

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.

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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

data" for different age groups should be incorporated in every record (tables I-III).

After much trial and error a colour-coding system on the spine of the folder was finalised, and receptionists can now file without reference to the patient's name. Lost or badly misfiled cards are becoming a thing of the past.

Should computers ever be practicable for busy day-to-day team recording we are far more likely to be able to convert to them from an ordered A4 system than from the current higgledy-piggledy envelopes.

TABLE I—Percentage of minimum data completely recorded. Children 0-15 years

Minimum data	Practice patients	New patients
Family history	0	0
Standard immunisations 0-5 yr	63	28
Standard immunisations 6-15 yr	49	NK*
Tetanus booster 6-15 yr	54	NK*
Rubella status, females 11-15 yr	14	NK*

*Not known: insufficient numbers.

TABLE II—Percentage of minimum data completely recorded. Adult men

Minimum data	Practice patients	New patients
Family history	0	0
Marital status	50	18
Job	54	12
Tetanus booster	20	12
BP recording (within 10 years)	45	22
Urinalysis (within 10 years)	30	16
Smoking habits (within 5 years)	17	2

TABLE III—Percentage of minimum data completely recorded. Adult women

Minimum data	Practice patients	New patients
Family history	0	0
Marital status	96	80
Job	29	8
Tetanus booster	9	4
BP recording (within 10 years)	66	38
Urinalysis (within 10 years)	53	36
Smoking habits (within 5 years)	13	2
Rubella status } 16-45 yr	22	12
Contraception }	47	34
2 cervical smears (last within 5 years)	54	24

Method

Just as three major conversions of the premises in recent years necessitated regular team meetings so did the conversion to A4 folders. Because of the great variation in doctors' opinions, a spirit of compromise had to prevail. Weekly meetings over lunch did not prolong the working day.

Initially we decided to buy our own A4 folders. The Milton Keynes folder (A Rowley, unpublished monograph 1974) seemed best and would have cost about £2700 including inserts. The unexpectedly sudden arrival of DHSS documents when the practice name came to the head of the waiting list rendered the whole exercise much cheaper. Considerable work has gone into the design of the DHSS A4 folder and its inserts, and we were impressed by the resultant quality.^{6,7} There is room for variation within the A4 folder and our arrangement, opening it at the centre, shows a summary of the patients' previous significant illnesses and family history (see later) on the left-hand side, and on the right the day-to-day recording of the doctor and the other team members. There are separate sheets for immunisations and screening investigations (cervical smear, blood pressure, urine, etc), hypersensitivities, and occupations. There are mount sheets for laboratory reports and separate inserts for obstetrics and paediatric development. Three schoolgirls were employed during the vacation and assembled 17 000 folders and contents in five weeks.

The task of moving the records from FP5/6 envelopes to A4 folders was assigned to a teenage filing clerk and an unemployed art teacher (the "records secretary"), whose most relevant qualification was an "O" level in biology. The filing clerk completed the record for

obvious details such as name, date of birth, sex, occupation, and hypersensitivities. She also opened flat hospital letters and clipped them into the record in date order as well as gumming laboratory reports on to the appropriate sheets. The old medical record envelope was kept in the pocket of the A4 folder, and the card enclosures were treasury-tagged in date order. A certain amount of rubbish was thrown out, particularly duplicated or unreadable material.

The secretary's main job was to prepare a case summary from the previous notes and hospital letters.

Summary and disease index

What to summarise was the subject of much inter-doctor debate. This variation in opinion demonstrated to the secretary that there was no absolutely correct way to do it! Various pilot tests were done, and after very little practice it was found that the secretary usually did as good a job as the patient's doctor, and more often than not a better one, because of her more obsessive approach. Generally, the summary is a chronological account of the important illnesses from which the patient has suffered, or was continuing to suffer. All recurring or continuing general practitioner diagnoses were noted as were operations and important hospital diagnoses. Important social facts were also included ("severe financial deprivation," "battered wife," etc). When the patients consult their doctor amendments or additions may be made to the summary list.

From the RCGP classification of about 500 diseases the doctors selected about 60 that they considered had either important preventive aspects or would require long-term monitoring and care. All patients with these diseases were listed, and a simple practice disease index emerged.

A family history "rubber stamp" was designed and was put at the beginning of all patients' summaries (fig 1); the major reason for

FAMILY HISTORY	NIL	FATHER	MOTHER	SIBLING
DIABETES				
THYROID DISEASE				
GOUT				
PERNICIOUS ANAEMIA				
ISHAEMIC HEART DISEASE				
STROKE OR HYPERTENSION				
BLINDNESS (GLAUCOMA)				

FIG 1—Family history "rubber stamp."

selecting these six illnesses was either that their presentation can be insidious or that some preventative measures may be undertaken. Other rubber stamps at appropriate places on the records for smoking habits, contraceptive practice, and rubella status (fig 2) were also used. When the A4 folder had been completed from the old records a reminder about missing "minimum data" according to age group was

Other Procedures			
Date	DATE	CONTRACEPTIVE PRACTICE	SMOKING
	1979	EUGYNON 30	30/DAY
			0/DAY

RUBELLA STATUS	
HAD INFECTION	
HAS ANTIBODIES	24/9/77
HAD INJECTION	

FIG 2—Contraception, smoking, and rubella information (right-hand corner of "screening and investigation" chart). (Triangle with date is corner clipped off contraceptive payment form FP 1001.)

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.

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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.

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