shown elsewhere that old age, poor survival, DHA of residence, and place of death were all positively associated with DCO registration.³ All the studies Gulliford cites have used the Thames cancer registry as the sampling frame for studies of case notes and all exclude DCO cases from their sample. Our second concern relates to the use of cancer registry data for health services research. National Health Service (NHS) purchasers are now funding registries directly; we consider it essential that the reliability and the validity of registry data be confirmed before these are used as a basis for needs assessment, service outcomes, and provision. Registry data cannot be used when they are inaccurate or incomplete. In a previous paper we have shown that part of the problem lies with the incompleteness of clinical notes,⁹ and in that paper we chose to focus on quality control within the registry.

Gulliford asks how we assessed the reliability of our own data abstraction. Before beginning work, the two doctors who carried out the abstraction liaised with registry staff to confirm the criteria used when coding date of diagnosis, stage, and treatment. Data were abstracted on each set of case notes by the two doctors separately and checked for interobserver bias. Further checks took place at clinical audit meetings with surgeons and pathologists when cases with absent or discordant information was audited. All of this is described in a previous work cited in our paper.⁹

We regret the ambiguity in the abstract which could be taken to mean that the registry had data on treatment for DCO cases. However, the background and methods sections make clear that the registry definition of DCO cases was the one followed in this study. References to disagreements involving DCO cases in the abstract would be better described as disagreements involving DCO cases for which we subsequently retrieved clinical data. DCO cases are important because their exclusion from the sample can bias measurements of treatment and survival. In other papers we have attempted to measure the impact of DCO cases on national survival and the effect of losing them.^{3 10}

In conclusion may we identify what we take to be the strengths of our paper? Our objective was to identify factors in the registration process affecting reliability. We showed error in three areas in which the registry has explicit written policies: the retrospective follow up of DCO cases, six-month active follow up of cases, and the coding criteria for date of diagnosis. The registry has responded positively to this audit and to our recommendations for improving the internal quality of registry data.

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1 Pollock AM, Vickers N. Reliability of Thames cancer registry data on 673 cases of colorectal cancer: effect of the registration process. *Quality in Health Care* 1995;4:184-9.

- 2 Gulliford MC, Bell J, Bourne HM, Petruckevitch A. The reliability of Cancer registry records. *British J Cancer* 1993;67: 819-21.
- 3 Pollock AM, Vickers N. Why are a quarter of all cancers in south east England registered by "death certificate only" (DCO)? Factors related to DCO registrations in the Thames Cancer Registry between 1987 and 1989. *Br J Cancer* 1995;71:637-41.
- 4 Thames Cancer Registry. *Cancer in South East Thames 1987-9*. Sutton, Surrey: Thames Cancer Registry, 1992.
- 5 Thames Cancer Registry. *Cancer in South West Thames 1987-9*. Sutton, Surrey: Thames Cancer Registry, 1992.
- 6 West RR. Accuracy of cancer registration. *Br J Prev Soc Med* 1976;30:187-92.
- 7 Lapham R, Waugh NR. An audit of the quality of cancer registration data. *Br J Cancer* 1992;66:552-4.
- 8 Chow WH, Devesa SS. Death certificate reporting of colon and rectal cancers. *JAMA* 1992;267:3028.
- 9 Vickers N, Pollock A. Incompleteness and retrieval of case notes in a case note audit of colorectal cancer. *Quality in Health Care* 1993;2:170-4.
- 10 Pollock A M, Vickers N. The impact on colorectal cancer survival of cases registered by "death certificate only" - implications for national survival data. *Br J Cancer* 1994; 70:1229-31.

Medication errors during hospital drug rounds

In their paper Ridge *et al*¹ set out to find the nature and rate of drugs given in error in one National Health Service (NHS) hospital. It is important to distinguish between the authors' focus, which was errors that occurred at the time of the nurse giving the drug, and prescribing errors that originate with the doctor and already exist on the prescription. Prescribing errors were not examined by the authors as their survey recorded only those errors that could be classed as deviations from the doctor's medication order as written on the patient's chart.²

Although it is important that hospitals do review the effectiveness of their current drug supply and administration systems (as the authors suggest), it is incorrect to support the seriousness of this argument with reference to a review of coroner's records which concluded that about a fifth of deaths relating to prescribing and giving drugs were due to errors.³

In this review, a total of 3277 deaths came to inquest (3.8% of all deaths in the years 1986-91) and the review of coroner's cases actually identified 46 relevant deaths (due to adverse drug reactions or errors in prescribing or giving drugs). Of these 46, death was attributed to errors in medication in 10 cases, with an even mix of primary and secondary care cases, but of these 10 most were due to prescribing errors with possibly only one death due to a nurse giving a drug in error (and that involved oxygen).

The overall risk of death due to errors or adverse drug reactions was judged to be very small - about one in 2000 of all deaths during the study period, and of course, unlike in the paper by Ridge *et al*, there was no baseline for the number of total events that were potentially adverse - that is, the number of doses of medicines prescribed and given during the six year period.

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- 1 Ridge KW, Jenkins DB, Noyce PR, Barber ND. Medication errors during hospital drug rounds. *Quality in Health Care* 1995;4: 240-3.
- 2 Allan EL, Barker KN. Fundamentals of medication error research. *Am J Hosp Pharm* 1990;47:555-71.
- 3 Ferner RE, Whittington RM. Coroner's cases of death due to errors in prescribing or giving medicines or to adverse drug reactions: Birmingham 1986-91. *J R Soc Med* 1994; 87:145-8.

Preprinted assessment sheet

Goodyear and Lloyd pointed out the advantages of a preprinted assessment sheet,¹ but I would like to point out the danger of implementing this method in the hospital setup, specially for junior doctors in training.

Good history taking in medicine has for generations been the main method of educating medical students and junior doctors. Full evaluation of the history of a patient's complaints is crucial to making a correct diagnosis, and helps in planning the management. Every doctor spends the rest of his or her professional life relearning the lesson. The doctor's first task is to listen and observe, not only to obtain information about the current problem but also to understand the patient as a person and to learn about their life situation.²

Symptoms identified by taking a history provide some of the most important items of information used in the process of diagnosing a disease. When patients describe the symptoms for which they are seeking professional attention, they are also reporting the story of an illness as they have lived, and remembered it, and so it can vary. To some extent, symptoms are universal human experience. Virtually every person experiences some discomfort for which he or she is seeking some help.

Talking with a patient has a third function: it helps that person to feel that he or she is understood, and it thereby helps to establish a therapeutic relation. A style of questioning narrowly shaped for the sole purpose of diagnosing a disease ignores much of what patients have experienced and many of their concerns and questions. It therefore often prevents the development of a trusting relation, and diminishes the chances of helping the patient. Talking with a patient about the experience of being ill, on the other hand, can have great value even when nothing can be done about the disease.³

Collecting information with a pre-printed assessment sheet, or computer may be good, and may be more efficient, but is not advisable for young doctors in training. It is the duty of the senior experienced doctors to identify deficiencies in history taking by a junior doctor, and help him or her to rectify the deficiencies and thus help them to be good clinicians.

The disadvantage of a preprinted assessment sheet is that you forget to