Converting medical records to A4 size in general practice

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SUMMARY. A procedure for converting the medical record envelopes now used in general practice to an A4-sized record folder is described. The average time for conversion was 20·2 minutes per record and the cost, excluding filing equipment, averaged 41·6 pence for each record. The average cost to the practice was reduced to 16·4 pence per record by the reimbursement of 70 per cent of the clerk's salary from the local Family Practitioner Committee.

Introduction

ECN 946 (April, 1973) notified general practitioners that the Department of Health and Social Security (DHSS) accepted in principle the introduction of medical records of international paper size A4 for general practice and that these would require folders of approximately 310 mm × 240 mm. The ECN added that the introduction of the new records could probably be spread over a number of years.

The Interim Report of the DHSS Joint Working Party on Re-design of Medical Records in General Practice (Department of Health and Social Security, 1974) included amongst its recommendations that the present medical record envelope should be replaced as soon as practicable and that the introduction should be in stages. The first stage should be for doctors in purpose-built premises with provision for A4-size records and other doctors who specifically request supplies and are willing to undertake conversion. The second group would be those doctors who would be ready to undertake conversion with financial or other assistance on terms to be negotiated with the profession. Finally there would be a general introduction of A4-size records, this stage being of limited duration, from which time the folder and insert sheets would become the only form of record supplied to doctors.

Obviously it is desirable to limit the period when both new and old types of record are in use together, and therefore it is inevitable that existing medical record envelopes will, at some stage, have to be converted to the new format. The recommendations of the Joint Working Party (Department of Health and Social Security, 1974) suggest that conversion will be the responsibility of individual practices, although financial or other assistance may be provided.

When the general introduction of A4-size records in general practice becomes official policy the method for their introduction will have to be decided. Various options are available. The new record format could be introduced gradually, by family practitioner committees issuing an A4-record, instead of the present envelope, for each patient registering under the National Health Service for the first time. This method would have the disadvantage that two types of record, and therefore two sizes, would be in use at the same time, at least until all persons with an existing envelope had died or emigrated. Several firms are now producing, or planning to produce, storage equipment capable of accommodating both the present envelopes and the new A4 folders in variable proportions, which would reduce the problems arising from the use of both types of record at once. The number of envelopes in circulation would be reduced if, in addition, the family practitioner committee created an A4 record for each patient who changed his doctor. However, this is likely to have only a marginal effect on the period when both forms of record would be used.

The most likely procedure to be adopted will be a combination of both these methods, with the announcement of a limited period, agreed with the profession, for the conversion of the present envelopes in the possession of practices.

The main problem for general practitioners will be the method to be adopted for the conversion. This could be achieved in one of two ways: either by a team from the family practitioner committee visiting a practice and converting records on the practice premises, or by general practitioners employing their own staff for the purpose.

Both methods have their problems. A visitation of family practitioner committee staff might cause temporary disruption of the smooth flow of practice work, but would have the advantage that an experienced and trained team might work more efficiently, and complete conversion more quickly, than if a practice were to recruit and train their own staff. The use of family practitioner committee staff would have the additional advantage that, over a limited period, every practice list could be checked against family practitioner committee records. If a family practitioner committee team were to be used it is important that conversion should be done on the practice premises, and that envelopes should not be removed to family practitioner committee offices where they would be inaccessible to practitioners.

In the foreseeable future there is little prospect that family practitioner committees will be able to recruit additional staff for the conversion of the medical records in the possession of practices. Therefore each practice contemplating conversion will need to create a plan and to make the necessary financial provision.

The practice

The Darbishire House Health Centre is staffed by members of the Department of General Practice at Manchester University. This Centre provides general medical services for about 12,000 patients, who include people of every social group. The practice participated in an experimental project, supported by the Department of Health and Social Security, to design an A4 record system for general practice and was offered enough supplies of A4 record stationery by the Department of Health and Social Security to convert all records.

