SOCIETY FOR SOCIAL MEDICINE
XII ANNUAL MEETING, SEPTEMBER 19-20, 1968

Held at the Imperial College, London, under the auspices of The Institute of Cancer Research, The Royal Cancer Hospital, London

FIRST SESSION (Chairman: Richard Doll)
Symposium: Collaborative Projects involving the Department of Social Medicine, Institute of Cancer Research.

Who does What. R. A. M. Case (Chester Beatty Research Institute, London)

A brief description was given about how a very small Department of Social Medicine could act as a nucleus for a series of collaborative projects.

The Pathologist, the Coroner, and Social Medicine. A. L. Levene (Department of Pathology, Royal Marsden Hospital)

The office of Coroner in England is of great antiquity and acts as a guardian of the public weal. Some of the workings of the office were touched on and the role of the pathologist in assisting the coroner investigating notified cases was described. A slightly fuller account was given of two lethal complications of inhalation of asbestos dust—asbestosis and mesothelioma—and the ways in which they present to the pathologist.


A survey of the bichromate-producing industry, starting in 1949, was described, and it was shown how such a survey could monitor the effects of improved industrial conditions and processes in relation to lung cancer, and how it had been possible to show that a liver tumour hazard, suggested by animal experiment data, did not in fact exist in the industry.

A Study of the Mortality of Aberdeen Trawl Fishermen. Joyce L. Harley (Chester Beatty Research Institute, London)

A 10-year survey of the mortality of 3,605 Aberdeen trawl fishermen, carried out by the Department of Social Medicine, Aberdeen University, was described.

Preliminary analysis of the 310 deaths observed showed some differences, both in number and age distribution, from an expectation based on national age-specific death rates.

There were more deaths from violent causes than expected, but less from non-violent; more from cancer, notably lung cancer; less from coronary thrombosis, but only at ages over 55 years.

These results took no account of regional or social class differences in mortality rates.

How Medical Officers of Health's Records can help in Research. Joan M. Davies and Gillian M. H. Edwards (Department of Clinical Research, Royal Marsden Hospital and Institute of Cancer Research, London)

Medical officers of health usually allow research workers access to their series of death certificates covering residents in their areas. Among other uses for research, these records can provide material for proportional mortality studies of local industrial workers. Such studies may provide a quick method of investigating possible hazards, but results must be viewed cautiously because of inherent biases.

Such a study was made of cancer deaths among workers at a paper mill by a method allowing for secular and age differences in death rates. The results suggested an excess of stomach cancer deaths relative to deaths from all other causes.

SECOND SESSION (Chairman: R. A. M. Case)
Urban/Rural Differences in Lung Cancer Mortality: a Cohort Study. R. E. Waller (MRC Air Pollution Research Unit, St. Bartholomew's Hospital Medical College, London)

When considered on a cohort basis, male lung cancer mortality in London is beginning to decline, whilst that in rural districts continues to increase. The corresponding female rates are increasing in all areas, but in both sexes urban/rural differences are diminishing and rates for London are falling below those of other conurbations. There have been changes in air pollution consistent with the trends in death rates, but changes in smoking habits are clearly of importance and the picture is distorted by migration to and from urban areas.

Cancer Registration—A Reappraisal. M. R. Alderson (Department of Social and Preventive Medicine, University of Manchester)

The function of Cancer Registration was reviewed, stress being laid on the value of incidence data. The diagnosis and identification particulars are collected with reasonable accuracy where patients have been identified as having cancer. Limited treatment details can be abstracted, but the problem of interpreting results of different treatments was emphasized. Stage and spread of disease are abstracted from narrative notes with difficulty.

It was suggested that the national scheme should concentrate on collecting the minimum data for all new cases in the country. Further effort should go into checking the accuracy of the material and assisting epidemiological studies.

Measuring Cancer Latent Periods. Alice Stewart (Department of Social Medicine, University of Oxford)

With data from the Oxford Survey of Childhood Cancers, which have taken 14 years to collect, and Kneale's method of analysing doubly truncated contingency tables—which allows one to use case records or retrospective data to solve problems which are supposed to demand cohort records or prospective data—the latent
periods of several varieties of juvenile cancer (including two types of leukaemia) have been measured. These periods must be related to the position of the tumour as well as its nature, for it seems to take about three times as long for a medulloblastoma or an osteogenic sarcoma to produce symptoms as a neuroblastoma or Wilms' tumour, and about twice as long for a lymphatic leukaemia to surface as a myeloid leukaemia.

