

concentrations. A dangerous state of intoxication, preventing escape, may arise before symptoms become severe.² Victims of moderate or severe poisoning not infrequently develop nausea, vomiting, and incontinence of faeces.³ Mistakes, such as attributing death to food poisoning, have occurred because of inadequate postmortem examinations.^{4 5} Victims may be capable of performing tasks and even giving orders while suffering from poisoning but on recovery have no recollection of those events.¹ The father of this family claimed at the inquiry to have no recollection of PJP's visit or of subsequent events until he had recovered in hospital.

The clinical diagnosis of CO poisoning is not always easy and often depends on being aware of such a possibility.⁴ Skin pallor is much more often seen than the classical pink colour of the mucous membranes and skin, which indicates severe poisoning. If those in charge of caravan sites were aware of the manifestations of CO poisoning, similar tragedies might be prevented.

We thank Dr R J Gilbert, director, Food Hygiene Laboratory, Colindale, London, and Dr F J Bone, consultant bacteriologist, Dumfries and Galloway Royal Infirmary, Dumfries, for bacteriological analyses. We also thank the *Sunday Times* for permission to reproduce the figure and Mr J Candlish, who adapted it.

References

- ¹ Haldane J. Carbon monoxide poisoning. *Transactions of the Medico-Legal Society (London)* 1931;24:156-81.
- ² Simpson C K. Gaseous and volatile poisons. In: *Forensic medicine*. 7th ed. London: Edward Arnold, 1974:316-36.
- ³ Matthew H, Lawson AAH. Poisoning by toxic inhalants. In: *Treatment of common acute poisonings*. 3rd ed. Edinburgh: Churchill Livingstone, 1975:56-68.
- ⁴ Mason JK. Poisons and poisoning. In: *Forensic medicine for lawyers*. Bristol: John Wright, 1978:268-83.
- ⁵ Simpson K. The detection of accidental domestic gas poisoning. *Police Journal* 1960;33:90-4.

General Practice Observed

Changing to A4 folders and updating records in a "busy" general practice

G N MARSH, J R THORNHAM

Summary and conclusions

When the FP5/6 record envelopes were converted to A4 folders in a busy practice a system of updating preventative health measures was begun and a disease index constructed. All the day-to-day work was delegated to lay staff, and the whole primary health care team participated in the updating procedures. The exercise, although expensive, was considered to be most worth while and has improved the quality of patient care.

Introduction

Just as the remote "possibility" of an area health authority health centre has prevented many doctors from improving and expanding their own premises so we believe the remote "possibility" of using computers for medical recording sometime in the dim and distant future is preventing many practices from improving their current records now.

After several meetings the partners in this practice decided that since computers were comparatively rare and untried in general practice, and may possibly never preclude day-to-day manual recording, and since the earliest they would be generally available could be ten or more years¹ the practice must forget about computers in the short term and start to convert FP5/6 envelopes to A4 folders now.

"Medical records in general practice"² is an exemplary study from a university teaching practice and valuable and obligatory reading for anyone considering this step. It does emanate, however, from a small practice with many doctors whose total commitments include a considerable amount of non-service work (especially teaching) and who could spare "between 20 and 40 minutes a day" on the conversion. Thus they could effect it very quickly. Practices such as ours purposely maintain very large lists by employing the full complement of ancillary staff and sharing care with fellow health professionals.³ Hence they have the greatest need for an efficient and effective record system, but the least time and staff available to make the changes. We have written this paper primarily as a guide to these busy service-orientated practices.

Because of their heavy service commitments (17 000 patients) none of the five doctors wished to spend time on day-to-day conversion of records. Once matters of principle had been decided the conversion was to be delegated to ancillary staff.

Why change to A4?

Despite attempts to improve the old medical envelope⁴ together with the use of various insert cards (data-base, family planning,⁵ obstetric, etc) the envelopes had become quite inadequate. A4 offered more space for recording in general, a systematic placing of certain basic data, a summary of the patients' significant illnesses on view opposite the day-to-day record, and, most importantly, space for other team members to record. These advantages have all been well documented.⁶

In addition the conversion seemed to us a golden opportunity to update the record, especially with regard to preventative medical procedures. This has not been reported and is our second major reason for writing this paper. We decided that certain "minimum

Norton Medical Centre, Norton, Stockton-on-Tees, Cleveland County

G N MARSH, MD, FRCGP, general practitioner
J R THORNHAM, MB, MRCGP, general practitioner

pencilled on the front of it. Thus any appropriate member of the team—nurse, health visitor, doctor, receptionist—could update the record when the patient came to the surgery for any reason. Once updated the pencilled reminder is erased.

A4 folders take up more room than FP5/6 envelopes so 11 carousels were purchased and these function efficiently, are easier for the receptionist to manage, look aesthetically more pleasing, and lend themselves to a colour-coding system. With minor modification they house the FP5/6 envelopes until the A4 folder is prepared.

Results

A sample of records of patients who had been registered with the practice for two or more years were compared with a sample who had registered recently (tables I-III). The numbers examined varied according to the populations in the various age groups, but were large enough to give a reasonably accurate representation of each group.

At the current rate of progress the 17 000 records will have been converted by a filing clerk and a secretary in about 18 months. The costs were as follows: records secretary (18 months) £3750*; filing clerk (18 months) £1950; record carousels £2500; building and decorating repairs to record room after destruction of lateral filing shelves £500; and colour-coding materials £500. Total: £9200. (*70% reimbursement not applicable in our practice but could be in practices where full ancillary staff not employed.)