Preliminary decisions

It was agreed from the start that the conversion procedure would be evaluated. It was clear that, because the introduction of A4 records is not official policy, the family practitioner committee would not be involved at any stage. Patients' records would continue to arrive at the Health Centre in the traditional format and would need to be reconverted to that form whenever the family practitioner committee requested their return. Thus the practice was to be entirely responsible for the conversion of all records.

In the Darbishire House Health Centre the records of all patients are filed together in alphabetical order, and it seemed practical that conversion should follow this sequence. It was decided that the records of new patients would be converted as their envelope arrived in the practice, provided their surname began with a letter of the alphabet which had been converted. The envelopes of other patients were added to the general file of medical record envelopes to be processed in due course.

It was decided to take advantage of the conversion process to give each doctor the opportunity to review the records of all his patients. It was anticipated that such a review would have three effects: first, it would permit review of each patient's medical record and perhaps lead to the identification of unresolved problems previously overlooked; secondly, it would allow any redundant papers to be removed and thus simplify the conversion process; thirdly, it might aid the identification of records that should not be in the possession of the practice, e.g. known deaths and patients no longer resident in the area. In the event, very few records in the latter category were identified, a good deal of redundant paper was removed, but unfortunately a record of unresolved problems was not maintained.

Before the conversion procedure was implemented, an attempt was made to estimate the time required to convert all records. It was thought that 30 converted records per working day would be a reasonable basis for calculation (table 1). On this assumption it was decided to employ a full-time clerk for two years. This estimate proved to be optimistic.

The cover of the A4 folder (Form FP/EC 100), as issued to this practice by the DHSS, was blank and did not contain any specific place for the insertion of the patient's name, address and other particulars. An adhesive label was therefore designed which, in addition to the information normally contained on the envelope, included space for a code number indicating the

TABLE 1
ESTIMATED TIME FOR CONVERSION

Number of patients in practice	12,000	
Add patients newly registered less patients leaving	1,500	
Number of records to be converted		13,500
Number of records converted per day	30	
Number of working days required	450	
Number of working days in a year (based on five day week, less 28 days holiday, less five days sickness absence—estimated)	227	
Number of years required for conversion		1·98

doctor with whom the patient was registered, the patient's practice number, and the patient's telephone number. In this practice each patient is allocated an individual number which consists of a numeric prefix indicating the patient's doctor, followed by a number unique to each patient, e.g. 3/12460. Once used a number is not repeated. The number provides an additional aid to identification and is used in the same way as a patient's hospital registration number is used, e.g. on laboratory request forms and reports, and on specimen containers.

Conversion procedure

Enough medical record envelopes were extracted from the file of unconverted records to provide the clerk with about three days' work and sorted into parcels, one for each doctor, to which a docket was attached requesting the doctor to examine the records and to remove any redundant material. He was asked to note on the docket the time taken by him to examine the records and to record any difficulties encountered. The doctor was asked to return the envelopes to the clerk within 24 hours.

While waiting for these to be returned, the clerk prepared a batch of new record folders. This included fixing an address label to the cover and inserting a set of record sheets. The record sheets were:

(1) Form FP/EC 100A for clinical notes.

(2) Form FP/EC 100B on which to record a summary of important illnesses and investigations.

(3) Form FP/EC 100C for nurses' and health visitors' records.

(4) Form FP/EC 100D for recording immunisation and screening data.

(5) Form FP/EC 100G to which laboratory and x-ray reports are attached by horizontal adhesive strips.

It was arranged that other record sheets, e.g. obstetric records and a general purpose chart, would be inserted by the practitioner or his secretary as required.

When the envelopes were received back from the examining doctor, the clerk proceeded as follows:

(a) Completed the address label from the information on the front of the envelope.

(b) Entered the patient's forenames and surname on each record sheet.

(c) Removed the contents of the envelope and separated laboratory and other investigation reports from correspondence and the clinical record cards. The clinical record cards were then returned to the envelope. Laboratory and investigation reports were sorted into chronological order and attached to form FP/EC 100G. Correspondence, and any other documents, were sorted into chronological order, punched in the left-hand margin with two holes, and filed flat at the back of the folder.