**THIRD SESSION (Chairman: R. G. RECORD)**

**Organic Brain Dysfunction and Child Psychiatric Disorder.** M. RUTTER (Institute of Psychiatry, London)

On the basis of a total population study of school-age children, the rate of psychiatric disorder in children with neuro-epileptic conditions was found to be several times that in the general population and in children with chronic non-cerebral physical handicaps. The pattern of associations suggested that the high rate of psychiatric disorder was largely due to organic brain dysfunction rather than to the existence of a physical handicap. Organic brain dysfunction was not associated with any specific type of disorder. Within the neuro-epileptic group, the neurological features and the type of fit, intellectual/educational factors, and socio-familial factors all interacted in the development of psychiatric disorder.

**Congenital Malformations and Environmental Influences in Pregnancy.** I. D. G. RICHARDS (Social Pediatric Research Group, University of Glasgow)

A retrospective study was made in South Wales of 833 pregnancies resulting in the birth of infants with severe malformations, and an equal number of controls (women who gave birth to normal infants and matched for age, parity, social class, area of residence, and date of delivery).

There were statistically significant differences between cases and controls for several of the factors investigated. For example, in the first trimester, salicylate intake (for the total P < 0.001, alimentary tract defects P < 0.01), a miscellaneous group of drugs, including antiemetics (for the total P < 0.001, alimentary tract defects P < 0.01, cleft lip and/or palate P < 0.001), and dietary imbalance (central nervous system defects P < 0.01).

**Anencephalus in Belfast.** J. H. ELWOOD (Department of Social and Preventive Medicine, The Queen's University of Belfast)

Northern Ireland has the highest reported incidence of anencephalus in the world. This investigation examined 584 anencephalic stillbirths and infant deaths which occurred among 147,825 total births in Belfast during the period 1950–66.

The incidence averaged 3.95 per 1,000 total births. Long-term variations in incidence were examined in relation to birth rank and season, and comparisons were made with data from Dublin, Scotland, and Birmingham. Significant seasonal variation (P < 0.05) in incidence was found in Belfast, the highest number being born in October. The associations of anencephalus with certain social and biological characteristics were analysed using data for 1961–6. Significant associations were demonstrated with social class, sex, and birth weight, but not with maternal age, parity, or area of residence.

These results were compared with those from other series and explanations offered for the differences observed.

**FOURTH SESSION (Chairman: MARGOT JEFFEYRS)**

**Survey of General Practitioners in the London Borough of Camden.** V. SIDEL, P. MANSFIELD, and MARGOT JEFFEYRS (Social Research Unit, Department of Sociology, Bedford College, London)

89 per cent. of the general practitioners in the London Borough of Camden completed this interview study; preliminary findings only were available.

Camden practitioners were strikingly older than elsewhere; small practice units and marked professional isolation were associated with old age.

The few group practitioners were young, professionally communicative, and enjoyed their work much more than average. Amongst the remainder, enjoyment was unrelated to type or location of practice, but correlated interestingly with several background and practice factors.

General practice in Camden lags behind other areas in development. Practitioners seem more reluctant to retire than their peers elsewhere.

**A Comparison of the Social Characteristics and Academic Achievement of Medical Students and Unsuccessful Medical School Applicants.** M. L. JOHNSON (Social Research Unit, Department of Sociology, Bedford College, London)

A comparison was undertaken of data on home background and academic achievement of a sample of unsuccessful but "qualified" applicants to medical schools 1961–65, with A.S.M.E. data on medical students, in Appendix 19 of the Royal Commission on Medical Education Report. Results showed: (i) Pupils from Social Classes III, IV, and V are inhibited from applying for medicine. Accepted applicants are representative of the total in terms of social class but highly atypical in that students with medical fathers and from independent schools are grossly over-represented. (ii) A pool of well-qualified female talent exists. (iii) A substantial proportion of rejects were well qualified and obviously rejected on non-academic grounds.

