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

show that patients approved of the length of stay they had experienced. Mean length of convalescence was 37 days for male short-stay patients without complications, and 35 for men who were long stay. If those patients suffering complications are included the two groups experience the same length of convalescence of 38 days. In terms of loss of income, among the 124 male patients in the study, 49 suffered some loss, 17 in the long-stay group and 32 in the short-stay.

Further analysis is being carried out.

Cost Benefit Analysis in the Health Service—A Case Study of Elective Herniorrhaphy. N. J. GLASS and I. T. RUSSELL (*Medical Care Research Unit, University of Newcastle upon Tyne*)

The paper complements recent review papers^{1,2} of cost-benefit analysis in the Health Service by describing a case-study in which a recent proposal for a national policy of specialization in elective herniorrhaphy is evaluated using available data, but with emphasis on method rather than results.

Iles^{3,4} has demonstrated how the establishment in Toronto, Canada, of a hospital specializing in elective herniorrhaphy has yielded substantial clinical benefits. More recently^{5,6} he has proposed the addition of elective hernia wings to existing general hospitals as an answer to the hernia waiting list in Great Britain, stressing the clinical superiority of this solution and making a plea for economic considerations, such as working time lost, to be taken into account.

The benefits from the Iles' proposal are divided into two parts: first, those flowing from the reduction in the average length of stay from nine to three days and from the elimination of the waiting list; second, those arising from specialization, principally the reduction in recurrence.

An alternative, less radical, proposal to reduce length of stay and eliminate the hernia waiting list without recourse to specialist units is considered. This is shown to yield virtually the same substantial benefits. The advantages of specialization are almost entirely offset by the delay necessary to plan and build the special units.

It is concluded that while there are large benefits from a policy of reducing length of stay and eliminating the waiting list, a choice between policies for achieving this turns upon the value of beds released by building special units and upon the cost of building and running such units. The economic and clinical benefits flowing from specialization are not critical.

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Regional Variations in the Allocation of Financial Resources to the Community Health Service. A. J. TRICKEY, J. E. NOYCE, and A. H. SNAITH (*Derbyshire County Council Health Department*)

Differences in expenditure by the health service in the regions of England have been identified, together with factors with which low and high spending are associated. There is substantial variation in the amounts spent by executive councils, local health authorities, and regional hospital boards in the regions, with a standard deviation of 13%, 15%, and 19% of the mean expenditure in the three sectors respectively. Analysis showed that high spending in one sector of the health service was associated with high spending by the other two sectors, and conversely.

High levels of expenditure were associated with high socio-economic status of regional populations. Negative correlations with community health expenditure were obtained for low socio-economic status and birth rate. The same correlations were obtained for hospital revenue expenditure.

There are no regions of high spending which are not also high socio-economic status regions and it is concluded that the distribution of resources in the National Health Service has little relevance to need. It is suggested that a normative model for distribution of resources between regions is required. The local government formula for allocating the rate support grant is an example of a prescriptive model employed in the public sector. Resources are allocated to local authorities basically in accordance with population but with weightings for many factors, including the fraction of the population under 15 years and under 5 years and over 65 years of age, the density of population and whether the population is increasing or declining. These are just the sort of factors which the study showed had no effect on distribution of finance in the health service. Examination of local authority expenditure shows a small positive correlation between high expenditure and low socio-economic status of the population. Variation in expenditure between individual local authorities is also considerably less than in the NHS. A rational distribution of public funds is therefore possible but it is likely to be difficult to implement. In the hospital sector redistribution may have to be phased over a long period because of commitment to existing capital structures. In the community health services it should be possible over a much shorter period to redistribute resources in such a way that community health services compensate in some measure for the deficiencies in the hospital sector.

Development of a Formula for allocating Regional Health Authority Revenue Funds. J. H. RICKARD (*Department of the Regius Professor of Medicine, University of Oxford*)

Although there is now an official policy of distributing funds to Regional Hospital Boards on the basis of population, bed-stock, and case-flow, funds have been distributed *within* regions largely according to historical patterns with allowances for new developments. This has not necessarily resulted in an equitable distribution, though a comparison based simply on expenditure per head of the geographical population is inadequate since it ignores the problems of cross-boundary flows, differences in the morbidity of the populations, the costs