Summary of papers presented at the meeting of the Society for Medicine in Middlesbrough, September 1981.

United Kingdom trial of early detection of breast cancer: some preliminary results
S M MOSS, Institute of Cancer Research, Sutton, Surrey
A multicentre trial is in progress in the United Kingdom with the aim of evaluating the effectiveness of different methods for the early detection of breast cancer. Two populations, each of 25,000 women aged 45-64 are invited for annual screening by clinical examination and mammography. Two further populations, of 25,000 and 40,000 women in the same age range, are invited for education sessions in breast self-examination (BSE), and four comparison populations, totalling 120,000 women, are offered no additional services beyond conventional diagnostic facilities.

This is a non-randomised trial, and the principal means of evaluation will be the comparison of the mortality rates from breast cancer in each of the study populations. Preliminary findings from one screening centre show an attendance rate of 75% and a detection rate of 4.5 cancers per 1000 women screened. The attendance rates at education sessions in the two self-examination centres are 31% and 51%; data from one of these centres show similar incidence rates of 2-2 and 2-3 per 1000 woman-years in attenders and non-attenders for education, but with a significantly higher proportion of cancers, in the attenders detected by BSE.

Components of variations in standardised rates of surgery
K MCPHERSON, L JONES, Department of Community Medicine and General Practice, Oxford
International differences in surgical rates can be attributed to many factors, although no single one is entirely convincing. Systematic differences in relevant morbidity rates would be the most satisfactory explanation. In terms of variations between small areas in the same country two characteristics appear; firstly, different operations vary to different extent depending only on the level of geographic aggregation and, secondly, for a similar level of aggregation the variation of particular operations is the same across countries and systems of health care whatever the prevailing surgical rate. Independent evidence about variations in morbidity between areas (from the General Household Survey and elsewhere) suggests that, for example, cholecystectomy variations within England are largely explained by variations in the prevalence of gall stones.

Alleged neighbourhood bladder cancer in a pit village—a cautionary tale
M A HARRISON, Employment Medical Advisory Service, Darlington
An apparent increase in the incidence of bladder cancer was reported from a village that contained a coke works. The national incidence of bladder cancer was compared with that for the Northern Region and for three districts, each of which included a pit village containing a coke works. Occupational and other predisposing factors were considered. Nationally, there had been a 50% increase in bladder cancer over the past 25 years. In the Northern Region the incidence is especially high, but no particular increase was shown either in the village or in the three districts studied. Cigarette smoking, coffee drinking, and, perhaps, the previous occupations of some of the patients could have been predisposing factors. The claim that neighbourhood exposure to coke-oven emissions had influenced the incidence was not substantiated.

Fluoride and cancer mortality: a reanalysis of the United States 20-city data
C CHILVERS, Institute of Cancer Research, Sutton, Surrey
When average crude cancer mortality rates between 1940 and 1969 in 10 fluoridated and 10 non-fluoridated United States cities are compared, there appears to be a divergence in mortality immediately after fluoridation of water supplies, which began in the 1950s. When the crude mortality data are examined city by city it is clear that the divergence in rates is due to a levelling-off in mortality in the fluoridated cities. The divergence in rates occurs immediately after fluoridation; there is no latent interval. When account is taken of changes in the demographic characteristics of the cities by simultaneous standardisation for age, sex, and ethnic group the average increase in mortality in the fluoridated and non-fluoridated cities between 1950 and 1970 is similar. The choice of standard rates and number of pericentral years' deaths used does not affect this conclusion. This is also unaffected by the inclusion of 15 additional United States cities in the analysis.

A study of space-time interaction over 15 years in Hodgkin's disease
A M M MANGOU, I LECK, V F HILLIER, F KELLY, Department of Community Medicine, Manchester
Knox's test for space-time interaction was applied to 922 cases of Hodgkin's disease that according to the Manchester Cancer Registry had presented in 1962-76 in the population of the area known before 1974 as the South-east Lancashire Conurbation. The test showed significant excesses of pairs of cases presenting less than eight months apart in subjects living within 1 km of each other, the most significant being amongst pairs under eight months and 0.5 km apart (90 pairs observed, 67.6 expected). This excess appeared to be confined to pairs of adults at least one of whom was over 45 except that there was one instance of three girls aged between 10 and 12 who lived under 150 m apart and presented at hospital within 20 days. There was no significant excess of pairs of cases close in space presenting at long time intervals. The findings give some support to the hypothesis that at least some cases of Hodgkin's disease may be induced by an infection or other environmental influence, but they do not suggest that any such infection has a long and specific incubation period.
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Do general-practitioner deliveries constitute a perinatal mortality risk?
N Black, Department of Community Medicine and General Practice, Oxford
We compared the perinatal mortality for 1976–8 in Oxford with that in Banbury, taking account of birthweight and lethal congenital malformations. There was little or no difference in the birthweight-specific PNMRs, the PNMRs for births weighing over 2500 g were the same for the two populations, while for low and very low birthweights the Oxford rates were lower than Banbury (the difference was not statistically significant). The proportion of general-practitioner deliveries was 12% for Oxford, 43% for Banbury. The larger number of general-practitioner deliveries in Banbury did not appear to constitute a major risk factor.