**The Mortality and Morbidity of Hyperplasia of the Prostate in Teaching and Regional Board Hospitals.** J. S. A. ASHLEY and M. J. GARDNER (M.R.C. Social Medicine Research Unit, London School of Hygiene and Tropical Medicine)

To seek an explanation of higher case-fatality rates in regional board as compared with teaching hospitals a prospective study of hyperplasia of the prostate has been undertaken in both categories of hospital. In 798 cases reviewed, the great preponderance of the mortality is associated with the absence of a prostatectomy during the treatment. There is considerable concomitance, with regard to their general condition, between the type of patients treated in the two situations but the teaching hospitals seem to operate on a larger proportion—particularly the emergency admissions.
FIFTH SESSION (Chairman: J. W. B. DOUGLAS)

Skeletal Development in West African Children of Contrasting Nutritional Status. J. N. REA (Department of Clinical Epidemiology and Social Medicine, St. Thomas’s Hospital Medical School, London)

415 Nigerian children of similar ethnic background aged 1 month to 5 years from poor and “optimum” households in Lagos were measured at 3-monthly intervals for 18 months. Typically, growth was rapid until 3–4 months followed by a marked slowing until 18–21 months. Subcutaneous fat, muscle, supine length, and skeletal maturity as assessed from wrist x-rays were affected in that order. The “optimum” group were ahead of British standards in length and skeletal maturity. This potential for rapid skeletal development may have an adverse effect on morbidity and mortality when combined with dietary inadequacy.

Epidemiology of Sudden Unexpected Death in Infants (“Cot Death”). P. FROGGATT (Department of Social and Preventive Medicine, The Queen’s University of Belfast)

A study was made of 162 consecutive cases. Frequency is one per 400 live births. The usual parameters show cases to have been in life on average at a socio-biological disadvantage compared to living controls though not to babies dying from other causes. Peak incidence occurs with population respiratory virus epidemics.

95 per cent. of cases are aged 2 weeks to 9 months (the mode is 3–4 months), representing a period of physiological vulnerability to environmental insults. Recent work, supported by clinical, epidemiological, and histo-pathological evidence, suggests as a general mechanism of death cardiac dysrhythymia rather than pulmonary collapse or enaphylactic shock.

A Preliminary Report on Cancer Incidence in East Africa. PAULA COOK and D. BURKITT (M.R.C. Statistical Research Unit, University College Hospital Medical School, London)

The problems of investigating cancer incidence in a developing country were outlined, and reasons given for contemplating the survey despite the great difficulties: (i) that certain types of cancer are more common in Africa than in other parts of the world, (ii) that local fluctuations in frequency seem to be greater than is common in developed areas of the world, and (iii) that the population in East Africa is still dependent on and little protected from the natural environment. The history and nature of the survey were outlined, and justification given for the inclusion of cases for which there was no histological proof. The geographical distribution of cases was shown using a proportional approach for the seven tumours reported on the monthly questionnaire sent to almost all hospitals, and by calculating incidence rates from the data sent by the 25 per cent. of hospitals which are recording all malignant neoplasms. The incidence of cancer of the oesophagus was compared with the incidence in other parts of the world.

SIXTH SESSION (Chairman: G. KNOX)

Methods and Results in Two Domiciliary Blood Sampling Investigations. J. L. BURN (Health Department, Salford)

Two domiciliary surveys had been carried out, involving (a) the taking of samples of blood from all newly-born babies in Salford (in which there had been a 94 per cent. response) for the purpose of detecting six aminoacidopathies; (b) the ascertainment of leucocyte ascorbic acid levels in a sample of 300 persons over 60 years of age (80 per cent. response).

The results of feeding with varying strengths of ascorbic acid of the 75 per cent. of elderly people who were found to have inadequate ascorbic acid levels were described. The methods used and the results in these two screening tests, in a population outside hospital walls, were discussed.

Analgesic Consumption and Renal Disease: A Community Survey. W. E. WATERS (M.R.C. Epidemiological Research Unit, South Wales)

There is considerable clinical evidence of an association between the consumption of large amounts of analgesics and renal disease (especially papillary necrosis). During a community survey of 2,933 women aged 20–64 years in a South Wales valley, questions were asked about urinary tract symptoms and analgesic consumption. The women with the highest analgesic consumption (average of more than four analgesic tablets per day over the previous year) had a higher prevalence of dysuria, the dysuria lasted longer, and was more often accompanied by frequency of micturition and by pyrexia. Plasma urea, plasma creatinine, urinary concentrating power, and blood pressure are being determined on sub-samples of this population and to date no significant differences
between the high analgesic group and the rest of the population have been found with these objective tests.

