE and ANN CARTWRIGHT (*Institute for Social Studies in Medical Care, London*).

As part of a national study of birth control services in 52 areas of England and Wales, 900 randomly selected general practitioners in the areas were sent postal questionnaires in late 1970. Sixty-eight per cent responded, answering questions about birth control, including sterilization and abortion.

Twelve per cent of the respondents expressed a conscientious objection to abortion. Three per cent could think of no circumstances in which they would recommend it. The doctors on the whole were more liberal in their attitude to abortion than were doctors surveyed in 1967/68,* yet there persists a greater reluctance to recommend abortion in cases of 'social' need than in cases of medical need. A substantial minority of the general practitioners (35%) were in favour of 'abortion on request'.

The mean number of estimated referrals for National Health abortion in the last 12 months was 5.0, yet there was a wide variation in individual practice: 25% of the doctors were responsible for 60% of the referrals. One-third of their N.H.S. referrals were, by their estimates, turned down. Half of the doctors faced with this situation did nothing further towards arranging an abortion, almost one-third referred these patients privately, and one in ten referred them to another N.H.S. consultant. A quarter of the doctors sampled said they had on some occasions been deterred at the outset by the difficulties they foresaw from referring a patient they considered suitable.

Compared with the 1967 sample of doctors, the recent sample was more active in discussing birth control, while their advice was more narrowly limited to the pill.

Their knowledge about the pill was variable. Virtually all (98%) of those who prescribed the pill were aware that recent pulmonary embolism is a strong contraindication; 4 in 10 did not identify congenital liver dysfunction as such. At least one-fifth of the doctors underestimated the importance of each of three possible side effects (depression, chest pains, leg pains), and one half of them overestimated the need to set arbitrary limits on the period of pill-taking.

*Cartwright, Ann (1970) *Parents and Family Planning Services*. London, Routledge and Kegan Paul.

Effects of Prescription Charges on Medical Care. IAN LECK (*Department of Social and Preventive Medicine, University of Manchester*).

When prescription charges were reintroduced in Great

Britain in June 1968 the number of prescriptions dispensed annually fell by one-tenth. This decline was studied among nearly 30,000 patients by comparing their contacts with general practitioners during two months, one in early 1968 and the other a year later. The restoration of charges seems not to have affected the frequency of contacts but may have reduced the proportion of contacts at which prescriptions were issued.

The prescriptions issued to some of the patients during the second survey month were compared with those dispensed. The proportion of prescriptions not dispensed was relatively high among the patients who were not exempt from prescription charges, especially those who lived in relatively poor areas or were seriously ill. It is therefore suggested that a fall in the proportion of prescriptions dispensed, as well as in the frequency of prescribing, may have contributed to the decline in dispensing when charges were restored.

FOURTH SESSION (Chairman: H. CAMPBELL)

Sequel to a Famine: Intellectual Performance in Survivors. M. SUSSER and ZENA STAIN (*School of Public Health and Administrative Medicine, Columbia University New York*).

From September 1944 until May 1945, the cities of Western Netherlands were affected by a severe famine which touched all strata of the population. The remaining parts of the Netherlands were unaffected by the famine. This historical occurrence made it possible to compare the experiences of individuals born during the famine shortly thereafter with those of controls born outside the famine area during the same time intervals. It also made it possible to study the effect of famine for varying durations of exposure, and to discriminate between exposure early or late in pregnancy and in early infancy, depending upon the time of conception in relation to the famine period.

Data based on men appearing for military induction and born during the years 1944-46, were presented. In this population, which is virtually complete in terms of 18-year-old survivors, the prevalence of severe and mild retardation is not raised for the famine-exposed cohorts.

The occupational class of the fathers of inducted men was recorded. Scores of an intelligence test provided a continuous variable, available on about 95% of the population. Mean intelligence test scores were compared for sons of fathers in non-manual and in manual occupations, and according to famine exposure. Sons of non-manual workers scored consistently higher than sons of manual workers, and no influence was shown of famine exposure in either class, or in the differences between them.

The social classes differed somewhat in fertility during the famine period. The effects of these differences on I.Q. were marked.

These results on the effects of maternal starvation during gestation on later mental performance point to three conclusions: (1) the power of social determinants in mental performance; (2) the absence of a detectable nutritional component among these social determinants

(3) the absence of a clear effect of birthweight on the mental performance.

Two alternative hypotheses are: (1) that survivors of famine-affected cohorts do not represent the total born, so that those who died in early life might have been adversely affected. In other words, there was an all-or-none effect: the exposed fetus either died from the insult or survived unimpaired; (2) that postnatal learning was able to compensate for neurological impairment of the fetus induced in utero by the famine. If this hypothesis were correct, it would controvert the 'critical period' hypothesis.