Infants at risk in East London
T R Cullinan, J Treuherz, Department of Environmental and Preventive Medicine, St Bartholomew's Hospital Medical College, London
Questionnaires based on Emery's work in Sheffield on sudden infant death syndrome plus additional questions on ethnic origin, smoking, cooking, and heating were used by the health visitors of Tower Hamlets and City and Hackney Health Districts during visits to the homes of 3712 4-week old infants born between March 1978 and February 1980 (90% of total births). Social and health related risk factors predicting admission to hospital during the first year of life have been assessed. Eleven per cent of infants were admitted at least once. Single important risk factors, especially in relation to respiratory and gastrointestinal disease; appear to be bottle feeding at 4 weeks, maternal (though not paternal) smoking, and cooking with gas. Interalrelations, however, are still being quantified. A further randomised intervention study is planned.

Use of tranquillisers by middle-aged men in Britain
D Cook, R O Cummins, R Hume, A G Shaper, Department of Clinical Epidemiology and General Practice, Royal Free Hospital, London
The study examined the use of tranquillisers by 7735 men aged 40–59 enrolled in the British Regional Heart Study, a prospective study of cardiovascular disease. Men were randomly selected from the age-sex registers of general practice in 24 towns throughout Britain. At screening, 620 men (8%) reported that they used tranquillisers. Men over 50 had a slightly greater prevalence of use (8.9%) than men under 50 (7.1%); non-manual workers (9.4%) had a greater prevalence than manual workers (7.2%). There was no association between using tranquillisers and smoking or marital status. Positive findings included (1) an inverse relationship with drinking; (2) men with physical disease (especially cardiovascular disease) diagnosed by objective measurement or by their general practitioners used more tranquillisers than men with no disease; and (3) the unemployed (21%) had high rates relative to the employed (7%) but also exhibited more physical illness.

Use of hospital services by insulin-dependent diabetics
A Neil, Department of Community Medicine and General Practice, Oxford
Part of the use of hospital services by insulin-dependent diabetics is due to potentially avoidable morbidity. Glucose self-monitoring at home offers better glycaemic control, which may reduce the short-term complications of diabetic managements.

To determine how demands on hospital services might change, the existing pattern of use of services at Northwick Park Hospital was analysed and potentially avoidable morbidity was estimated.

The data suggest that up to 18% of insulin-dependent diabetic admissions, 10% of visits to clinics, and several attendances at accident and emergency departments for hypoglycaemic coma are potentially avoidable with better diabetic control, which may be achieved with self-monitoring.

Distribution of less common causes of death in smaller areas
M J Gardner, P D Winter, E D Acheson, MRC Environmental Epidemiology Unit, Southampton
Extracts of five items of information on each death (year of occurrence, age, sex, area, and the underlying cause) in England and Wales during 1959–79 have been obtained to analyse the distribution of less common causes of death in smaller areas.

Initial results, related to deaths occurring during 1968–78, showed on maps pleural mesothelioma in men to be concentrated around ports, naval dockyards, and the east side of London, and nasal cancer in areas of furniture and boot and shoe manufacture. A relationship was found between bladder cancer and the proportion of the local workforce working in the dyestuffs manufacturing industry.

These findings are suggestive that if used systematically the method may produce clues to unknown carcinogens in the environment.

Selection and mortality differentials
A J Fox, P O Goldblatt, A M Adelstein, Department of Mathematics, City University, and Office of Population Censuses and Surveys, London
The OPCS Longitudinal Study provides reliable mortality data by a much wider range of characteristics than are available from other national sources. Based on a 1% sample of the population it broadens the scope of mortality analysis and permits study of changes.