(d) A small adhesive label (30 mm × 7 mm) bearing the initial letter of the patient's surname and a coloured label of the same size denoting the patient's doctor, were attached to the spine of the folder.

(e) Finally, two horizontal lines were drawn across the front of the medical record envelope which was then inserted into a pocket inside the front cover of the folder.

At the end of each working day the clerk recorded the number of records converted and the time *actually* worked, e.g. excluding breaks for meals.

At an early stage in the conversion process it was noticed that converted envelopes occasionally became separated from the corresponding A4 folder and were filed with unconverted records. Some means of marking converted envelopes was clearly desirable, the solution adopted was to rule two horizontal lines across the front at the foot of the address space.

The coloured label denoting the patient's doctor and the alphabet label are placed adjacent and fixed to the spine of the A4 folder at a different level for each letter of the alphabet. The coloured label has proved to be a useful visual aid when searching the file for a patient's record when the name of the doctor is known. The positioning of the labels has helped to prevent misfiling. As an additional aid to the detection of misfiled records, two contrasting colours are used for the alphabet labels; a differently coloured label for each alternate letter of the alphabet.

Converted A4 records are filed in five-tier 'Rotoscan' carousels, each shelf of which rotates independently.

Results

During a period of 72 weeks, 6,066 records were converted at an average rate of 20·2 minutes per record (table 2). The average cost of converting each record, excluding the cost of filing equipment, was 41·6 pence (table 3). If cost is based only on the clerk's salary (plus ten per cent for overheads) the average cost per record becomes 39·6 pence. Reimbursement of 70 per cent of the clerk's salary under the ancillary staff scheme reduces these average costs to 16·4 pence and 14·4 pence per record respectively.

TABLE 2
RECORD CONVERSION TIME

Number of records converted in 72 weeks	6,066
Time worked on conversion (minutes)	122,265
Average time per record (minutes)	20·2
Average number of records converted in each four week period	337
Average number of records converted per day worked	19·08

TABLE 3
COST OF CONVERSION

	£
Gross salary paid to conversion clerk (excluding employers' contribution to NHI etc.)	2,185·69
Purchase of address, alphabet and coloured labels	109·11
	2,294·80
Add ten per cent for other overheads	229·00
	2,523·80
Gross average cost per record (6,066 records)	41·6 pence
Nett average cost per record (70 per cent of clerk's salary reimbursed by Family Practitioner Committee	16·4 pence

The time taken by each practitioner to examine the records referred to him was recorded, the average time being 1·1 minutes per record (table 4). However, Doctor E used the opportunity to extract data for research purposes from the records, and therefore took longer than any other doctor to examine the records referred to him, thus distorting the result. If his figures are excluded, the average time per record for the remainder of the group is 0·61 minutes.

TABLE 4
GENERAL PRACTITIONER'S TIME IN EXAMINING RECORDS

Doctor	*Number of records examined*	*Total time occupied (minutes)*	*Average time per record (minutes)*
A	1,009	384	0·38
B	557	618	1·11
C	731	264	0·36
D	613	378	0·62
E	812	2,377	2·93*
F	157	239	1·52
	3,879	4,260	1·098*

*Excluding Doctor E (see text) the average time per record for the remainder of the group is 0·61 minutes.

Conclusion

If the findings of this study are applied to a practice of 2,500 patients a clerk would require 840 hours to complete the conversion of existing envelopes, and at 0·6 minutes per record the practitioner would require 25·58 hours to examine them. At an average of 39·64 pence per record, i.e. excluding the cost of filing equipment and additional stationery, the gross cost to the practice would be approximately £991. This would be reduced to a nett cost of approximately £361 if 70 per cent of the clerk's salary was reimbursed by the family practitioner committee. On the same basis, the gross cost of converting the records for the whole population would be about £20,000,000.

Few difficulties were encountered by the doctors who examined the records. This step could be excluded in any future conversion procedure if it were accepted that some redundant paper would be filed in the new folders. However, there may be special reasons for retaining the opportunity for doctors to examine their records, for example, Doctor E (table 4) who used the opportunity to extract research data from the records of his patients.

Acknowledgement

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REFERENCE

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