unrelated disease was aggravated by the physiological effects of pregnancy and 103 were quite fortuitous in that women who died in road accidents or from viral encephalitis or from certain forms of malignancy happened to be pregnant.

Abortion is no longer among the leading causes of death, but the others are still there—pulmonary embolism (now the main, single cause), anaesthesia, hypertensive disorders, and uterine haemorrhage, followed by ectopic pregnancy and sepsis. In the prevention of these deaths—and 58% of those directly due to pregnancy and childbirth had one or more avoidable factors in that there was some departure from generally accepted standards of satisfactory care—the same lessons are still to be learnt, lessons that have been emphasised repeatedly in earlier reports. The reasons for care being unsatisfactory are shared among pregnant women themselves, family doctors, and staff in consultant obstetric units. Avoidable factors in the antenatal period included concealment of pregnancy, late booking, failure to keep appointments, delay in referral to a consultant when some abnormality was noted, delay in operating on patients with ectopic pregnancy, and inadequate treatment in hospital of antepartum haemorrhage or some other disorder. In labour some patients refused skilled, lifesaving care and others might better have been transferred earlier to a consultant unit. Sometimes junior hospital staff had to cope with cases beyond their capabilities; sometimes senior staff with responsibilities in other hospitals were not immediately available in the face of an important complication.

A major hazard in labour continues to be the administration of an anaesthetic by an anaesthetist lacking adequate knowledge and skill. In the triennium under review 30 deaths were due directly to anaesthesia and in a further 10 anaesthesia contributed to the death. In the puerperium or postoperative period women died through discharging themselves too early and against medical advice. Other deaths were due to delay in treating infection and inadequate action when warning symptoms of pulmonary embolism appeared. Most pages of the report have something constructive to say about the prevention of maternal death; it is essential reading for everyone concerned with maternity services—doctors, nurses, and administrators.

But, after 30 years, nine reports, and relatively few deaths each year, the time has come to look afresh at the form and purpose of these triennial reports. In some categories the number of deaths is so small that the variation from year to year and even from one three year period to another has little or no significance. Again, the comments in many chapters amount to little more than reinforcement of what has been said previously. Continuity could be achieved by maintaining basic, simple tables with more detailed analysis and comment reserved for selected causes of maternal death where there is judged to be a clear need for special attention or research. Each curtailed triennial report might contain one, possibly two, such special topics that had been given to a small working party or task force to prepare. These groups need not limit their attention to the three years of the triennial report: the previous five or even eight years might be covered, depending on the subject and the number of deaths.

Suitable topics may easily be found in the present report: amniotic fluid embolism is a good example. During 1976-8, 11 deaths were attributed to this cause, but probably several others put down to postpartum haemorrhage associated with a blood coagulation disorder arose directly from the passage of amniotic fluid into the maternal blood stream and the rapid development of disseminated intravascular coagulation and defibrination. Since 1973 the reports have accepted the

diagnosis of death from amniotic fluid embolism only when histological examination of the lungs has confirmed the diagnosis. This attempt at precision may be masking the extent of this cause of maternal death, for the quantity of amniotic fluid that has to pass before it can be identified in the lung is unknown. Presumably lesser quantities of amniotic fluid (insufficient to be seen in histological sections of the lung) can result in fatal blood coagulation defects. Amniotic fluid syndrome might be a better term, for it could include deaths from embolism as well as those from haemorrhage after disseminated intravascular coagulation.

One worrying possibility is that the "unexplained" rise in the number of deaths from postpartum haemorrhage taken in conjunction with those deaths clearly due to amniotic fluid embolism may, in some measure, be linked to the fashionable tendency to induce and stimulate labour. This is the sort of issue that could usefully be selected for special attention in a future report. Another is anaesthesia, where almost all the deaths have avoidable factors, and this is especially relevant today when deaths from many other causes are difficult to prevent. All aspects of anaesthesia in maternity practice should be examined closely—the knowledge and experience of the anaesthetist, the availability of expert help if needed, the sort of contracts held by anaesthetists doing maternity work, the general standards of care in labour (this may well have a bearing on the risks associated with anaesthesia), and the administrative arrangements in maternity units. The issue of maternal deaths resulting from anaesthesia, because of the numbers and because they are generally avoidable, might well be made to stand out in a slimmed down version of a future report.

The confidential inquiries have made outstanding contributions to the reduction of maternal mortality, and their success may weigh against any substantial change in the format. But circumstances are constantly changing, and a new approach and new ideas based on the secure foundation of the work of the past 30 years might well bring an added interest and relevance to what is happening today in maternity care.

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¹ Department of Health and Social Security. *Report on confidential enquiries into maternal deaths in England and Wales 1976-1978*. London: HMSO, 1982.

