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