Photographs and Other Variables used in Screening for Arthritis of the Hands. R. M. Acheson, Anne B. Collart, and R. Greenberg (Department of Epidemiology and Public Health, Yale University)

Age, sex, morning stiffness, nocturnal pain, and swelling of the joints of the hands were determined by questionnaire from 1,002 adults aged 21 and over in the general population. At the interview a standardized coloured transparent photograph was also taken of the hands which was subsequently read for the presence of bony deformity, soft tissue swelling, and inflammation of the joints, together with muscular wasting. All respondents also had both hands x rayed. A non-parametric discriminant function analysis was used to study the effectiveness of these nine variables in predicting whether osteoarthrosis would be visible by x ray. For the entire population, age, bony deformity and the symptom of swelling were, in that order, the most effective discriminators. In the population aged 45 years and over, again in order, bony deformity, muscular wasting, and the symptoms of swelling and morning stiffness contributed to the prediction of radiological disease. The specificity and sensitivity of these parameters were, however, disappointing.

Sampling Hospital Patients. Vera Carstairs (Scottish Home and Health Department, Edinburgh)

Possibilities in Screening for Cerebrovascular Disease. C. R. Gillis and V. M. Hawthorne (Department of Epidemiology and Preventive Medicine, University of Glasgow)

A short questionnaire investigating loss of power in upper and lower limbs and loss of speech and consciousness was administered to approximately 1,800 individuals in three parts of Scotland—Tiree, Stirlingshire, and Central Glasgow—each of which has distinctive differences. The percentage of individuals (7.7 per cent.) with one or more of the symptoms in question was similar in each of the three groups.

The proportion of those with symptoms tended to increase with age, and sex was not a factor. An interesting finding was that in the 50 to 64-year age group there was no association with hypertension.

SEVENTH SESSION (Chairman: J. N. Morris)

Frequency of Treatable Disease in the Elderly and its Relationship to Social Characteristics. P. Millard, M. Johnson, and Eleaine Ward (University College Hospital London, and Social Research Unit, Department of Sociology, Bedford College, London)

A random sample of 186 patients aged over 70 years registered with a large group practice in the London Borough of Camden was stratified by attendance during 1966. 87 per cent. had a structured social interview and 73 per cent. also had a medical examination.

13 per cent. needed treatment for eyesight, 6 per cent. for hearing, 45 per cent. for dentistry, and 27 per cent. for chiroprody. The greatest need was found amongst older low-income women, with low rates of activity and social contacts. It was suggested that simple tests for these conditions could be carried out by lay interviewers at the homes of non-consulters, and by the doctor for those who consult him.

25 per cent. of the women seen were anaemic; the risk group being those with low incomes, 80+. However, it is debatable whether screening for anaemia is worth while.

Patterns of Mortality in Middle-age in the County Boroughs of England and Wales. M. J. Gardner, M. D. Crawford, and J. N. Morris (M.R.C. Social Medicine Research Unit, London School of Hygiene and Tropical Medicine)

Male and female mortality at ages 45–74 years in the County Boroughs has been looked at in relation to (i) changes that have occurred during the 20th century and (ii) environmental factors associated with differences between the towns in cause-specific death rates.

Firstly, the ranking of death rates in these towns is similar during each of four periods in the last 50 years, those towns with lower and higher rates remaining so. The highest rate remains nearly twice the lowest, i.e. there are still substantial differences between towns in mortality.

Secondly, five environmental factors emerge from correlation and regression analyses which together explain a large percentage of the variance of death rates between these towns. The factors are:

(a) air pollution,
(b) socio-economic conditions,
(c) latitude,
(d) hardness of water supplies,
(e) rainfall.

Multiple regression analysis is used to show how these five factors are differently associated with each of the major causes of death in this age group—cardiovascular disease, bronchitis, cancer of stomach, and cancer of lung.