Data from this study have shown the effect of selection on observed mortality differentials. Of particular interest is "health-related mobility," which is associated with the relative health of people acquiring or losing individual characteristics. It has been suggested that, for characteristics affected by health-related mobility, mortality differentials would narrow or widen with increased duration of follow-up.

An investigation was made of health-related mobility to mortality differentials by economic position and social class, to regional differentials, and to family and household differentials. Selection was shown to operate when people change economic position, migrate, or change marital status. While these selection processes contributed to social class gradients they did not explain regional differentials and contributed only to a limited degree to differentials by marital status. Differentials by household circumstances also reflected the selection processes.
Inter-hospital and inter-authority comparisons
J YATES, M G DAVIDGE, L VICKERSTAFF, 
Health Services Management Centre, Birmingham
Data are obtained from existing sources of information and from that data are derived several crude indicators of performance. The information is then made available to clinicians and managers in the health service to enable them to compare the performance of their own service with that of all others in the country. Background information about each indicator is available and a personal report for each clinician, manager, or authority can be provided, supplemented by presentation of information in diagrammatic form. Initially, the project is concentrating on comparative information for large mental illness and mental handicap hospitals and on general surgical, traumatic, and orthopaedic services at a district level. If the work is extended it will be extended to all hospital specialties.

Women's view of the benefits of the cervical smear test
T R POSNER, P HOBBES, D WATKINS, B JONES, CRC Project, Oxford
A baseline survey of women's beliefs about cervical cancer and experience of the cervical smear test was carried out in 1979 before a programme of intervention designed to encourage cervical screening. Five possible components were identified: reassurance (42%), early detection (21%), diagnosis (17%), prevention (4%), and ambiguity (13%).
A woman's answer was related to her age and whether she had had a test. Younger women, a higher percentage of whom had had a test, were likely to mention reassurance and early detection as benefits. Statistically significant associations were also found between a woman's belief in the early detectability of cervical cancer or the preventive function of the test and mention of reassurance or early detection as benefits.

Disability and patient satisfaction with medical care
D L PATRICK, E SCRIVENS, J C CHARLTON, Department of Community Medicine, St Thomas's Hospital Medical School, London
This paper examines how disability is associated with dissatisfaction and patient expectations concerning medical care services provided by doctors in primary care. A general and a specific measure of satisfaction was included in a survey of 1026 respondents living in the London Borough of Lambeth. Disability was assessed using a multidimensional measure known as the functional limitations profile. Consistent with the findings from other studies of patient satisfaction, most respondents expressed satisfaction with most aspects of care, except for availability in an emergency, preventive teaching, and communication. Physical disability was associated with greater dissatisfaction with access, while psychosocial disability was related to greater dissatisfaction with the quality and art of care.

Blood lead and water lead in British towns
S J POCOCK, A G SHAPER, M WALKER, B CLAYTON, T DELVES, R F PACKHAM, P POWELL, Department of Clinical Epidemiology and General Practice, Royal Free Hospital, London
Within the framework of the regional heart study, blood lead concentrations have been measured on 7378 middle-aged men in 24 British towns. Water lead concentrations have been measured in the homes of 941 men, about 40 men to a town. Mean blood lead concentrations vary considerably in towns, and the highest mean concentrations are seen in Ayr, Harrogate, and Wigan, all towns with a soft water supply. Blood lead concentration exceeded 1.7 μmol/l in 1% of men. As in previous studies there is a relation between individual blood lead and water lead concentrations and it is curvilinear. The data suggest that water lead makes a major contribution to between-town differences in blood lead concentrations.

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Smoking and drinking in Britain: the importance of social class and town of residence
A G SHAPER, R CUMMINS, M WALKER, C WALE, D COOK, Department of Clinical Epidemiology and General Practice, Royal Free Hospital, London
This study reports the smoking and drinking behaviour of men enrolled in the regional heart study—a prospective study of 7735 men aged 40–59 randomly selected from the age-sex registers of general practitioners in 24 towns throughout Britain. Pronounced differences were noted in the prevalences of smoking and drinking between non-manual and manual workers. Increased levels of smoking were associated with a higher prevalence of moderate-to-heavy drinking. Between drinking groups, the relationship with smoking was more u-shaped, with low and high levels of drinkers smoking more than intermediate levels. When social class was controlled, there were still pronounced differences between towns in both smoking and drinking behaviour. Town of residence and social class clearly have independent effects on smoking and drinking. The well-known regional and social class differences in cardiovascular disease may be due in part to an independent influence of town and social class on smoking and drinking behaviour.

