periods of high pollution. In an attempt to throw some light on this the opportunity has been taken to study a sample of adolescents now living in London who were born around the time of the disastrous London fog of December 1952.

In the first phase of the study (1970-71) 800 subjects born in 1952 were seen at an average age of 18½, then in the second phase (1971-72) a similar sample drawn from the same areas but born in 1953 was seen, again at age 18½. The MRC questionnaire on respiratory symptoms was used, with additional questions on the home environment in early life, and measurements of FEV, FVC, and PEF were made.

A preliminary analysis of the results has not revealed any consistent differences in respiratory symptoms or ventilatory capacity between subjects born before the London fog and present at the time, and those born just after it. Both groups were subjected to the high levels of pollution that existed in London throughout the 1950s, and the prevalence of respiratory symptoms is higher than has been reported from 'clean' areas.

The results are also remarkably uniform with respect to areas of residence and social class of family, but the prevalence of respiratory symptoms is much higher in subjects who smoke than in those who do not, even though smoking histories are short.

FIFTH SESSION (Chairman: SIR JOHN BROTHERSTON)

Twins as Markers of the Value of Obstetric Radiography. ALICE STEWART (*Department of Social Medicine, University of Oxford*)

A study of the twin pregnancies included in the 1958 survey of the National Birthday Trust has confirmed associations between obstetric radiography and first births, assisted deliveries, and pregnancy illnesses. Over 80% of the mothers were delivered in hospital, and the proportion of stillbirths and neonatal deaths following x-ray examinations (61%) was below average for the babies weighing less than 6 lb and above average for the heavier babies.

The babies who were born in hospital did better (with 92% of survivors and relatively few deaths from atelectasis and during labour) than the other babies (with 89% of survivors and relatively few deaths from head injuries). But where there were labour complications the x-rayed pregnancies did worse than the non-x-rayed ones because the low rate of stillbirths during labour which characterized the forceps deliveries was more than offset by a high rate of neonatal deaths from head injuries.

A high frequency of x-ray examinations and hospital deliveries in a nation-wide sample of twin pregnancies was indicative of a high standard of medical care, which has proved to be more successful in relation to small babies and atelectasis than in relation to large babies and head injuries.

Death from Hyperplasia of the Prostate. VERA CARSTAIRS, M. A. HEASMAN and BRIDGET LOWE (*Scottish Home and Health Department, Edinburgh*)

Data were examined for all patients discharged from hospital over a period of three years with a diagnosis of hyperplasia of the prostate and treated in either a general surgery or a urology unit. These numbered 9,986 and there were 376 deaths. The death rate was 5.0% for patients treated in general surgery units and 2.3% for those treated in urology units. The characteristics of patients who seemed to be most at risk of dying were: older patients; admitted as emergencies; not operated on; with an associated diagnosis not involving the urinary tract. The percentage of high-risk patients was higher in surgery than in urology units but standardized rates showed that this did not account for all the difference observed in the overall rates. In hospitals the death rate varied from 0% to 13.6% and for consultants from 0% to more than 20%. Only one urologist had a death rate over 5% while 52 of 110 general surgeons had death rates of this order, although some of these treated very few patients. In hospitals where there were both surgery and urology beds, over 50% of patients were admitted as emergencies, compared with only 14% in urology. It is suggested that there is a case to be made for urologists treating a higher proportion of the high-risk cases and that thought should be given to methods of selecting patients to this end.

Emergency Admissions to Hospital from a Deputizing Service: a Controlled Study of Length of Stay and Outcome. B. T. WILLIAMS, R. A. DIXON and J. KNOWLEDEN (*Medical Care Research Unit, Department of Community Medicine, University of Sheffield*)

The duration of stay and outcome of admission of 459 patients referred to hospital as emergencies by a deputizing service in 1970 was compared with that of a control group of 1,244 emergency admissions arranged by other doctors during the periods when the deputizing service was operating. Satisfactory control was achieved for age, sex, marital status, specialty, and diagnostic grouping.

Similar proportions (12%) died in each group though death tended to be earlier among the deputizing service's referrals. Of those discharged alive, similar proportions of deputizing service referrals (27%) and referrals from other sources (25%) had left hospital after three days.

These findings do not support the hypothesis that patients referred for hospital admission by a deputizing service are less ill than patients referred by other doctors.

Assessment of Workload by Patient Dependency Studies and Activity Sampling with Identification of the Contributory Factors as a Guide to Organization and Management. HELEN HOWARTH (*Department of Social and Preventive Medicine, University of Manchester*)

The work load of a ward is affected by the age and sex of the patient, the day of stay, the diagnosis, and the transfer of the patient but primarily the policies and the work load of the consultant have the greatest effect.