Design and Methodology of a Study into the Effects of Screening for Early Disease. Harriet Trevelyan (Department of Clinical Epidemiology and Social Medicine, St. Thomas's Hospital Medical School, London)

In this study based on general practice we are carrying out an assessment of the effect of screening on mortality, morbidity and Health Service usage.

Design The study population consists of 6,000 between the ages of 40 and 64 years on the lists of two group practices, who randomly allocated to screening and control groups.

Both groups are followed for a period of 5 years. The screening group is at risk from the day they accept or refuse screening along with a matched control.

Screening Procedure This consists of a screening clinic where the tests are performed and the practitioner's examination carried out.
Follow-up Procedure. The consultation rate, referral rate, the number of days off sick or in hospital, and the death rate are being used as indices of morbidity and Health Service usage.

Analysis. This will include comparison between the two groups of the follow-up data and an analysis of the yield and load on the Health Services to be expected from screening.

Assessing the Risk of Infection with Tubercle Bacilli in a Community. I. SUTHERLAND (M.R.C. Statistical Research Unit, University College Hospital Medical School, London)

The findings in a series of tuberculin surveys in the Netherlands have been interpreted in terms of the risk of contracting a primary tuberculous infection in the course of particular calendar years. A surprisingly regular picture of the decline of tuberculosis emerges, represented by a risk of primary tuberculous infection of 97 per 1,000 population in 1913, decreasing steadily by about 5 per cent. annually until 1939, and thereafter steadily by about 13 per cent. annually to a risk of only 0.57 per 1,000 in 1966. Moreover, the annual risk of infection appears to have been independent of age up to age 20, except, perhaps, under the age of 2 before the second world war, when tuberculosis was common in cattle, and milk was unpasteurized.

This simple but adequate model gives a comprehensive indication, not only of the prevalence of past infections, but also of the primary infections, and reinfections with tubercle bacilli at different ages for different population cohorts, both now and during the next few years. It is hoped to extend it to give estimates also of expected future numbers of cases of clinical tuberculosis.

The same approach is being applied to similar data from other countries with equal promise.

Eighth Session (Chairman: Sir Aubrey Lewis)


A random sample of long-stay schizophrenic women under the age of 60 years, from three mental hospitals, was examined in 1960, 1962, 1964, and 1968. Both within each hospital, and when the hospitals were compared, a depriving and understimulating environment was associated with more severe negative symptoms. Social conditions tended to improve at first, but the improvement then fell off or was reversed. Patients who were exposed to changing social environments showed concomitant changes in clinical condition. Changes in drug treatment did not explain the results. It is concluded that the social environment of mental hospitals can be manipulated for the patients’ benefit.

Behaviour and Attitudes of Mothers: An Observation Study. R. K. TURNER and E. S. COOPER (M.R.C. Unit for the Study of Environmental Factors in Mental and Physical Illness, London School of Economics)

There have been surprisingly few attempts to determine whether maternal attitudes towards child-rearing are translated into readily identifiable patterns of behaviour; consequently, it is difficult to evaluate much of the research in the area of child development, since the relationship between maternal attitudes (usually measured by questionnaires, rating scales, or by interviews, and the behaviour of mothers has been assumed rather than demonstrated. An investigation was designed to rest the hypothesis that mothers, who are characterized by a restrictive child-rearing attitude, would exert a high degree of control over their children. The results provide at least limited confirmation of the hypothesis, and the authors describe some of the implications of these findings for future research and the practical and methodological problems of the technique of direct observation.

Some Social Class Differences in the Activities and Contacts of Young Children at Home. ANNETTE LAWSON (M.R.C. Unit for the Study of Environmental Factors in Mental and Physical Illness, London School of Economics)

An interview method for obtaining from mothers accounts of their children’s daily activities and contacts, its reliability, and validity was discussed.

Figures illustrating the amount of time children in middle and manual working-class families spent in sleep, play, “basic care”, out shopping and visiting, and in “other” activities were detailed. Working-class children spent consistently, even as early as 16 weeks, less time asleep than their middle-class counterparts.

The amount of attention the children received from parents and other adults, as illustrated by a weighted score, showed the fathers as giving much more time to their children in working- than in middle-class families.

Finally, some figures illustrating the consistency of behaviour over an average period of 19 months were presented and the suggestion was made that middle-class families behaved much more consistently both with the elder child over time and with their first and second-born children at similar ages than did the working-class families.