there are innumerable patients who are managed quite well by their GPs and who never go near a psychiatrist, nor do they want to. You stick to your neat and cosy theoretical principles, Dr Tyrer. We are doing the work under difficult circumstances and with very little time for each patient. I have yet to refer a patient to a psychiatrist without his being prescribed a vast amount of drugs before the patient got better or more manageable.

Let's have less "GP baiting" from the ivory towers of academic excellence and more practical help and advice on how to help our patients. Anyone can criticise anything or anyone. It takes someone of real worth to suggest something better or get the job done any better.

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Perforated duodenal ulcer on diflunisal (Dolobid)

SIR,—We read with interest the letter from Drs H P Upadhyay and S K Gupta (26 August, p 640) reporting an overdose of diflunisal. Recently we treated a patient with a perforated, acute duodenal ulcer while on treatment with diflunisal (Dolobid). Prior to starting treatment he had no gastrointestinal symptoms. He was prescribed two tablets twice daily for pain in his knee. He took no other medication. On day 2 of treatment he started to feel epigastric pain and his ulcer perforated on day 7.

The manufacturers' information booklet records one associated duodenal ulcer. They report a series in which faecal blood loss was significantly lower on diflunisal than on a comparative dose of aspirin.¹ However, the blood loss on diflunisal was significantly greater than on a placebo. It is our clinical impression that a large number of patients presenting to hospital are already being treated with diflunisal. Will it continue to be as trouble free as predicted?

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¹ De Schepper, P J, *et al*, *Clinical Therapeutics*, 1978, 5, suppl A, p 49.

Death certification and epidemiological research

SIR,—Sir Cyril Clarke concludes the report entitled "Death certification and epidemiological research" (14 October, p 1063) by saying "The purpose of this paper is to try to improve the accuracy of the information which the OPCS receives," but the study group and the report have overlooked so many pertinent points that they have vitiated their good intentions.

In the first place there is no reference to the Brodrick report, *Death Certification and Coroners* (Cmnd 4810, 1971), which deals far more effectively with the problems which they encountered and makes fuller recommendations.

Secondly, if coroners are to be criticised, even constructively, would it not have been a good idea first to consult a coroner, or better still the Coroners' Society, to find out why coroners do not consult the clinician in charge more often? Would it not have been a good

idea also in cases 4, 5, 6, 12, 13 and 14, which were clearly the subjects of inquests, to find out something of the circumstantial evidence considered by the coroner before reaching his verdict as incorporated in the death certificate? If this was done there is no indication in the paper that it was, but rather we are given the picture of a group of omniscients, looking only at the medical notes and deciding, without reference to the legal requirements of a verdict of "suicide," that they knew best. In case 6, for example, the words "He killed himself" are the formula to denote suicide laid down by the Coroners Rules 1953—and in fact the death certificate says precisely the same thing as the so-called "Actual cause of death," but it says it rather more fully.

Sir Cyril has treated very superficially a very important subject which has already been dealt with far more expertly by the Brodrick Committee. Reform is much overdue and it is a sad reflection on the Government's priorities that it can find the money to set up OPCS but not the parliamentary time to give it a proper death certification system on which to base its epidemiological research. In the meantime it would help if consultants took a greater interest in death certification, both by ensuring that their junior staff are adequately supervised and by giving as much information as possible to pathologists before they embark on necropsies, whether at the request of the coroner or not.

If the Royal College of Physicians wants better mortality statistics it must put its own house in order before telling the coroners what to do—and it could achieve most by directing its strictures at our political masters, in whose hands the matter has rested for seven years.

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SIR,—I should like to comment on the paper "Death certification and epidemiological research" by the Medical Services Study Group of the Royal College of Physicians (14 October, p 1063). Since the authors point out that the study was suggested by me, may I say that I do not entirely agree with their interpretation of the findings, in particular with what they call major errors.

Many doctors will still recall the surprise which greeted the news that a radiological picture when read twice by the same or other radiologist was interpreted inconsistently.¹ It was soon realised that diagnosis includes a subjective element which by its nature varies from time to time. Ways to minimise "error" were devised—for example, independent diagnosis by different clinicians or repeated "blind" by the same clinician. Indeed, the essence of statistical analysis lies in taking account of variation and error.

Death certificates are widely used for research and have not escaped scrutiny. The method and findings of this report are in some ways similar to those of previous studies, in which, it should be recalled, the main point was the difference between diagnosis in hospitals before and after necropsy.^{2,3} But are the implications for research and statistics not in danger of being exaggerated? Do the authors overlook the steps taken by experienced analysts to correct and to allow for errors? Surely yes. A close look at the tables purporting to show major discrepancies reveals that

some discrepancies are minor, that in others the correct "underlying" cause would have been coded, and that in yet others the discrepancies are not serious in the context of the uses of these records.

What are the alleged major discrepancies in these tables, how do they come about, and what is their effect on statistics? Firstly, doctors may conceal what they consider embarrassing conditions such as alcoholism. Secondly, coroners usually omit psychological antecedents when certifying suicide; and the legal distinctions between suicide, open verdict, and accidentally self-inflicted death do not necessarily accord with clinical opinion. Thirdly, sometimes coroners' pathologists do not use the standard form for certifying cause of death. Fourthly, the recording of pathological conditions may be in the wrong order, may contain redundant information, or may be wrong (as judged by subsequent scrutiny). These last errors may indeed be the result of relegating the job of certifying to the most junior doctor without guidance.

This is quite a list of flaws; but they affect a relatively small number of certificates, and the errors are not as serious for research and statistics as would appear at first sight. For example, the effect of wrong order is minimised by rules of coding and by analysing multiple causes; indeed, some of the examples of major discrepancies would have been correctly coded. The avoidance of ostensible stigma is systematic and recognised and, as a result, the effect can be measured in special studies, such as the study by Barraclough *et al* of the precursors of suicide⁴ and the OPCS study of deaths of alcoholics.⁵ Death certificates carry only summaries of complex disorders. They should not be expected to be always comprehensive; as long as they have the correct clues—for example, suicide or cirrhosis of liver—the details may be established at another level of investigation. Detractors of death certificate statistics in asking for all or none betray their main mistake: they view the information on certificates as though it is treated in isolation. It is not. In fact it is seen as only part of a network. The information is invariably analysed in conjunction with other records—as indeed in the study under discussion.

Death certificates are used mainly for analysing trends, for correlations (for example, with environmental hazards, times or places), and for surveys designed to test causal hypotheses retrospectively and prospectively. For trends and correlations most diseases are diagnosed consistently enough. Many studies in depth attest to their reliability for these purposes, a recent example being the studies on the rise and fall of asthma mortality.⁶ In retrospective surveys hypotheses are tested by selecting certificates with particular diagnoses, and finding out whether the deceased persons had been exposed to the suspected hazard. For these studies diagnoses are invariably checked by recourse to clinical notes and opinions, and the use of controls allows for the play of chance. A prospective survey (a growing practice) begins with records of persons exposed to an alleged hazard, and subsequently their deaths are noted together with the diagnoses. Again, mortality patterns are compared with those of standard populations subject to similar limitations of diagnosis.

That the use of death certificates for research is increasing is not surprising. They are mandatory for every death, quickly processed, and indexed to be available for analyses and surveys. What were referred to as major