A patient dependency study of 2,234 patients was carried out over a six-month period in an ophthalmic hospital in conjunction with an observation survey of staff deployment. A computer was used for the patient

dependency data so that a pattern of care could be obtained for every patient and the workload was related to the following variables: age, consultant, day number, diagnosis, sex, transfer, and type of admission.

Although those aged under one year or 90 years and over showed a higher care group than the others, age did not have a great deal of bearing on the workloads of the wards. On the other hand, the workload index of the consultants varied considerably and was related to the workload index of the ward. The variation in the routines of ambulation following surgery allowed by the consultants affected the workload considerably.

Ways in which such information can help in management and organization are in the planning of admissions, the levelling of workload resulting in better staffing levels, the prevention of forced discharges, reduction in the number of transfers, better notification to patients' relatives of admission and discharge, and guidance for reorganization.

SIXTH SESSION (Chairman: DR. J. J. A. REID)

Psychiatric In-patients from Salford: The Current Problem and Future Demand. T. FRYERS (*Department of Social and Preventive Medicine, University of Manchester*)

The current demand for psychiatric hospital beds remains high in spite of earlier predictions and some clinical impressions of substantial decline. Regional Hospitals Boards are currently discussing with departments of social services the application of the DHSS norm of 0.5 bed per 1,000 total population to their local situations.

Local studies allow more detail and practical planning application. Salford is an industrial borough of 130,000 population, rapidly diminishing, with a history of excellent mental health services. Five successive annual censuses (1968-72) derived from the Salford Psychiatric Case Register provided information for the present study.

Short and medium stay patients (under one year) remained constant in number. Long stay patients (one year or more) reduced slowly in number and the length of stay increased. In January 1972, 60% (over 200 patients) had been in for 20 years or more and 35% (over 120 patients) had been in for 30 years or more.

In the long stay cohort from January 1968 the number of patients under 45 years declined rapidly, the number 65 and over with a diagnosis of dementia declined very rapidly, and others 65 and over very slowly—5% in four years.

The accumulation of new long stay patients was 54 in four years and 61 in five years. We assume a 10-year period of accumulation to reach a balanced state in new long stay patients.

Predictions of future demand are hazardous in this field. Five-year data are in many ways inadequate, but older data are not necessarily valid for the future. We must assume that conditions similar to present ones will persist. Using variations and extensions of previous methods of prediction, the demand for psychiatric beds in Salford is projected to 1982. The predictive total is 2.3 beds per 1,000 total population; 0.65/1,000 for short and medium stay, 1.08/1,000 for the remnant

of the long stay cohort from 1968, and 0.58/1,000 for new long stay patients accumulating over 10 years.

The Health Care of the Elderly—Is it a Question of Priorities? ROSAMOND GRUER (*Department of Social Medicine, University of Edinburgh*)

A survey of the needs of the elderly in the Scottish border counties has produced results similar to those of earlier studies, showing that there is considerable unmet medical need.

Alternative methods of identifying those in need were considered and estimates of the amount of unmet medical need which each method would uncover, and of the staffs and financial resources which would be required to initiate investigation and treatment, were made. The purpose of these estimates is to provide some crude measures of the cost, benefits, and disadvantages of each scheme in order to provide some basis for planning services for the elderly.

An age/sex register of those over 65 can be compiled quite cheaply from up-dated Executive Council lists and the registers of long stay hospitals. An at-risk group could be identified in a few months making use of everyday work of general practitioners, local authority nursing and social services staff, and Church representatives, but this method would leave 14% of those at risk unidentified.

A screening programme for all those over 65 years on an age/sex register and initiation of investigation and treatment for the unmet medical needs detected by the method would use double the resources required by a similar programme which covered an identified at-risk group or which was restricted to those over 75 years old. On the other hand, both these latter methods would leave half the medical need undetected. A programme of regular physiotherapy treatment would almost double the cost of each scheme and it is suggested that a clinical trial of this type of treatment is indicated.

The extra cost of providing enough extra geriatric hospital beds to reduce the present waiting list in the area to nil, together with the running cost for one year, is equivalent to the cost of initiating the screening programme for the whole population.

The Interface between Medicine and Social Work: contrasting Public and Professional Attitudes. UNA MACLEAN (*Department of Social Medicine, University of Edinburgh*)

A very large, pre-war council housing estate on the outskirts of Edinburgh has long been known for its high prevalence of sociomedical problems. In an attempt to deal with the situation, a multidisciplinary social casework centre was established in the area five years ago. The main clientele of this centre are married women aged 20 to 44 years. Information is available about the problems for which these women seek help at the centre but little was known about their attitudes to the welfare agencies and to the related medical services.

The present study, based on mothers with young families, is concerned with their reactions to certain