The Nutrient Intake of Kent Schoolchildren. D. G. ALTMAN (*Dept. of Clinical Epidemiology and Social Medicine, St. Thomas's Hospital Medical School, London*).

Between autumn 1968 and spring 1970, a nutrition survey was carried out on schoolchildren in four areas of Kent by the Department of Social Medicine, St. Thomas's Hospital and Kent County Council.

The aims of the study were: (1) to examine the dietary intake of school children and its relationship to health and socio-economic factors, (2) to investigate the extent and nature of poor nutrition, and (3) to act as a pilot study for a forthcoming national survey.

The sample consisted of 1,207 children, of whom 1,017 were eligible for the study. Of these, 778 were willing to co-operate and 239 refused. The children were chosen from two age groups being either 8-9 years old or 13-15 years old at the beginning of the study.

Each child was asked to complete a one-week's weighed diet record and to undergo a medical examination. A socio-economic questionnaire was administered to the family.

Preliminary results were presented concerning the relationships between intake of nutrients and certain basic factors—sex, age, weight, social class, number of siblings, and mother's work status, between these factors and nutrient intake standardized for intake of calories, and and on the intakes for children who had no father.

The relationships between both nutrient intakes and nutrient intake/1,000 calories and term time lunch source, allowing for variations in sex, age, social class, number of siblings, mother's work status, and Quetelet's index were discussed. Similarly, results were presented for frequency of school milk uptake in relation to variation in the same socio-economic factors.

All analyses were carried out using multiple regression techniques.

Prediction of Outcome in the Treatment of Alcoholism—A Belfast Study. R. BLANEY and INGE RADFORD (*Dept. of Social and Preventive Medicine, Queen's University, Belfast*).

Against the background of scarce resources for the treatment of alcoholism relative to the generally acknowledged size of the problem, a Belfast study was initiated with the object of evolving a method for the prediction of treatment outcome based on certain items of information known about patients before their admission to hospital.

The samples were selected, 111 patients from Shaftesbury Square Hospital, a specialized unit for alcoholism, and 140 patients from Purdysburn Hospital, a general psychiatric centre. The sample patients were all those from the Belfast area treated for alcoholism in either of the two centres during the year 1968. The following independent pre-treatment variables were recorded: age, sex, marital state, age at marriage (if relevant), social class, religion, day or inpatient, formal or informal admission, previous hospitalizations, education, trouble with the law, cigarette smoking, and the patient's previous attempts to change his drinking pattern. Note was also made of the length of stay in hospital and whether the patient discharged himself contrary to advice. Each patient was sought out for interview at 18 months following discharge and his drinking behaviour for the period recorded. Follow-up was successful for 95% of Shaftesbury Square patients and for 81% of Purdysburn patients. For each hospital the non-response rate was not significantly related to age, sex, social class, marital state or religion.

For the Shaftesbury Square patients, 46% remained abstinent for the first six months after discharge. By 12 months, 28% were still abstinent from alcohol. This proportion had fallen to 16% by the time 18 months had elapsed. In the case of Purdysburn Hospital the corresponding proportions were 17%, 9%, and 6% respectively. Further analyses employed the category of 'unfavourable' outcome over the six months period after discharge as the dependent variable. For the single factor tests, this measure of outcome was found to be significantly associated with religion, length of stay, and trouble with the law (drink-related) in the case of Shaftesbury Square patients, and for Purdysburn patients with length of stay, trouble with the law (drink-related), age, social class, and previous admissions for alcoholism to any unit.

Discriminant function tests were applied to the Shaftesbury Square Hospital data. The result was that only two variables (previous admissions for alcoholism to Purdysburn Hospital, and previous admissions for alcoholism to other hospitals, excluding Shaftesbury Square and Purdysburn Hospitals) significantly discriminated between the groups. The proportion of variation explained was 7½%. The small numbers in the unfavourable category precluded meaningful examination of the misclassification rates. Similar analyses for the Purdysburn Hospital data indicated that only one variable (trouble with the law—drink-related) would significantly discriminate between groups. Again the proportion of variation explained was low (8%) and the estimated probability of misclassification was 0.387. It was concluded that prediction of outcome was not practicable on the basis of the variables selected.

Evaluation of Social Therapy in Chronic Alcoholism. W. E. WATERS, A. L. COCHRANE and J. COLLINS (*Department of Clinical Epidemiology and Community Medicine, University of Southampton Medical School, and M.R.C. Epidemiological Research Unit (South Wales) Cardiff*).

Scientific evaluation of the personal social services is