Secular trends in surgery
D S QUILL, H B DEVLIN, North Tees General Hospital, Stockton-on-Tees
A retrospective study was carried out of changes in the pattern of surgery performed in a district general hospital over the 20-year period 1960–79. Data sources were operating theatre log books and OPCS population estimates.

The results document a twofold increase in the amount of general surgery performed and a somewhat greater increase in the major surgical subspecialties.

In general surgery a reduction occurred in the rate of elective surgery for peptic ulcer from 46/100 000 in 1960 to 35/100 000 in 1979. A more dramatic reduction was seen in the appendicectomy rate. Emergency surgery for inguinal hernia was also seen to have fallen over the same period.

Overall, these changes have resulted in a reduction in the rate of emergency general surgery from 357/100 000 in 1960 to 215/100 000 in 1979. These changes are thought to be important in the planning of surgical facilities.

Sociopsychological effects of mastectomy
T M FEELEY, H B DEVLIN, North Tees General Hospital, Stockton-on-Tees
We studied the sociopsychological effects of mastectomy on the response to surgical services. Of the 128 patients interviewed more than nine months after mastectomy, 22% had reduced social and leisure activity compared with their
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preoperative state, 19% had an altered holiday pattern, and 10% did not return to work. Loss of self-esteem and feelings of shame or inadequacy are evidenced by the following findings: 38% of the women would not dress or undress in the presence of their husbands and 38% changed from fitted clothing to loose clothing. A matched control group was not interviewed, but the magnitude of the behavioural change suggests that it was related to the amputation of the breast.

Many patients complained of the surgical service provided: 15% said that there was a delay of more than one month between presentation with a breast lump to the family practitioner and referral to a surgical clinic; 10% expressed surprise at finding that their breast had been removed; 23% did not understand the nature of the operation or the reason for it, or the necessity of further treatment; and 95% expressed some disappointment, 60% being unsatisfied with the prosthesis, 11% never wearing it, 7% wearing it only occasionally, and 35% often using an alternative such as cotton wool.

The findings indicate, firstly, that earlier reports of profound behavioural trauma occasioned by mastectomy are correct and, secondly, that a review is urgently needed of the preoperative counselling of women with breast cancer.

Errors in death certification

A L COCHRANE, F MOORE, MRC Epidemiology Unit, Cardiff

Scrutiny of death certificates during a series of long-term follow-up studies has shown three major types of error in certification, especially in the way they are coded to comply with the ICD. These are:

1. The recording of deaths due to coalworkers' pneumoconiosis where the condition is mentioned on the same line of the coroner's certificate after bronchitis or emphysema, result in it not being coded as such.

2. The recording of deaths by a "lazy" group of certifying officers where only bronchopneumonia or ill-defined conditions are entered in part I of most of their death certificates—in one instance 68 out of 79 (68%) in one year.

3. Until 1979 the external cause of some fractures not being stated resulted in their having to be coded to "other and unspecified accidental falls". In 1978 nearly 20% of all types of accidents were thus recorded. The ninth revision gives a separate rubric for "unspecified fractures" but this remains within accidental falls.

Vision screening in the under-5s: an evaluation

S M HALL, D HALL, A PUGH, Communicable Disease Surveillance Centre, London

Screening the under-5s for visual defects as a part of developmental surveillance is widely undertaken in Britain. There is evidence that many defects remain undiagnosed until the child starts school by which time amblyopia, probably a preventable condition, may be irreversible.

This study was a field evaluation using three groups of children: (a) those undergoing developmental surveillance by doctors in child health clinics; (b) those examined by a community orthoptist; and (c) those attending ophthalmology outpatient clinics.

It was concluded that: the yield from vision screening clinics is very low and that from the Stycer tests for under-5s is negligible; a community orthoptist is a valuable "filter" between community and outpatient clinics; parents are more effective than professionals; and there is considerable medical ignorance of the diagnosis of visual disabilities.

Effects of living alone on the nutritional state of the elderly

M L BURR, MRC Epidemiology Unit, Cardiff

A nutritional survey was conducted among 830 elderly subjects in a South Wales town. Men who ate alone had a poorer vitamin C and thiamine state and took less fruit than other men of similar age, but no such differences were found in women. Indeed, women eating alone had significantly higher leucocyte ascorbic acid concentrations than other women. Furthermore, the men with a low thiamine state tended to have a low vitamin C state too, whereas in women the two factors seemed to be unrelated. Thus living alone may be a risk factor for vitamin deficiency in men but not in women. Quetelet index, arm circumference, skinfold thickness, and haemoglobin were unrelated to eating alone, so presumably solitary men obtain enough energy and iron for their needs. But there may be some support for the belief that widowers neglect their diet whereas widows eat even better than before.