Discussion

It would be incorrect to conclude that this record changeover has been achieved without doctor effort. The weekly meetings were the hub of the process, but one of us (JRT) was heavily involved in the early planning—firstly, in sampling different types of folder (including a very worthwhile expedition with several reception staff to practices in Milton Keynes); secondly, in assessing published reports; thirdly, auditing summaries done by both doctors and several of the secretarial staff; and fourthly, meeting architects, filing cabinet salesmen, and printers. The need for an enthusiastic co-ordinator in projects such as this cannot be over-emphasised.

Nevertheless, actual assembly and conversion of the records, including summaries and a diagnostic index, plus an analysis of missing minimum data, could all be delegated and now as the conversion proceeds apace necessitates virtually no help from a doctor.

The major person actually converting the records is a graduate with no medical knowledge whatever; she learnt the job in a few weeks. Possibly a trained medical secretary, health visitor, or nurse might have been marginally quicker at the beginning because of a greater familiarity with medical terminology, but in this area unemployed teachers are readily available whereas unemployed health workers are not.

The cost, even shared among five doctors, is to some extent inhibiting, and we would highlight to DHSS and BMA that the linking of ancillary staff to numbers of doctors rather than to population served is inequitable. It means that practices with the largest numbers of patients and the heaviest work load have proportionately fewer lay staff and are least able to carry out this sort of essential project. We received no reimbursement for the extra staff needed to carry out the conversion.

The results show the serious deficiencies in basic information recorded in the FP5/6 envelope (tables I-III). Our only consolation is that our records seemed to be rather better than those coming from other practices and no worse than the standard of recording noted previously.⁸ It will be realised that the missing data arise to some extent merely because of poor recording and does not mean necessarily that the various procedures have not been carried out. In addition general practitioners purport to keep much information in their heads, although doubts about its accuracy have been expressed.¹ We are convinced that the opportunity to inquire about and if necessary update the preventative procedures of many patients whenever they attend the surgery, as well as writing to them to attend for specific items, is

evidence of improvement in quality of care. The availability of nurses trained to carry out family planning consultations,⁵ well-woman examinations,⁵ and all immunisations⁹ means that this may be done without increasing doctor effort.

Continuing improvement in clinical care is more difficult to prove, but instantly available and readable case summaries and important family history are aids to care that have often been missing. The use of the diagnostic index with its potential for reaching groups of patients with particular problems as new treatments or protocols of care materialise must surely increase quality as well as opening the way to research activities and providing data for teaching.

All in all we believe we can already, and will increasingly in the future be able to, refute contrary conjecture as to whether changing to the A4 folder actually improved the quality of care.¹⁰

Our final advice to practices dithering as to whether to go ahead with an A4 system would be to start as soon as possible. Quality general practice does not flow automatically from an improved record system, but it makes it easier to achieve.

We thank all members of the primary health care team for their patience, tolerance, and co-operation during the conversion of the records, especially Mrs Eva Trotter (records secretary) and Miss Janet Lee (filing clerk) for actually doing the work.

References

- 1 Anonymous. A decade for the patient. *Br Med J* 1980;280:64-5.
- 2 Zander LI, Beresford SAA, Thomas P. Medical records in general practice. Occasional paper 5. *J R Coll Gen Pract* 1978.
- 3 Marsh GN, McNay RA. Team workload in an English general practice—I. *Br Med J* 1974;ii:315-8.
- 4 Marsh GN, Simons ME. Standardised filing system in the family doctor's surgery. *Br Med J* 1967;ii:163.
- 5 Marsh GN. Further nursing care in general practice. *Br Med J* 1976;ii:626-7.
- 6 Department of Health and Social Security. Interim report of the joint working party on redesign of medical records in general practice. London:HMSO, 1974.
- 7 Department of Health and Social Security. Second interim report of the joint working party on redesign of medical records in general practice. London:HMSO 1977.
- 8 Dawes KS. Survey of general practice records. *Br Med J* 1972;iii:219-23.
- 9 Marsh GN. Group practice nurse: an analysis and comment on six months' work. *Br Med J* 1967;ii:489-91.
- 10 Milne RM. Correspondence on medical records. *J R Coll Gen Pract* 1979;203:373.

(Accepted 11 March 1980)

What are the side effects of taking daily doses of aspirin 300 mg plus paracetamol 250 mg for many years other than gastrointestinal side effects?

The main concern is whether this drug combination, in this dose, causes analgesic nephropathy. Most of the described cases of analgesic nephropathy have followed taking drug mixtures that included phenacetin. Aspirin is, however, as nephrotoxic as phenacetin in experimental animals, and paracetamol is the major metabolite of phenacetin. It would not be surprising if this drug combination proved as nephrotoxic as mixtures containing aspirin and phenacetin. So far there is little evidence for such nephrotoxicity from Britain, the rest of Europe, or North America, but in Australia, where analgesic abuse is particularly common, aspirin-paracetamol mixtures appear to be as important a cause of analgesic nephropathy as aspirin-phenacetin mixtures.¹ Until this controversy is settled such drug mixtures should be avoided when long-continued treatment is required and single drugs used, which are probably safer. The risk of analgesic nephropathy from a single tablet a day, in the dose indicated, is small, but there is no point in taking it if relief can be obtained more safely from a single drug.

¹ Nanra RS, Stuart-Taylor J, de Leon AH, White KH. Analgesic nephropathy: etiology, clinical syndrome, and clinicopathologic correlations in Australia. *Kidney Int* 1978;13:79-92.