"Cancer Surveys"

Cancer Surveys, a new quarterly journal produced by the Imperial Cancer Research Fund, provides comprehensive reviews of selected topics in oncology and related disciplines, each issue being devoted to one topic. A major aim is to bridge the gap between clinical, laboratory, and epidemiological research.

Among the interesting papers in the first issue, on the inheritance of susceptibility to cancer in man, is one based on a study of the Danish Twin Register. This register comprises the 25 598 pairs of twins born in Denmark during 1881 to 1920, some 92% of whom have been traced. Data on the occurrence of cancer among them were obtained by questionnaires sent at intervals to the twins, from cancer registry

data, and from hospital and other medical records. During the period 1920-77 a total of 621 twins developed cancer of the breast, colon, or rectum or leukaemia. The two main conclusions of the study are that the incidence of the four cancers among twins is no higher than that in the general population; and the occurrence of the cancers in both members of a twin pair ("concordance") is not more frequent among monozygous than dizygous twins.

By its design the study avoids a common bias in twin studies which may lead to overreporting of monozygous twin pairs concordant for a disease. Twins enter the Danish study primarily because they are twins and not because of the occurrence of a disease.

The finding of a similar concordance rate among monozygous and dizygous twins suggests that genetic determinants do not exert a strong influence in the aetiology of these four types of cancer—an encouraging conclusion from the viewpoint of preventive medicine.

Other papers in this first issue of *Cancer Surveys* include reviews of cancer genetics, analysis of cancer in families, the genetic epidemiology of prostatic cancer, predisposition to cancer in rare inherited disorders such as xeroderma pigmentosum, and the association of cancer with chromosomal abnormalities and DNA polymorphism. The quality of the first issue suggests that this new journal will readily become established.

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Patients who lose weight

Anyone who is overweight is likely to be warned of the risk of cardiovascular disease and advised to slim. But what of those patients who come to their doctors complaining of losing weight? Experience suggests that involuntary weight loss is a sign of ill health, and recent publications seem to support this view. Normal people tend to gain weight in early adulthood, reaching a plateau in about the fourth decade.^{1 2} The relative weight of an individual (the ratio of his weight to the population mean, expressed as a percentage) should not fall substantially at any stage. Large epidemiological studies show that mortality is lowest in patients with a relative weight of 100% to 115% of the mean,^{2 3} but it is higher in groups above and below this weight, giving a U-shaped curve of mortality versus relative weight. Cardiovascular disease is often the cause of death in the people with high weights, while cancer and other causes predominate in those whose weights are low.

A recent study of the diagnostic and prognostic significance of involuntary weight loss is therefore of interest.⁴ Half of the patients who complained of losing weight had not in fact lost any when weighed carefully. In 35% of those who had actual loss of weight no physical cause was found. Nevertheless, most of the 91 patients with confirmed loss of weight did have a serious underlying disorder: 59 had physical disease and eight had a psychiatric disorder. Twenty-one of the patients with physical disease died within two years.

The diagnoses were not obscure; indeed, most were indicated by the medical history, physical examination, and results of screening laboratory tests and radiological examination.

Cancer was the most frequent diagnosis, accounting for 20%; but gastrointestinal disorders such as malabsorption and inflammatory bowel disease were also seen frequently. Heart failure was the next most common cause, alcohol abuse, obstructive airways disease, and poorly controlled diabetes mellitus then followed. There was only one case of thyrotoxicosis.

The purpose of this study was to develop a diagnostic strategy that would distinguish patients with physical causes of loss of weight from those without. The medical history and the results of physical examination were the most useful discriminators. Screening laboratory tests were less helpful. Of the investigations, the chest x-ray film was the most useful examination, showing up masses, infiltrates, heart failure, and lymphadenopathy. Patients who had a change in appetite, nausea or vomiting, or a cough were likely to have a physical cause, while those who maintained the same level of physical activity during loss of weight and who smoked little were not.

Despite these gloomy findings comfort may be found in the possibility that, though diseases may cause loss of weight, the loss of weight itself in turn may influence the course of the disease.⁵ For example, low body weight has a favourable effect on both the incidence and the prognosis of breast cancer independent of any treatment regimen⁶⁻⁸; the effect appears to be due to the effect of body weight on sex hormones. Obese men and women have depressed blood concentrations of sex-hormone-binding globulin and of gonadotrophins,⁹ but these abnormalities can quickly be reversed by loss of weight. The clinical course of other hormone-dependent tumours of both animals and man can also be influenced by dietary manipulation of the body weight.¹⁰

Endocrine changes are not the only result of changes in weight. Loss of weight results in alterations of cardiovascular and respiratory function and in reduction of basal metabolic rate, all of which could influence the body's response to disease. Might it be that involuntary loss of weight, as well as being a sign of illness, is also a sign of vigorous self-defence?

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