Two decades of rural health care in Nigeria

C R BARBER, Department of Social Studies, Oxford Polytechnic, Oxford

A scheme designed to give African medical students at the Ibadan medical school experience of rural health care encountered various problems and difficulties.

Resistance by students and problems of administration and co-operation between sponsoring authorities, together with entry into virtually uncharted and unknown areas, meant that, at first, pre-occupation was with matters far removed from clinical practice. A survey of people and dwellings had to be carried out, health problems had to be identified, and a system of monitoring populations through health visitors and some form of record-keeping had to be instituted.

It was found that proper success came only when the scheme moved completely into Nigerian hands; when people, staff, and students were able to identify with it. A generation later attitudes had changed so that students were eager for placements and obviously were beginning to see themselves becoming general practitioners. Such changes, however, presumably reflect the economic and political developments as much as they can be attributed to the workings of the scheme itself.

Distribution of juvenile on-set diabetes cases in Scotland, 1968–76

C C PATTERTSON, M THOROGOOD, P G SMITH, J I MANN, H A HEASMAN, J A CLARKE, Department of Community Medicine and General Practice, Oxford

Details of Scottish hospital inpatient admissions of 2505 diabetic children over the period 1968–76 were obtained, and the first admission identified. After correction for readmissions, there was an increase in incidence of around 8% in the period. The age distribution of the cases showed a primary peak at 11 and 12 years and a secondary peak at 3 and 4 years for boys and girls respectively. Seasonality of admission was found only in children over 5 with a peak in late autumn and another in winter. There was an association between incidence of disease and density of population with the least densely populated counties having a combined incidence rate almost twice that of the cities.
This association was evident to a lesser extent within Glasgow City wards. Statistical tests of space clustering and of space-time clustering of cases within parishes and city wards showed little evidence that either was present.

HDL—cholesterol: relationships with other risk factors for coronary heart disease

D THELLS, O H FORDE, E ARNESEN, P G LUND-LARSEN, D D MJØS, Tromsø, Norway

High density lipoprotein cholesterol (HDL-C) was determined in some 15 000 healthy Norwegian men and women aged 29–53 as part of a screening programme for coronary risk factors. Mean HDL–C concentrations were higher in women at all five-year age levels. Non-smokers had higher concentrations than cigarette smokers, and male athletes had higher concentrations than a sedentary group. The effect of physical activity was most pronounced in non-smokers. Multiple regression analysis indicated that weight was the most important independent variable with a negative association in both sexes, and the effect of physical activity at leisure was reduced but remained significant. The effect of smoking was more pronounced in women than in men. These cross-sectional data suggest that an increase in HDL–C may be feasible by simple hygienic measures.
Mortality in relation to the functional capacities of people with disabilities living at home

Harris AI, Head E. Sample surveys in local authority areas with particular reference to the handicapped and elderly. London: Office of Population Censuses and Surveys, 1971.


CORRECTION

Middlesbrough Meeting, September 1981 (June 1982, p 150)

The headline should read: “Summary of papers presented at meeting of the Society for Social Medicine in Middlesbrough. September 1981.”

The following abstract of a paper given at this meeting has recently been received.

LOOKING AT CHANGES OVER TIME: GENERAL LESSONS FROM A STUDY OF THE HANDS OF PATIENTS WITH RHEUMATOID ARTHRITIS

The analysis of categorical data from longitudinal studies has been relatively neglected in statistical publications. In particular, ordinal scale data, because of its ordering, is often subjected to arbitrary scoring schemes or a dichotomisation is used to simplify the analysis.

Recently a class of models for ordinal regression was presented by McCullagh. For interpretation, these have the appeal that the observed response is governed by an underlying continuous variable. McCullagh deals only with situations where the responses for different values of the independent variable are not related. This is not the case for longitudinal data but Koch's general approach to categorical data using weighted least squares can be adapted to fit McCullagh's models.

This method has been used to analyse a study of the development of deformity in the hands of patients with rheumatoid arthritis. Together with Markov chain analysis, these approaches have shed light on whether the timing of early synovectomy is critical.

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